

THE DISCUSSION ON CONSONANT HARMONY IN NORTHWESTERN KARAIM*

0. Rationale 1. What happened to northwestern Karaim 2. The discussion 3. Conclusions

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Abstract: *During more than a century of investigation, northwestern Karaim has been labelled as being consonant-, vowel- and syllable-harmonical. The present paper attempts at summarizing the debate and drawing some conclusions from it. Views of 36 researchers are presented chronologically together with a commentary and information on their impact on our discussion.*

Keywords: *northwestern Karaim, phonology, consonant harmony, vowel harmony, syllabic harmony*

KUZEYBATI KARAIMCE'DE ÜNSÜZ UYUMU TARTIŞMASI

Özet: *Yüzyıldan fazla süren araştırmalarda, Karaimce ünsüz-, ünlü- ve hece-uyumlu bir dil olarak tanımlanmıştır. Bu yazıda, bu konuda yapılan tartışmaların bir özeti ve bazı sonuçları sunulmaktadır. Bu bağlamda, 36 ayrı araştırmacının görüşleri tarihsel bir sırada verilmekte; yorumumuza ve tartışmamıza etkileri açıklanmaktadır.*

Anahtar Kelimeler: *Kuzeybatı Karaimce, sesbilim, ünsüz uyumu, ünlü uyumu, hece uyumu*

0. Rationale

Harmony is without doubt one of the most basic features of the Turkic linguistic family. There are plenty of descriptions of its workings in Turkish and in many other languages. However, when I tried to see through the various transcriptions of northwestern Karaim¹, I realized that after more than a century of investigation, the

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1 The more usual naming of Karaim dialects is based on the names of the towns they are (were) spoken in. In the case of western Karaim, I prefer the geographical nomenclature (Halych = SW, Trakai = NW) for two reasons outlined below; in the case of Crimea, I will use it for consistency:

1. Both dialects are (were) also spoken in other towns: NW in Naujamiestis (Nowe Miasto), Panevėžys (Poniewież), Vilnius &c., SW in Kulychiv (Куличів, Kuliczów), Kukeziv (Кукезів, Kukizów), Lutsk (Луцьк, Łuck) &c. Trakai and Halych were not necessarily the biggest aggregations.

2. The current, Lithuanian, name of Trakai is same as in English. When the NW dialect was first described by a linguist, it was called *Troki*. The current, Ukrainian, name

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discussion has still not reached a conclusion on the issue of whether it is the vowels, the consonants or the syllables, that are the carriers of the phenomenon in this now almost extinct dialect.

The main goal of this paper is to summarize the dispute. I will: **1.** briefly present my personal view on the issue of what phonetic changes which took place in northwestern Karaim, **2.** list the opinions of various researchers with some commentary, and **3.** attempt at drawing some conclusions from the debate.

1. What happened to northwestern Karaim

Just as the existence of front-back vowel harmony is a standard feature of the Turkic languages, it is also a standard feature that at least *g*, *k* and *l* play their little roles, too. The oppositions palatal *ǰ*, *k*, *l* : velar *ɣ*, *q*, *l* (with different degrees of palatalization, velariness and possible spirantization) are absolutely ubiquitous, but not phonological². It has so happened, however, that as a result of a few unusual—at least in the Turkic world—phonetic changes, in northwestern Karaim the consonants became the actual carriers of the harmony.

The early history of Karaims remains, in many aspects, obscure. It should be safe to assume that the ancestors of the western Karaims settled in Kiev as early as the 10th c. and moved no later than in the 14th c. to Galicia and in the 15th c. to Lithuania. For the past five hundred years or more, they have been surrounded by peoples speaking Slavonic—and in the case of northwestern Karaim also by Lithuanian—languages. The only Turkic languages they have been in real contact with were other dialects of Karaim and the now already extinct dialect of the Polish Tatars.

This has proven crucial from the point of view of phonetics: **1.** consonant palatalizations—merely allophonic in Turkic—are phonological in Slavonic, and what is more, very popular; **2.** of the eight Turkic vowels (back *a*, *o*, *y*, *u* and front *e*, *ö*, *i*, *ü*), *ö* and *ü* are missing from the Slavonic languages' inventories, and **3.** *y*- does not occur in anlaut in the surrounding Slavonic languages., nor in Lithuanian.

This appears to have induced the first three of the four following changes (on how commonly they are accepted, see below): **1.** the development of palatalization in all (not only *g* and *k*) consonants adjoining front vowels, **2.** the loss of non-initial

of Halych is *Галуц*. When the SW dialect was first described, it was *Halicz*. In linguistic literature, it also goes by the names *Halich*, *Halyč*, *Kalič* &c. In both cases, the names have changed (at least in spelling) in the meantime, too. This introduces unnecessary confusion.

2 With some exceptions, which are unimportant for our case, such as combinations with *i* in Uigur. Cf. also *syllabic harmony* in footnote 5 and 2.18.

ö and ü with an automatic palatalization of the preceding consonant³, **3.** the change of *y*- > *i*-, and **4.** the change of *e* > 'a'⁴. Of the original four front vowels, three (*e*, *ö* and *ü*) jettisoned their frontness to consonants in almost all positions, and the one that did not (*i*), merged in anlaut with its back counterpart: **emen* > *eṃañ* 'oak', **dört* > *d'ort* 'four', **yrax* > *irax* 'far', and **süt* > *śut* 'milk'. Thus, the harmony suddenly turned out to have shifted from vowels to consonants.

For a full picture, it needs to be noted however, that there are some limitations to this system: **1.** *-p*, *-r* and usually *-k* are essentially not palatalized in the absolute anlaut, **2.** consonant clusters do not have to be palatalized (e.g. *śuv'du* ~ *śuvdu* 'he loved', *koṗ'tañ* ~ *koṗ'tañ* