

MICHAŁ NÉMETH

Jagiellonian University in Krakow

michal.nemeth@gmail.com

A HISTORICAL PHONOLOGY OF WESTERN KARAIM. ALVEOLARS AND FRONT LABIALS IN THE SOUTH-WESTERN DIALECT*

Keywords: western Karaim, Karaim historical phonology, south-western Karaim fricatives, south-western Karaim affricates, south-western Karaim front labial vowels

Abstract

This article is an attempt to establish the time-frame and relative chronology of the $\check{s} > s$ and $\check{o}, \check{u} > e, i$ changes that occurred in south-western Karaim. The sample material used for the present article comes from Halych Karaim handwritten prayer books dating back approximately to the second half of the 18th and the first half of the 19th century, and are written in the Karaim semi-cursive variant of the Hebrew script. The final conclusion of the article is that both changes occurred in the final decades of the 18th century.

1. Preliminary remarks

The general consensus is that the $\check{s} > s$, $\check{c} > c$, $\check{z} > z$, and $\check{z} > z$ shifts, i.e. the dealveolarisation of the alveolar affricates and fricative consonants, and the $\check{o} > e$, $\check{u} > i$ changes, i.e. the delabialisation of front labials, are innovations in south-western Karaim. The former change is not an entirely isolated case in the Turkic linguistic world; examples of the dealveolarisation of some affricates and fricatives have also been documented in other Turkic languages (see below). Still, south-western Karaim is one of the very few Turkic languages in which the dealveolarisation process regularly affected all alveolar fricatives and affricates. On the other hand, the delabialisation of \check{o} and \check{u} is considered to be an isolated example of such a systemic change in the Turkic languages in general (see e.g. Baskakov 1963: 34).

* The content of this article was presented on the Szeged Workshop on Karaim Studies organised by University of Szeged on 13th June 2014.

2. The sample linguistic material used in the present article

The conclusions that will be presented in the present article are based on an analysis of handwritten Halych Karaim texts written in Hebrew script. Unfortunately, there are no Karaim texts older than the beginning of the 20th century that would be written in a script other than Hebrew. This makes our research more difficult since the set of graphemes and vowel points that Hebrew script offers is far not sufficient enough to reflect all the phonetic or phonological features of Karaim.¹ The notation is thus very often ambiguous and only a complex and thorough analysis of its orthographic tendencies enables us to draw safe conclusions on the interrelationship between phonetics, phonology, and spelling.

The present paper grew out of a preliminary reading of 14 handwritten prayer books from Halych with extensive Karaim insertions. In the interest of clarity, however, I have selected one Halych Karaim *piyut*² to quote fragments from it³ and to use its linguistic material for exemplification purposes.

The most important selection criterion was that a text was available in different copies of different ages (to cover the analysed time scale with acceptable proximity), and copied by different persons, preferably known by name. Another criterion used was that the name of the author or translator of the text is known to us. In addition, it was important that the Halych Karaim texts used for analysis were fully vocalised and clearly legible. Finally, the text I eventually chose contains one clearly north-western form, which shows the degree of complexity of this type of research and makes the text even more unique and valuable.

Hence, the sample material used in the present article comes from a *piyut* copied in four prayer books and translated from Hebrew into Karaim by Shemuel ha-Rodi (died 1744) the son of Josef ben Shemuel ha-Rodi ha-Mashbir (born ca. 1650 according to Tuori 2013: 75, died 1700). We know that Shemuel officiated as hazzan in Halych in the years 1738–1744, that his wife's name was Esther, and that he had two sons, one of whom was Moshe, who also officiated as hazzan in Halych in the years 1765–1778 (or 1765–1792).⁴ The arrival of his father, Josef ben Shemuel ha-Mashbir, in Halych eventually proved to be one of the most important milestones in the community's history: his reforms while acting as hazzan in Halych until his death, helped significantly raise the spiritual education of its members, for which Josef earned the

¹ For a detailed description of the orthographic features of south-western Karaim texts written in this script see Németh (2011b: 99–130).

² A *piyut* (plural: *piyutim*, in Hebraistic transliteration: *piyyūṭīm*) is a liturgical hymn recited during religious services, usually during holy days and Sabbaths, and inserted in prayers. For a detailed description of this type of liturgical poem in the rabbinic liturgy see, e.g. Deutsch (1905: 65–68) or Fleischer (2007: 192–195).

³ Due to space limitations I refrain from quoting this source *in extenso*, but I intend to provide a full, comparative critical analysis in a future comprehensive study on Halych Karaim *piyutim* I am currently preparing. I would like to express my sincere gratitude to Anna Sulimowicz (Warsaw) for providing me with access to these manuscripts.

⁴ For the dates mentioned see Bałaban (1927: 25), Zarachowicz (1935: 23), Gąsiorowski (2008: 455–456), and Kizilov (2009: 377).

Hebrew nickname *ha-Mashbir*, i.e. ‘provider of bread’. It is important to note that even though historians are not certain which year Josef ben Shemuel ha-Mashbir arrived in Halych,⁵ nor the place he lived in before moving to Halych,⁶ we can say with certainty that his son Shemuel, the author of the translation in question, was born in Halych and was in all probability also brought up there.

The *piyut* discussed in the present article is available in four copies recorded in four different prayer books stored in Warsaw in the private archive of Anna Sulimowicz under the following catalogue numbers: JSul.III.03, JSul.III.63, JSul.III.69, and JSul.III.79. Based on a thorough analysis of all the Hebrew headings introducing the manuscripts’ handwritten content we can estimate their age relatively well. The copyists of the two oldest manuscripts, of JSul.III.03 and JSul.III.63, were most likely two different persons (although a palaeographical comparison of the handwriting shows this clearly, their identity remains uncertain or unknown), whereas the scribe who copied both JSul.III.69 and JSul.III.79 is known by name. Table 1 below summarises the relevant data.⁷

Catalogue number	Translator	Copyist	Probable date of copy	Folio numbers
JSul.III.63	Shemuel ben Josef ha-Rodi (died 1744)	Jeshua (died 1796) or Josef (died: ?) Mordkowicz	probably around 1778 (1796 the latest)	35 v ^o – 36 v ^o
JSul.III.03		unknown	shortly after 1805	100 r ^o – 101 v ^o
JSul.III.69		Jeshua-Josef Mordkowicz (born 1802, died 1884)	between 1851 and 1866	219 v ^o – 221 v ^o
JSul.III.79				269 v ^o – 272 r ^o

Table 1. The translator, copyists and date of translations

The text in question is a translation of a Hebrew *piyut* that begins with the words *אָנִי וְעַגְוִמָּה אֶנִּי וְעַגְוִמָּה*. Its Karaim incipit is *Men zavally Israel* ‘I, miserable Israel’. Presented below is a comparative critical edition of its first two parts (out of nine). The whole text consists of 63 lines.

The transcription shows the oldest of the four *piyut* translations (JSul.III.63). I have remarked on the relevant differences between the copies in the critical ap-

⁵ He could have arrived in Halych, on the one hand, in ca. 1670, or, on the other, in 1680 or 1685, see Kizilov (2009: 48).

⁶ See Gašiorowski (2008: 375) and Tuori (2013: 77, 86) who argue in favour of Troki as his place of origin, while Abrahamowicz (2001: 13), Akhiezer, Markon (2007), and Kizilov (2009: 48) propose Derazhne in Volhynia.

⁷ Our detailed arguments concerning the age of the manuscripts will be presented in detail in the critical edition mentioned above. This matter proved to be such a complex task that presenting a full explanation here would have been impossible due to space limitations. I would like to express my gratitude to Prof. Tapani Harviainen (Helsinki) for his help and advise on Hebraistic matters.

paratus.⁸ If a comment concerns not a single word but rather a longer fragment, the fragment in question has been enclosed in half square brackets, i.e. [...]. I refrain from quoting the first three lines of the Hebrew heading.

In the present article I was unable to use the phonetic transcription I employed in my previous critical studies and grammatical descriptions as the reconstructed phonetic representation of the attested linguistic material would be far more hypothetical. A transcription reflecting the language's phonological system seems much more appropriate here as it offers a reliable linguistic description. I only remark on phonetics if the writing allows me to draw safe and unambiguous conclusions from it.

I use /j/ to indicate the palatal glide. The phonetic value of /v/ remains uncertain: it could have been a bilabial fricative or bilabial glide, which evolved into a labiodental fricative. However, the relative chronology of this evolution remains for the time being obscure. I have used the symbol /ɣ/ to denote the uvular fricative characteristic of south-western Karaim until the second half of the 19th century; /χ/ stands for the velar fricative, whereas /h/ represents voiceless glottal fricative. Finally, with /ʒ/ I note the alveolar voiced affricate. In the translation I tried to remain faithful to the original text as much as possible. Additions in square brackets are intended to facilitate the reading.

2.1. Transcription

Page 35 v^o

[...]

- [4] Men zavally Israel bilinemen jazyklaryma oltura galutta küçlü jasta
 [5] da açuvlu. Ki bar bu tarlyklar uçradylar meni ki olturyanymda
 [6] jerimde köplügünden⁹ bar nametnin çor ettim kulluyun adonajyn ol
 [7] aziz da ol korkunçlu. Da bunar köre¹⁰ dayyn olda çorlady meni da bezdi
 [8] klegi anyn menden [ne ki¹ burundan edim anar astry süvümlü¹¹. Vale
 [9] haligine kaçyrybyla kojdu meni kajyly da har küñ¹² bolamen syzlavlu.
 [10] ¹³ דױה וזבֿה. Kajyrdym ense aziz zynharlamaklaryna [tügel torannyn¹⁴

⁸ Due to space limitations, I have decided not to mention the syntactic, morphological, lexical, and orthographic differences between the copies, which are irrelevant to the main subject of this article.

⁹ כױפֿליגױנדױן: Mistakenly spelled with *shūrūq*. JSul.III.03: כױפֿליגױנדױן *köpliginden*. — JSul.III.69: כױפֿליגױנדױן *kepliginden*. — JSul.III.79: כױפֿליגױנדױן *kepliginden*.

¹⁰ כױריא: JSul.III.03: כױריא *köre*. — JSul.III.69: כױריא *kere*. — JSul.III.79: כױריא *kere*.

¹¹ שױוּמְלִי: JSul.III.03: סױבֿימְלִי *sivimli*. — JSul.III.69: שױוּמְלִי *sivimli*. — JSul.III.79: שױוּמְלִי *sivimli*. For transcribing the letter *shin* in certain cases with *s* (only in the latter three manuscripts), see my argumentation in 3.6. Generally speaking, in front of a syllable with *i*, its phonetic value was [ʃ] (written with the letter *shin*), and was a positional allophone of /s/.

¹² כױן: JSul.III.03: כױן *kün*. — JSul.III.69: כױן *kin*. — JSul.III.79: כױן *kin*.

¹³ דױה וזבֿה: JSul.III.03: דױה וזבֿה. — JSul.III.69: דױה. — JSul.III.79: דױה. These insertions indicate the beginning of the subsequent (second) part of the translation.

¹⁴ טױגֿיל תּוֹרֶה־נְנִין: JSul.III.03: אַזִּיז תּוֹרֶה־נְנִין *aziz torannyn*. — JSul.III.69: טױגֿיל תּוֹרֶה־נְנִין *tigel torannyn*. — JSul.III.79: טױגֿיל תּוֹרֶה־נְנִין *tigel torannyn*.

- [11] *jabuškany*¹⁵ *byla murdar kulluyuna jat tenrilernin da murdar bolundum*
 [12] *alarbyla neginče ki xor ettim da byrčlattym syjly žany*¹⁶*mny. Bu*
 [13] *jazyk üçün*¹⁶ *tünkelttin*¹⁷ *meni tüslü*¹⁸ *jerlerinde umalarnyn kulluk*
 [14] *etivčülernin*¹⁹ *avoda zaraya*²⁰ *da ulla xorlukka kollarynda alarnyn*
 [15] *kemištin*²¹ *meni. Da dayyn čeber jerimden de ki ülüš*²² *beribedin*²³ *any mana*
 [16] *sürdün*²⁴ *meni andan da ǰanlyklar arasyna tozdurdun ulanlarymny. Ki*
 [17] *muna sensen kipligim*²⁵ *tar vaxtymda nek bu haligine uzak zaman galutta*
 [18] *ynžytasen meni. [...]*

2.2. Translation

Page 35 v°

[...]

- [4] I, miserable Israel, I am conscious of my sins dwelling in exile, in great grief
 [5] and bitter. For all these worries happen to me because while I have dwelt
 [6] in the place of abundance of any goods I disdained the service of the Lord, [of] the
 [7] holy and the feared. And therefore He condemned me, too, and He found
 [8] His will for me repulsive [= He refused his will to me] for which, in the begin-
 ning, I was very kind to Him. But
 [9] now, in His wrath he left me in concern and every day I am full of pain.
 [10] {Part 2} And I turned my back on the holy commandments of Your immaculate
 Torah
 [11] by joining the service to strange gods, and I became impure
 [12] by this, until I have disdained and besmirched my outstanding heart.
 [13] For this sin you have made me wander various lands of those who

¹⁵ ייבושקנים: JSul.III.03: יאבושקנים *jabuskanym*. — JSul.III.69: יאבושקנים *jabuskanym*. — JSul.III.79: יאבושקנים *jabuskanym*.

¹⁶ איוציון: JSul.III.03: איוציון *üçün*. — JSul.III.69: איצין *icin*. — JSul.III.79: איצין *icin*. For the reading of the letter *tzade* with *-c- or *-z- in the latter three manuscripts, see my reasoning in 3.5.

¹⁷ טיונְבִילְטֵטִין: JSul.III.03: טיונְבִילְטֵטִין *tinkelttin*. — JSul.III.69: טיונְבִילְטֵטִין *tinkelttin*. — JSul.III.79: טיונְבִילְטֵטִין *tinkelttin*.

¹⁸ טיוסְלִי: JSul.III.03: טיוסְלִי *tisli*. — JSul.III.68: טיוסְלִי *tisli*. — JSul.III.79: טיוסְלִי *tisli*.

¹⁹ אַטִיבְצִילְרִנִין: JSul.III.03: אַטִיבְצִילְרִנִין *etivcilernin*. — JSul.III.69: אַטִיבְצִילְרִנִין *etivcilernin*. — JSul.III.79: אַטִיבְצִילְרִנִין *etivcilernin*.

²⁰ Hebr. עֲבוֹדַת זָרָה ‘idolatriy, paganism’ with the -ga dative case suffix.

²¹ כִּמִּשְׁטִין: JSul.III.03: כִּמִּשְׁטִין *kemistin*. — JSul.III.69: כִּמִּשְׁטִין *kemistin*. — JSul.III.79: כִּמִּשְׁטִין *kemistin*.

²² אִילִיס: JSul.III.03: אִילִיס *ilis*. — JSul.III.69: אִילִיס *ilis*. — JSul.III.79: אִילִיס *ilis*.

²³ It is most probably the converbial form *berip* (of the verb *ber-* ‘to give’) used here with the auxiliary verb *edin*. This construction is not mentioned in grammars of Karaim (this is its first known attestation), but it is known from other Turkic languages (see Juldašev (1965: 188–198)). I would like to express my thanks to one of my anonymous reviewers for this suggestion.

²⁴ סִירְדִין: JSul.III.03: סִירְדִין *sirdin*. — JSul.III.69: שִׁירְדִין *sirdin*. — JSul.III.79: שִׁירְדִין *sirdin*.

²⁵ כִּיפְלִיגִים: JSul.III.03: כִּיפְלִיגִים דָּא בּוֹלוֹסְלוּיִיִם *küpligim da bolusluyum*; *küpligim* is a hypercorrect form. — JSul.III.69: כִּיפְלִיגִים דָּא בּוֹלוֹסְלוּיִיִם *kipligim da bolusluyum*. — JSul.III.79: כִּיפְלִיגִים דָּא בּוֹלוֹסְלוּיִיִם *kipligim da bolusluyum*.

- [14] serve paganism, and in the hands of them in great trouble
 [15] have you left me. And from the land which you gave me as a legacy you have
 [16] cast me out and among kingdoms you have scattered my children. So,
 [17] behold, you are my strength in my times of want, why do you
 [18] harm me now in exile for so long? [...]

3. Linguistic features

3.1. Dialectal affiliation of the texts

One question of paramount importance that must be answered before we start our discussion is whether the texts that we analyse reflect the linguistic features of the translator's or the copyist's language. The answer is unambiguous: since these translations constitute a small part of the prayer books as a whole, the language of which is highly consistent even though they contain texts authored by different persons from different communities (Halych, Lutsk, Derazhne, Pozvol, and Kukizov) in different periods of time, it is beyond any doubt that these texts must primarily reflect the language of the copyists (unlike Bible translations in which copyists usually followed the original with the highest possible accuracy).

In the subsequent subchapters those linguistic features are presented that are important as indicators of the dialectal affiliation of the text and are clearly reflected by the writing. Special attention is paid to the front labial vowels and alveolar fricatives.

3.2. The continuants of *ŋ

All four texts bear clearly south-western Karaim linguistic features. Among these, one of the most distinctive is the south-western continuant of the velar *ŋ, i.e. *n* (always denoted with the letter *nun*), the north-western Karaim equivalent of which in a certain group of suffixes and words is *j* (always written with letter *yodh* or double *yodh*), e.g. in *torannyn* [10]²⁶, *tünkelttin* ~ *tinkelttin* [13], *sürdüün* ~ *sirdin* [16], *navilerinnin* [20], *šeminnin* [50], or *günexlerinnin* ~ *ginexlerinnin* [59] – instead of **torajnyn*, *tuñkałttij*, *śurđuj*, *navilerijnin*, *šemijnin*, *ğuñaxłařijniñ*, respectively.

All the more surprising, then, is the clearly north-western form אִזְיִנְיִן *özünün* [47] attested in JSul.III.63, instead of the expected **özünnün*, which is the only exception not only in the text edited here, but also, in all the *piyutim* I have managed to read so far. In the other three manuscripts the well-known south-western *ezinnin* is used. It is difficult to come up with a clear-cut explanation for this fact. However, perhaps it is valid to suggest that the original copy that served as the basis for the copyist of JSul.III.63 already contained this form. In this case the form in question would have had the status of a word which the copyist had mistakenly not transposed phonetically into a south-western Karaim form.

²⁶ Numbers in square brackets refer to the line number of the text as recorded in JSul.III.63.

In turn, the presence of a north-western form in this text appears to provide some support for the assumption forwarded by Gašiorowski (2008: 375) and Tuori (2013: 77) that Josef ben Shemuel, the father of the translator of the *piyut*, resided in Troki prior to his arrival in Halych around 1685, or, at least, that his idiolect may have been influenced by the language of his north-western Karaim relatives. From the point of view of the present article, however, it is important to emphasise that there are no other recorded traces of north-western Karaim influence in the texts.

The form *özünün* also shows that the $*\eta > j$ shift took place prior to the text being copied, and therefore we would rightly expect *j* to be present in all those examples where $*\eta > n$ appears if the texts had been copied by a Karaim from Lithuania in his native dialect. This chronology of change corresponds with the data recorded in the north-western Karaim texts we find in JSul.III.05 – a prayer book from Kukizów copied around 1782/1783, and in III-73 – a partial Bible translation also from Kukizów from around 1707. In these fully handwritten items we already see the result of the $*\eta > j$ change, e.g. *kulluhuja* ‘to your service’ (JSul.III.05, folio 15 r^o).

3.3. Consonant harmony vs. vowel harmony

All four prayer books are fully vocalised, which allows us to state confidently, that the texts bear no traits of disrupted vowel harmony shifted toward consonant harmony. In comparison, texts from Kukizów show that the consonant harmony in north-western Karaim evolved most probably at the turn of the 17th and 18th centuries, see Németh (2014). Thus, these are beyond any doubt south-western Karaim texts.

3.4. The continuants of $*\ddot{o}$, $*\ddot{u}$

Somewhat more complex is the case with the continuants of the labial $*\ddot{o}$, $*\ddot{u}$. Fortunately, the writing system clearly differentiates between \ddot{o} , \ddot{u} and *e*, *i*, as we see in JSul.III.63 and JSul.III.03. In JSul.III.69 and JSul.III.79 we do not find any traces of \ddot{o} , \ddot{u} any more, which means that the delabialisation process must have operated prior to the period between 1851 and 1866. In any case, it is safe to say that the labial pronunciation of these two vowels was not characteristic of Jeshua-Josef’s idiolect (born 1802) – also in the light of the numerous other autographs of this very prolific copyist.

The front labial \ddot{o} and \ddot{u} are usually spelled with the letters *yodh* and *waw*, or, somewhat less frequently, only with the letter *waw* – of course with a *hōlām* or *shūrūq*, respectively, in both cases.²⁷ The front *e* and *i* are, in turn, always denoted with a *yodh* preceded by the vowel points *tzere*, *seghol* or *hiriq*. Every vowel is additionally introduced word-initially by the letter *aleph*. The notation of *e* and *i* does not differ from the most frequent writing form we may encounter in south-western Karaim texts from the second half of the 19th century, see Németh (2011b: 108–110).

²⁷ The writing is often inconsistent within one and the same text, cf. e.g. the postposition *üčün* recorded as אִיִּצְיִן and אִיִּצְיִן in lines 50 and 51, respectively. It should also be mentioned here that the vowel \ddot{o} cannot appear in the word-final position for phonotactic reasons (it does not appear in non-initial syllables).

The sound-to-spelling correspondence of the front labials looks as follows:

[ö] In initial position:

- -אִי-: in one word (in JSul.III.63 only), e.g. אִיזוּיִינִן *özünün* [47]
- -אִו-: in two words (in JSul.III.63 only), e.g. אִוֶּץ *öc* [41]

In medial position:

- -יִו-: frequent, e.g. כִּיִּרְיָא *köre* [7]
- -וִ-: less frequent, e.g. טֹרְיִלְרִימְנִי *törelirimni* [34]

In final position:

- *ö* does not appear in this position

[ü] In initial position:

- -אִי-: frequent, e.g. אִיזוּצִיִּן *üçün* [50]
- -אִו-: in two words (in JSul.III.63 only), e.g. אִוֶּצִּין *üçün* [51]

In medial position:

- -יִו-: frequent, e.g. טִיִּרְלִיִּו *türlü* [35]
- -וִ-: less frequent, e.g. טִיִּבּוּל *tüvül* [40]

In final position:

- -י-: frequent, e.g. אִיבִּיִּוִּּנִי *üvümünzünü* [20]
- וִ-: in two words (in JSul.III.63 only), e.g. רַחְמֵיִטְלִוּצוּ *raḫmetlevcü* [27]

Importantly for us, the two *piyut* translations attested in JSul.III.63 and JSul.III.03 exhibit highly valuable differences in this matter that might be key to establishing the chronology of delabialisation. This is, namely, because the text in JSul.III.03 exhibits the evident alternation of *ö ~ e* and *ü ~ i*, and contains erroneously spelled words with labials not motivated etymologically (see chapter 3.7 below). This observation allows us to suggest that it was written at the time this phonetic shift was still operating.

By way of contrast, the chronologically older text, i.e. JSul.III.63, clearly shows the labiality of *ö* and *ü* preserved, in every position, whereas the two more recent texts, as mentioned above, reflect the final result of this process, i.e. *e* and *i* in every position. It seems reasonable, then, to say that these manuscripts delineate the time-frame of this process.

Table 2 below presents in comparative form all the relevant data from these four texts. The line number refers to the place of attestation of the respective word in JSul.III.63. The grey background indicates words with front labials preserved. Underline indicates words in which front labials are only partially preserved. For reconstructing dental affricates and fricatives in JSul.III.03 see our argumentation in chapter 3.5.

From the table below it transpires that the phonemes *ö* and *ü* have been preserved in the first syllable the longest, which is quite an interesting feature as it somewhat resembles north-western Karaim, where *ö* and *ü* remained intact in the word-initial position. In JSul.III.03 we find altogether eight forms in which the front labials are preserved only in the first syllable. The only three cases of front labials being preserved in the non-first syllable are the words *ḫajjfsinivcü*, *raḫmetlevcü*, and *sirtivcü*, i.e. in both cases in the *-ivcü* suffix (< **igčü*, see Berta 1996: 592, 595; present-day *-ivci*). Perhaps, it is the bilabial *-v-* that caused that the front labial was preserved in it longer.

Line nr.	ö, ü vs. e, i			
	J <i>Sul</i> .III.63 (around 1778)	J <i>Sul</i> .III.03 (shortly after 1805)	J <i>Sul</i> .III.69 (1851–1866)	J <i>Sul</i> .III.79 (1851–1866)
4	<i>küčlü</i>	<i>küclü</i>	<i>kicli</i>	<i>kicli</i>
6	<i>köplügünden</i>	<u><i>köpliginden</i></u>	<i>kepliginden</i>	<i>kepliginden</i>
7	<i>köre</i>	<i>köre</i>	<i>kere</i>	<i>kere</i>
8	<i>süvümlü</i>	<i>sivimli</i>	<i>sivimli</i>	<i>sivimli</i>
9	<i>kün</i>	<i>kün</i>	<i>kin</i>	<i>kin</i>
10	<i>tügel</i>	—	<i>tigel</i>	<i>tigel</i>
13	<i>üçün</i>	<i>ücün</i>	<i>icin</i>	<i>icin</i>
13	<i>tünkeltin</i>	<i>tinkeltin</i>	<i>tinkeltin</i>	<i>tinkeltin</i>
13	<i>tüslü</i>	<i>tisli</i>	<i>tisli</i>	<i>tisli</i>
14	<i>etivčülernin</i>	<i>etivcilernin</i>	<i>etivcilernin</i>	<i>etivcilernin</i>
15	<i>ülüš</i>	<i>ilis</i>	<i>ilis</i>	<i>ilis</i>
16	<i>sürdün</i>	<i>sirdin</i>	<i>sirdin</i>	<i>sirdin</i>
19	<i>üstüme</i>	<i>istime</i>	<i>istime</i>	<i>istimizge</i>
19	<i>sürdün</i>	<i>sirdinde</i>	<i>sirdinde</i>	<i>sirdinde</i>
20	<i>körklü</i>	<i>körklü</i>	<i>kerkli</i>	<i>kerkli</i>
20	<i>üvümüznü</i>	<i>ivimizni</i>	<i>ivimizni</i>	<i>ivimizni</i>
21	<i>ügütlerine</i>	<i>igitlerine</i>	<i>igitlerine</i>	<i>igitlerine</i>
21	<i>hörmətli</i>	<i>hermetli</i>	<i>hermetli</i>	<i>hermetli</i>
23	<i>üçün</i>	<i>ücün</i>	<i>icin</i>	<i>icin</i>
23	<i>köplügünden</i>	<u><i>köpliginden</i></u>	<i>kepliginden</i>	<i>kepliginden</i>
24	<i>görge</i>	<i>gerge</i>	<i>gerge</i>	<i>gerge</i>
27	<i>raḡmetlevčü</i>	<i>raḡmetlevcü</i>	<i>raḡmetlevci</i>	<i>raḡmetlevci</i>
27	<i>sürtüvčü</i>	<u><i>sirtivcü</i></u>	<i>sirtivci</i>	<i>sirtivci</i>
27	<i>günexlerin</i>	<i>ginexlerin</i>	<i>ginexlerin</i>	<i>ginexlerin</i>
28	<i>küčlü</i>	<i>küclü</i>	<i>kicli</i>	<i>kicli</i>
29	<i>köre</i>	<i>köre</i>	<i>kere</i>	<i>kere</i>
29	<i>kötürme</i>	<u><i>kötirme</i></u>	<i>ketirme</i>	<i>ketirme</i>
31	<i>körkümnü</i>	<u><i>körkimni</i></u>	<i>kerkimni</i>	<i>kerkimni</i>
31	<i>üçün</i>	<i>ücün</i>	<i>icin</i>	<i>icin</i>
33	<i>čörüvleme</i>	<i>cerivleme</i>	<i>cerivleme</i>	<i>cerivleme</i>

Line nr.	ö, ü vs. e, i			
	JSul.III.63 (around 1778)	JSul.III.03 (shortly after 1805)	JSul.III.69 (1851–1866)	JSul.III.79 (1851–1866)
33	<i>čörüvlerimni</i>	<i>cerivlerimni</i>	<i>cerivlerimni</i>	<i>cerivlerimni</i>
34	<i>törelerimni</i>	<i>terelerimni</i>	<i>terelerimni</i>	<i>terelerimni</i>
35	<i>türlü</i>	<i>tirli</i>	<i>tirli</i>	<i>tirli</i>
38	<i>közlerimni</i>	<i>közlerimni</i>	<i>kezlerimni</i>	<i>kezlerimni</i>
40	<i>tüvül</i>	<i>tivil</i>	<i>tivil</i>	<i>tivil</i>
40	<i>özgege</i>	<i>ezgege</i>	<i>ezgege</i>	<i>ezgege</i>
40	<i>künülemeginni</i>	<i>kinilemeginni</i>	<i>kinilemeginni</i>	<i>kinilemeginni</i>
41	<i>öç</i>	<i>ec</i>	<i>ec</i>	<i>ec</i>
42	<i>sözüne</i>	<i>sözine</i>	<i>sezine</i>	<i>sezine</i>
42	<i>köre</i>	<i>köre</i>	<i>kere</i>	<i>kere</i>
46	<i>süvgende</i>	<i>sivgende</i>	<i>sivgende</i>	<i>sivgeninde</i>
46	<i>süvgün</i>	<i>sivgin</i>	<i>sivgin</i>	<i>sivgin</i>
47	<i>özünün</i>	<i>ezinnin</i>	<i>ezinnin</i>	<i>ezinnin</i>
47	<i>körgün</i>	<i>körgin</i>	<i>kergin</i>	<i>kergin</i>
48	<i>sürtkün</i>	<i>sirtkin</i>	<i>sirtkin</i>	<i>sirtkin</i>
48	<i>köplügünden</i>	<i>köpliginden</i>	<i>kepliginden</i>	<i>kepliginden</i>
50	<i>üçün</i>	<i>ücün</i>	<i>icin</i>	<i>icin</i>
50	<i>eşitüvünnü</i>	<i>esitivinni</i>	<i>esitivinni</i>	<i>esitivinni</i>
51	<i>üçün</i>	<i>ücün</i>	<i>icin</i>	<i>icin</i>
53	<i>sürtkün</i>	<i>sirtkin</i>	<i>sirtkin</i>	<i>sirtermen</i>
54	<i>köre</i>	<i>köre</i>	<i>kere</i>	<i>kere</i>
54	<i>töre</i>	<i>töre</i>	<i>tere</i>	<i>tere</i>
56	<i>χajıfsüngün</i>	<i>χajıfsingin</i>	<i>χajıfsingin</i>	<i>χajıfsingin</i>
57	<i>χajıfsünüvcü</i>	<i>χajıfsinivcü</i>	<i>χajıfsinivci</i>	<i>χajıfsinivci</i>
57	<i>günexni</i>	—	—	<i>ginexni</i>
58	<i>tügendi</i>	<i>tigendi</i>	<i>tigendi</i>	<i>tigendi</i>
60	<i>köre</i>	<i>köre</i>	<i>kere</i>	<i>kere</i>
63	<i>köplügünden</i>	<i>köpliginden</i>	<i>kepliginden</i>	<i>kepliginden</i>

Table 2. The continuants of *ö and *ü in the four hymn translations analysed

3.5. The continuant of *š

Generally speaking, in the Karaim semi-cursive script the letter *shin* (ש) is used to represent š, whereas the letter *samekh* (ס) stands for s (the dots above *shin* that we know from the Hebrew orthography, i.e. those for indicating the difference between *shin* (ש) and *sin* (ס) were not used in Karaim texts). Obviously, it is quite natural that the Karaims took advantage of these two Hebrew letters to distinguish between s and š. At the same time, however, the set of Hebrew letters Karaims had at their disposal made the distinction between č and c, ž and z, and, finally, ẓ̌ and ẓ̣̌ much more difficult.²⁸ Diacritic marks were never used with predilection, as a result of which the letter *tzade* (צ) could have stood both for č (> c) and ẓ̌ (> ẓ̣̌), and the letter *zayin* (ז) represented z and ž. The reason for this apparent negligence, however, is to be found in the low phonological load of these pairs of phonemes. Namely, initially the Karaim phonological system lacked c and ẓ̌ (so there was no č – c and ẓ̌ – ẓ̣̌ opposition), whereas the phonological load of the opposition of ẓ̌ and z was very low (in fact, I do not know of any minimal pair). Later, in the transition period, when dealveolarisation was occurring (which probably lasted for several decades), and also in the second half of the 19th century, when, dealveolarisation had already ended, š, č, ž, and ẓ̌ reappeared in Slavonic loanwords (or, in fact, in Slavonic *Fremdwörter*), elements of these phoneme pairs coexisted for a while, but their ranges of use were separated from each other to such a degree, that the use of any diacritics²⁹ was simply redundant. Tables 3–5 below illustrate this (cells with grey background contain phonemes used only in loanwords).

Before the shift		During the shift		After the shift	
š	s	š	s	š	s
č	–	č	c	č	c
ž	z	ž	z	ž	z
ẓ̌	–	ẓ̌	ẓ̣̌	ẓ̌	ẓ̣̌

Tables 3–5. The phonological load of the opposition of š, ž, č, ẓ̌ and s, z, c, ẓ̣̌ prior to, during and after dealveolarisation

At the same time, it is also worth mentioning that authors who used diacritics applied them in such an inconsistent way that the absence of a certain diacritic mark

²⁸ The latter two phonemes, i.e. ẓ̌ (> z) and ẓ̣̌ (> ẓ̣̌) occurred initially only in Arabic and Persian loanwords, but it seems that the alveolar fricative š was preserved for a longer time in them (see below). Over the course of time, the phonemes š, č, ž, and ẓ̌ reappeared in south-western Karaim in the second half of the 19th century, but were pronounced alveolarly only in the younger Slavonic loanwords due to the high level of bilingualism, see Németh (2011a: 87–88).

²⁹ In Karaim texts one can very rarely find Hebrew *rafe* used above *zayin* to note ẓ̌ (ř), and a small *tzade* (having in some cases the shape of a small hook) noted under *zayin* (צ) to form the letter ẓ̣̌. The latter was used by Jeshua-Josef Mordkowicz, although inconsistently. Hebrew *geresh* or *gershayim* were never used in their diacritical role by Karaims.

could have never been treated as a decisive argument as far as phonetic values are concerned, cf. e.g. זאַנימני *zanyimny* and ינזיטסען *ynzytasen* on folio 220 r^o in JSul.III.69.

Consequently, all we can say about dealveolarisation in south-western Karaim must be based on the well-documented $\acute{s} > s$ shift. The assumption that all four shifts (\acute{s} , \acute{z} , \acute{c} , \acute{z} $>$ s , z , c , z) operated simultaneously must remain hypothetical, but nevertheless probable.

The four texts exhibit in this case a phenomenon similar to what we have described in the previous subchapter: the copyist of the oldest text makes a clear distinction between \acute{s} and s , whereas in JSul.III.03 and in the texts copied at the beginning of the second half of the 19th century only s is recorded (noted with *samekh*, see also chapter 3.6 below). The only three exceptions in which * \acute{s} is preserved in JSul.III.03 are Persian loanwords,³⁰ which would suggest that the text was written at the very end of the period when dealveolarisation was taking place and the pronunciation of * \acute{s} remained alveolar the longest in loanwords. Table 6 below presents the relevant linguistic material. Cells with a grey background contain words with the original \acute{s} preserved.

3.6. The phonetic value of *shin* before a syllable containing *i*

The use of the letter *shin* in JSul.III.69 and JSul.III.79 points to a significant phonetic peculiarity: it was, namely, very regularly used by Jeshua-Josef Mordkowicz to denote /s/, but only in front of a syllable that contained *i*, i.e. in a position in which s was being palatalised into \acute{s} from at least the second half of the 19th century on³¹ – in every other position it was consistently written in combination with the letter *samekh*. It is therefore safe to say that *shin* served to denote \acute{s} . Moreover, the manuscript JSul.III.03 in this case, too, reflects irregular notation, i.e. its copyist used both *samekh* and *shin* in this position, interchangeably, cf. e.g. the word *kemistin* (< *kemištin*) written as כַּימִישְׁטִין and כַּימִיסְטִין on folios 100 r^o and 100 v^o, or *sirtkin* written in two ways, as שִׁרְטְכִין and סִרְטְכִין, on folio 101 r^o. This either reflects a simple orthographic irregularity, or has deeper roots, namely it reflects the alternating pronunciation of $s \sim \acute{s}$ and tells us that the process of palatalising the dental fricative s in south-western Karaim was already ongoing at the time the prayer book was written. The latter, when seen in the light of the previous two phenomena of $\ddot{u} \sim i$, $\ddot{o} \sim e$ and $\acute{s} \sim s$, which cannot be explained by mere orthographic irregularity, seems far more probable. The oldest manuscript bears no traces of this tendency.

³⁰ Namely, *dušman*, *fašman*, and *šahar*, cf., however, the word *dušman*, denoted twice with -s- in the same manuscript, דוּסְמַן *dusman* (folio 100 v^o), דוּסְמַן לַרְיִמְנִין *dusmanlaryimny* (101 r^o) and two other loanwords that are spelled with *samekh* representing s in place of the original \acute{s} , namely סַהַט *sahat* (100 v^o), and סַוַּוַּיַּט סַוַּוַּיַּטִּינִין *savayatyyny* (101 r^o) and סַוַּוַּיַּטִּינִין *savayatyyny* (101 v^o). For the meaning and etymology of these words see Zajęczkowski W. (1961).

³¹ More precisely, the process operated in front of *i* and \acute{c} , \acute{d} , \acute{d} , \acute{g} , \acute{k} , \acute{l} , \acute{n} , \acute{s} , \acute{t} , \acute{t} , \acute{z} . For a detailed description of this change see Németh (2011a: 74–80); for a description of the use of the letter *shin* and of the way south-western Karaim s and \acute{s} were denoted see Németh (2011b: 104–105, 112–113, 119, 122–123).

Line nr.	Linguistic differences (š vs. s)			
	JSul.III.63 (around 1778)	JSul.III.03 (shortly after 1805)	JSul.III.69 (1851–1866)	JSul.III.79 (1851–1866)
11	<i>jabuškany</i>	<i>jabuskanym</i>	<i>jabuskanym</i>	<i>jabuskanym</i>
15	<i>ülüš</i>	<i>ilis</i>	<i>ilis</i>	<i>ilis</i>
19	<i>kemištin de</i>	<i>kemistinde</i>	<i>kemistinde</i>	<i>kemistinde</i>
22	<i>jaχšy</i>	<i>jaχsy</i>	<i>jaχsy</i>	<i>jaχsy</i>
24	<i>šahat</i>	<i>sahat</i>	<i>sahat</i>	<i>sahat</i>
29	<i>ašyra</i>	<i>asyra</i>	<i>asyra</i>	<i>asyra</i>
30	<i>dušman</i>	<i>dusman</i>	<i>dusman</i>	<i>dusman</i>
31	<i>bolušluyunnu</i>	<i>bolusluyumnu</i>	<i>bolusluyumnu</i>	<i>bolusluyumnu</i>
32	<i>dušmannyn</i>	<i>dušmannyn</i>	<i>dusmannyn</i>	<i>dusmannyn</i>
37	<i>ošol</i>	<i>osol</i>	<i>osol</i>	—
39	<i>azaškanlarymny</i>	<i>azaskanlarymny</i>	<i>azaskanlarymny</i>	<i>azaskanlarymny</i>
40	<i>yšančymny</i>	<i>ysancymny</i>	<i>ysancymny</i>	<i>ysancymny</i>
41–42	<i>sayyšlajdylyr</i>	<i>sayyslajdylyr</i>	<i>sayyslajdylyr</i>	<i>sayyslajdylyr</i>
43	<i>ašyra</i>	<i>asyra</i>	<i>asyra</i>	<i>asyra</i>
43	<i>jarlyyašymny</i>	<i>jarlyyasymny</i>	<i>jarlyyasymny</i>	<i>jarlyyasymny</i>
47	<i>bulušluyuma</i>	<i>bulusluyuma</i>	<i>bulusluyuma</i>	<i>bulusluyuma</i>
48	<i>jašlarymny</i>	<i>jaslarymny</i>	<i>jaslarymny</i>	<i>jaslarymny</i>
49	<i>dušmanlarymny</i>	<i>dusmanlarymny</i>	<i>dusmanlarymny</i>	<i>dusmanlarymny</i>
51	<i>fašman</i>	<i>fašman</i>	<i>fasman</i>	<i>fasman</i>
53	<i>išlerimnin</i>	<i>islerimnin</i>	<i>islerimnin</i>	<i>islerimnin</i>
55	<i>šavayatyynny</i>	<i>savayatyynny</i>	<i>savayatyynny</i>	<i>savayatyynny</i>
57	<i>bošatuvču</i>	<i>bosatuvču</i>	<i>bosatuvču</i>	<i>bosatuvču</i>
59	<i>günexlerinnin</i>	<i>ginexlerinnin</i>	<i>ginexlerinnin</i>	<i>ginexlerinnin</i>
59	<i>azaškanlarymny</i>	<i>azaskanlarymny</i>	<i>azaskanlarymny</i>	<i>azaskanlarymny</i>
60	<i>šaharyna</i>	<i>šaharyna</i>	<i>saharyna</i>	<i>saharyna</i>
62	<i>jarlyyašymny</i>	<i>jarlyyasymny</i>	<i>jarlyyasymny</i>	<i>jarlyyasymny</i>
63	<i>šavayatyynny</i>	<i>savayatyynny</i>	<i>savayatyynny</i>	<i>savayatyynny</i>

Table 6. The continuants of *š in the four hymn translations analysed

The relevant linguistic material is presented in table 7 below. To ensure greater clarity I have separately indicated *ś* in the forms in which it is justified to reconstruct it and presented them in cells with a grey background. The transcription is therefore augmented with *ś*, i.e. a phonetic feature, but I have refrained from reconstructing any other instances of possible palatal pronunciation of the consonant before a syllable containing *i*, even though this could have affected all the respective consonants simultaneously (see Németh 2011a: 74–87 and below).

Line nr.	Linguistic differences (<i>ś</i> vs. <i>š</i> and <i>s</i>)			
	J <i>Sul</i> .III.63 (around 1778)	J <i>Sul</i> .III.03 (shortly after 1805)	J <i>Sul</i> .III.69 (1851–1866)	J <i>Sul</i> .III.79 (1851–1866)
8	<i>süvümlü</i>	<i>sivimli</i>	<i>śivimli</i>	<i>śivimli</i>
13	<i>tüslü</i>	<i>tišli</i>	<i>tišli</i>	<i>tišli</i>
15	<i>kemištin</i>	<i>kemištin</i>	<i>kemištin</i>	<i>kemištin</i>
16	<i>sürdün</i>	<i>sirdin</i>	<i>śirdin</i>	<i>śirdin</i>
19	<i>üstüme</i>	<i>istime</i>	<i>ištime</i>	<i>ištimize</i>
19	<i>kemištin</i>	<i>kemistin</i>	<i>kemištin</i>	<i>kemištin</i>
19	<i>sürdün</i>	<i>sirdin</i>	<i>śirdin</i>	<i>śirdin</i>
27	<i>sürtüvücü</i>	<i>širtivcü</i>	<i>śirtivci</i>	<i>śirtivci</i>
34–35	—	<i>ešitivinni</i>	<i>ešitivinni</i>	<i>ešitivinni</i>
36	<i>tefilesin</i>	<i>tefilešin</i>	<i>tefilešin</i>	<i>tefilešin</i>
43	<i>ešittiremen</i>	<i>ešittiremen</i>	<i>ešittiremen</i>	<i>ešittiremen</i>
45	<i>tefilesin</i>	<i>tefilešin</i>	<i>tefilešin</i>	<i>tefilešin</i>
45	<i>miskinlernin</i>	<i>miskinlernin</i>	<i>miškinlernin</i>	<i>miškinlernin</i>
46	<i>süvgende</i>	<i>sivgende</i>	<i>śivgende</i>	<i>śivgeninde</i>
46	<i>süvgün</i>	<i>śivgin</i>	<i>śivgin</i>	<i>śivgin</i>
48	<i>sürtkün</i>	<i>širtkin</i>	<i>śirtkin</i>	<i>śirtkin</i>
50	<i>ešitüvünnü</i>	<i>ešitivinni</i>	<i>ešitivinni</i>	<i>ešitivinni</i>
52	<i>ešittim</i>	<i>ešittim</i>	<i>ešittim</i>	<i>ešittim</i>
53	<i>sürtkün</i>	<i>sirtkin</i>	<i>śirtkin</i>	<i>śirermen</i>
54	<i>jetsin</i>	<i>jetšin</i>	<i>jetšin</i>	<i>jetšin</i>
56	<i>χajifsüngün</i>	<i>χajifšingin</i>	<i>χajifšingin</i>	<i>χajifšingin</i>
57	<i>χajifsünüvcü</i>	<i>χajifšinivcü</i>	<i>χajifšinivci</i>	<i>χajifšinivci</i>
58	<i>ešittirgin</i>	<i>ešittirgin</i>	<i>ešittirgin</i>	<i>ešittirgin</i>

Table 7. The *s* > *ś* change attested in the four hymn translations analysed

The question remains whether the palatalisation of $c > \acute{c}$, $z > \acute{z}$, $ʒ > \acute{ʒ}$, and $n > \acute{n}$ in front of i and \acute{c} , \acute{d} , \acute{g} , k , l , \acute{n} , \acute{s} , \acute{t} , \acute{z} we know from the second half of the 19th century operated simultaneously to the $s > \acute{s}$ change. It seems that the answer might be affirmative, given that in later times the $c > \acute{c}$, $z > \acute{z}$, $ʒ > \acute{ʒ}$, and $n > \acute{n}$ changes occurred in the same phonetic environment as the $s > \acute{s}$ shift did. However, the difference between these pairs of palatalised and non-palatalised consonants was noted extremely rarely (see Németh 2011b: 122–123).

3.7. The testimony of the erroneous forms in JSul.III.03

The manuscript JSul.III.03 seems thus to have been written in a period of transition in south-western Karaim. This has also been corroborated by the evidence of erroneously written words, in which \acute{o} , \acute{u} and \acute{s} appear in a position where they are etymologically not motivated, cf.:

Line nr.	Linguistic differences (phonetically erroneous forms)			
	JSul.III.63 (around 1778)	JSul.III.03 (shortly after 1805)	JSul.III.69 (1851–1866)	JSul.III.79 (1851–1866)
17	<i>kipligim</i>	<i>küpligim</i>	<i>kipligim</i>	<i>kipligim</i>
25	<i>kertiden</i>	<i>körtiden</i>	<i>kertiden</i>	<i>kertiden</i>
37	<i>kiplegin</i>	<i>küplegin</i>	<i>kiplegin</i>	<i>kiplegin</i>
40	<i>jasanyajsen</i>	<i>jašanyajsen</i>	<i>jasanyajsen</i>	<i>jasanyajsen</i>
62	<i>kertiligi</i>	<i>körtiligi</i>	<i>kertiligi</i>	<i>kertiligi</i>

Table 8. A list of phonetically erroneous forms in the four hymn translations analysed

These errors can only be explained as a result of a hypercorrection introduced by a copyist who was unable to consult his own feel for the language to reconstruct correctly some of the original forms. Besides, the errors are quite significant. First of all, the copyist must have presumably heard both \acute{o} , \acute{u} and e , i , as well as \acute{s} and s in his immediate linguistic environment. Secondly, forms like *בִּיִּרְטִידִין* *körtiden* (100 v^o), *בִּיִּרְטִילִיגִי* *körtiligi* (101 r^o) on the one hand, and *בִּיִּפְלִיגִים* *küpligim* (100 r^o) and *בִּיִּפְלִיגִין* *küplegin* (100 v^o) on the other confirm that a proper reading of the combination of letters *yodh* and *waw* (with *hölām* or *shürūq*) is \acute{o} and \acute{u} , respectively, and not \acute{o} and \acute{u} (i.e. not an o and u that palatalised the preceding consonant we know from north-western Karaim). This constitutes valuable proof as an \acute{o} , \acute{u} could have by no means alternated with e , i . These two sets of continuants of $*\acute{o}$ and $*\acute{u}$ were the results of two separate processes that led to the elimination of front labials from the western Karaim vowel system: in the northern subdialect front labials lost their frontness, in the southern counterpart they lost their roundness. This, in turn, means that such forms as e.g. *בִּיִּפְלִיגִינִדִין* cannot be deciphered as,

say, **kop'lugünden*, instead of *köplügünden*, and cannot serve as an argument in favour of dialect interferences.

As far as קױפּלױגױנדן *jašanyajsen* (folio 101 r^o) is concerned, the erroneous use of *š* instead of the expected *s* shows clearly that at the time the manuscript was written the copyist had problems reconstructing the original value of *s* < **š*.

3.8. Earlier attempts at establishing the date of these processes

As far as I am aware, only a few authors have touched upon the question of the age of the *š, č, ž, ẓ̌* > *s, c, z, z* dealveolarisation process. I do not know of any such attempt made regarding the *ö* > *e, ü* > *i* delabialisation.

Above all, we should mention here Munkácsi (1902: 50–52) and Grzegorzewski (1914–1915: 93), who treated the south-western Karaim dealveolarisation as vital proof of an alleged alternation of alveolar and dental fricatives and affricates in the language of the Codex Comanicus. Ergo, they treated this feature as an archaism in Karaim dating back to the 13th–14th centuries or so (see e.g. Drüll 1980: 11–16 for an overview of the research on the age of this Middle Kipchak source). Without, however, going into detail, it should be mentioned here that their orthographic arguments in favour of such a change in the Codex Comanicus were convincingly rejected by Melich (1903: 52–53), Grønbech (1942: 8), Räsänen (1949: 173), and Bodrogligeti (1971: 21–36). Furthermore, Grønbech (1942: 8) rejected the validity of the testimony of south-western Karaim in this matter, too, and wrote: “der Übergang von *č, ĝ* und *š* zu *c, dz* und *s* im heutigen Luckerkaraimischen, der auch als Stütze für die komanische Zetacismushypothese ins Feld geführt wurde, beweist nichts, da diese Entwicklung offenbar ganz späten Datums ist; im Trokikaraimischen und Karatschaischen ist sie unbekannt.” However, he failed to explain more accurately when this process could have taken place, nor did he present arguments proving that dealveolarisation is a much later phenomenon. All in all, Munkácsi’s and Grzegorzewski’s early conclusions were not repeated in the most important later descriptions of the language of Codex Comanicus.³²

The analysed material clearly shows that the south-western Karaim dealveolarisation process was a much younger process. And even if we find examples of dealveolarisation in several other Turkic languages, as e.g. in Kazakh, Karakalpak, Nogai, Balkar, Khakas or Azerbaijani, see Tenišev (1984: 234–235 [*š* > *s*], 240 [*ž* > *z*], 245–248 [*č* > *c*]), it seems, for the time being, that the Karaim dealveolarisation process shares historically nothing in common with them, all the more as in all other Turkic languages the process involved only some phonemes, whereas in Karaim it affected all alveolar affricates and fricatives. Ergo, the south-western Karaim dealveolarisation process was not a Kipchak dialectal feature inherited by Karaim. Finally, as argued below, the Karaim dealveolarisation shares nothing in common with the so-called Polish mazuration, either.

³² For an exhaustive bibliography of works devoted to the language of Codex Comanicus see Drimba (2000: 11–22).

3.9. The probable age and relative chronology of these processes

To answer this question with the greatest possible accuracy we must take into consideration a number of other factors and juxtapose them with the testimony of the linguistic material available to us.

First of all, we must remember that the delabialisation and dealveolarisation processes took place in both Lutsk and Halych Karaim. In private letters authored by Lutsk Karaims, born at the end of the 18th century, we find no traces of *š, *ö, and *ü.³³ This is an important factor when we realise that after the First Partition of Poland in 1772, Halych became a part of the Habsburg Empire, an event which led to its isolation. After this date Lutsk and Halych were in different countries: until 1795 Lutsk was a part of Poland. Later, after 1795, i.e. following the Third Partition of Poland, it became a part of the Russian Empire. Obviously, this does not mean that the contacts between these two communities was totally cut off. As Kizilov pointed out (2009: 93–94, 98), even though crossing the Austro-Russian border posed a considerable problem until 1918, the members of these two communities often visited or married each other and collaborated on joint financial projects. There were also three hazzans in Lutsk that were of Galician origin in the second half of the 19th century and during the Great War. Still, it must have been far more problematic for Karaims to travel in large numbers between communities similar to what happened e.g. after the Haidamak massacre in Derazhne in 1768 when the survivors eventually moved to Halych (see e.g. Kizilov 2009: 50–51). Until the interwar period the latter event was the last movement of people between Volhynia and Galicia we know of that involved whole families. In fact, 1772 marks the beginning of demographic stagnation in Halych even though in the first years of Austrian rule the number of births exceeded the number of deaths (see Kizilov 2009: 96).

Secondly, we must remember that the Halych Karaim community was never numerous. At the end of the 18th century, their population in this region approximated 200–250 people (see Kizilov 2009: 57, 96). We must therefore bear in mind that a language that is spoken by such a small number of people is much more impressionable to any phonetic change.

Thirdly, linguistic processes tend to be reflected in writing with a certain delay, which is especially true in the case of liturgical texts, which preserve archaic features much more often.

Fourthly, as we mentioned, in texts written by persons born at the turn of the 18th and 19th centuries, e.g. Jeshua-Josef Mordkowicz, we cannot find any traces of the original *ö, *ü, and *š. The processes must therefore have ended before this generation was born. But even though the processes described in the present article occurred at approximately the same time and in the same territory, there is one considerable difference between the š > s dealveolarisation and the ö > e, ü > i delabialisation processes. This is namely that the latter was certainly triggered under the influence

³³ See e.g. the letter of Moshe Firkowicz (1797–1872) in Németh (2011b: 243–247).

of the Slavonic linguistic environment, and therefore theoretically could have operated in both Lutsk and Halych separately. For the time being, however, the cause of the dealveolarisation process in south-western Karaim remains obscure. We cannot document it in the local Yiddish,³⁴ Ukrainian, or Polish dialects: the well-known Polish mazuration is a form of dealveolarisation that looked the same, but operated most probably from the second half of the 12th to the 14th century and did not spread to the territories inhabited by Karaims (see Klemensiewicz 1974: 35–36, 44). Until proved to the contrary, the dealveolarisation process in south-western Karaim may be assumed to have operated in the language of both communities at the same time.

If we put these factors together and combine them with the evidence of the edited handwritten texts, it seems therefore justified to say that the $\acute{s} > s$ process operated in the 18th century, presumably most intensively in its final decades. This would explain why the process involved both the Lutsk and Halych varieties of Karaim, including the idiolect of the copyist of JSul.III.03. The latter manuscript showed that the $\acute{s} > s$ change had ended before he copied it, for he only used the original * \acute{s} in loanwords and made one mistake in reconstructing it. The same manuscript, however, reflects a far-reaching alternation of $\ddot{o} \sim e$, and $\ddot{u} \sim i$, as well as $s \sim \acute{s}$ in front of a syllable with i , and testifies that the $\ddot{o} > e$, $\ddot{u} > i$, $s + i > \acute{s} + i$ processes were ongoing during the copyist's lifetime. This also means that these processes ended later than the $\acute{s} > s$ shift. Given that the latter processes are of Slavonic origin, such a chronology is in compliance with the fact that this is the period in which the Slavonic influence started to gain strength, to eventually become the major factor shaping south-western Karaim in the 19th century. Finally, since we know that the analysed texts copied by Jeshua-Josef Mordkowicz only exhibits e and i , s and a regular notation of \acute{s} in front of syllables containing i , and since we know that he was born in 1802, it seems valid to say that the $\ddot{o} > e$, $\ddot{u} > i$, $s + i > \acute{s} + i$ processes also operated in the final decades of the 18th century and ended presumably around 1800, in some idiolects or areas possibly somewhat later than the $\acute{s} > s$ process.³⁵ Importantly, however, both processes could have started much before 1772.

4. Final remarks and future perspectives

In his article devoted to the phonetic characteristics of Lutsk Karaim Aleksander Dubiński (1978: 40) compared the south-western Karaim dealveolarisation process to similar processes in other Turkic languages and remarked that “die hier erwähnte

³⁴ In Yiddish, the confusion of the sibilants \acute{s} , \acute{z} , \acute{c} and s , z , c is characteristic only of the north-western dialect (see Weinreich 1963: 348–349, 353–354, and fig. 5 on page 347). The explanation of this dialectological peculiarity of Yiddish still remains an open question (even after Loudén's article published in 2000). I thank professor David Gold (New York) for his discussion on the origin of the Karaim dealveolarisation.

³⁵ Shortly after submitting this article for printing I saw a Torah translation stored in the archive of Anna Sulimowicz copied by Jeshua-Josef Mordkowicz (catalogue number JSul.III.01) in which front labials are partially preserved (cf. e.g. *sözün, kördi, ivretivlerin*) whereas \acute{s} not (e.g. *jaχsy, is*). This agrees with the relative chronology presented here.

phonetische Besonderheit wird bisweilen auch als Einfluss der lokalen slawischen Umgebung erklärt, jedoch Beispiele aus anderen Türksprachen eher diese Ansicht verneinen.” It is not entirely clear which Slavonic phenomenon Dubiński was referring to as an influential factor, but the linguistic material presented in this article shows that this process should not be linked to other similar processes present either in Turkic or Slavonic linguistic world.

As a general remark, we can say quite clearly that the second half of the 18th century seems to be one of the most eventful periods in the history of south-western Karaim. All peculiarities characteristic of it seem to have evolved in this period. It seems justified, then, to treat the evolution of these phenomena as basic turning points in the history of this language and to refer to Karaim from before this period (i.e. prior to the $\check{s} > s$ and $\ddot{u} > e$, i changes) as Middle Western Karaim, whereas to Karaim as used after these changes had operated as Early Modern Karaim.

The chronological order of the manuscripts accords with the changes that occurred in Karaim. In other words, the older the manuscript is, the more archaic the linguistic features it exhibits. The present author is currently preparing a new study, i.e. a comparative critical edition of a large number of *piyutim* translations from this period, which, hopefully, will confirm the conclusions presented in this article or elaborate on them. It is also hoped that in the future clearer answers will be found to some of the questions that could not be answered or could only be answered partially. If our conclusions are correct, in future studies we could use phonetic features as an additional criterion for establishing the date of south-western Karaim manuscripts.

Finally, I find it important to emphasise that, in my opinion, manuscripts that contain words like e.g. *köpliginden*, *közlerimni*, i.e. words that may bring to the mind the idea of dialectal interferences, give, in fact, evidence of archaic language features.

References

- Abrahamowicz Z. 2001. Dzieje Karaimów w Haliczu. [Z. Abrahamowicz's manuscript prepared for print by S. Gąsiorowski]. – *Przegląd Orientalistyczny* 198–199: 3–16.
- Akhiezer G., Markon I. 2007. Joseph ben Samuel ben Isaac ha-Mashbir. – Skolnik F., Berenbaum M. (eds.). *Encyclopaedia Judaica. Second Edition*. [vol. 11]. Detroit, New York, San Francisco, New Haven (Connecticut), Waterville (Maine), London: 425.
- Bałaaban M. 1927. *Studja historyczne*. Warszawa.
- Baskakov N.A. 1963. Türk dillerinde ön vokallerin düzleşmesi ve karaimcenin Halicz-Luck lehçesinde $\ddot{o} > e$ ve $\ddot{u} > i$ değişimleri. – *Türk Dili Araştırmaları Yıllığı Belleten*: 33–37.
- Berta Á. 1996. *Deverbale Wortbildung im Mittelkiptschakisch-Türkischen*. [= *Turcologica* 24]. Wiesbaden.
- Bodrogligeti A. 1971. *The Persian Vocabulary of the Codex Cumanicus*. [= *Bibliotheca Orientalis Hungarica* 16]. Budapest.
- Deutsch G. 1905. Piyuṭ. – Singer I. et al. (eds.). *The Jewish Encyclopedia*. [vol. 10]. New York, London.
- Dubiński A. 1978. Phonetische Merkmale des Łuck-Halicz Dialektes der karaimischen Sprache. – *Rocznik Orientalistyczny* 39.2: 33–44.

- Drimba V. 2000. *Codex Comanicus. Édition diplomatique avec fac-similés*. București.
- Drüll D. 1980. *Der Codex Cumanicus. Entstehung und Bedeutung*. Stuttgart.
- Fleischer E. 2007. Piyyut. – Skolnik F., Berenbaum M. (eds.). *Encyclopaedia Judaica. Second Edition*. [vol. 16]. Detroit, New York, San Francisco, New Haven (Connecticut), Waterville (Maine), London: 192–195.
- Gąsiorowski S. 2008. *Karaimi w Koronie i na Litwie w XV–XVIII wieku*. Kraków, Budapest.
- Grønbech K. 1942. *Komanisches Wörterbuch. Türkischer Wortindex zu Codex Cumanicus*. København.
- Grzegorzewski J. 1914–1915. Dzetacyzm perski „kodeksu kumańskiego”. – *Rocznik Oryentalistyczny* 1: 85–93.
- Juldašev A.A. 1965. *Analičičeskie formy glagola v tjurkskich jazykach*. Moskva.
- Kizilov M. 2009. *The Karaites of Galicia. An ethnoreligious minority, among the Ashkenazim, the Turks, and the Slavs. 1772–1945*. Leiden, Boston.
- Klemensiewicz Z. 1974 [2002]. *Historia języka polskiego*. [7th edition]. Warszawa.
- Louden M.L. 2000. Contact-induced phonological change in Yiddish. Another look at Weinreich’s riddles. – *Diachronica* 17: 85–110.
- Melich J. 1903. A moldvai csángók eredetéhez. – *Ethnographia* 1–2.14: 52–54.
- Munkácsi B. 1902. Komanischer Ursprung der Moldauer Tschango. – *Keleti Szemle. Közlemények az ural-altaji nép- és nyelvtudomány köréből* 3: 245–253.
- Németh M. 2011a. A different look at the Lutsk Karaim sound system (from the second half of the 19th century on). – *Studia Linguistica Universitatis Jagellonicae Cracoviensis* 128: 69–101.
- Németh M. 2011b. *Unknown Lutsk Karaim letters in Hebrew script (19th–20th centuries). A critical edition*. [= *Studia Turcologica Cracoviensia* 12]. Kraków.
- Németh M. 2014. Historical phonology of western Karaim: Dating the evolution of consonant harmony in the north-western dialect. [forthcoming in *Studia Linguistica Universitatis Jagellonicae Cracoviensis* 131].
- Räsänen M. 1949. *Zur Lautgeschichte der türkischen Sprachen*. [= *Studia Orientalia* 15]. Helsinki.
- Tenišev È.R. 1984. *Sravnitel’no-istoričeskaja grammatika tjurkskich jazykov*. Moskva.
- Tuori R. 2013. *Karaite zēmirōt in Poland-Lithuania. A study of paraliturgical Karaite Hebrew poems from the seventeenth and eighteenth centuries*. Helsinki.
- Weinreich U. 1963. Four riddles in bilingual dialectology. – *American contributions to the Fifth International Congress of Slavists*. [vol. 1]. *Linguistic contributions*. The Hague: 335–359.
- Zajączkowski W. 1961. Die arabischen und neupersischen Lehnwörter im Karaimischen. – *Folia Orientalia* 3/1–2: 177–212.
- Zarachowicz Z. 1935. Łuwachy hazzanłarnyn Halicte. – *Karaj Awazy* 8: 23.

Acknowledgement

This project was financed by The National Science Centre of Poland (Narodowe Centrum Nauki), grant number DEC-2011/03/D/HS2/00618. The author benefited from grants 00497/12/FPK/NIMOZ and 02261/13/FPK/NIMOZ financed by The National Institute of Museology and Collections Protection of Poland (Narodowy Instytut Muzealnictwa i Ochrony Zbiorów).

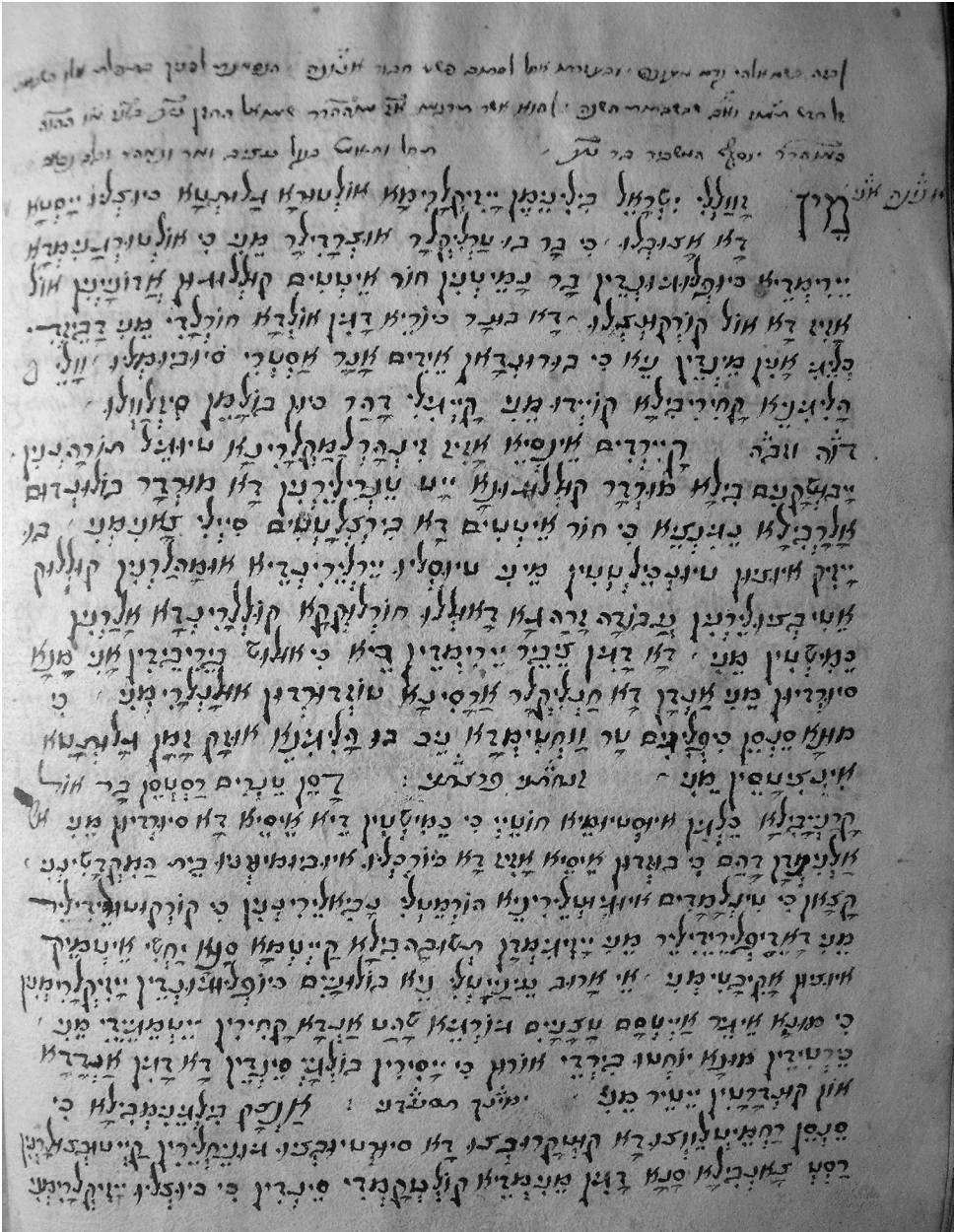


Figure 1. Facsimile of folio 35 v° of JSul.III.63

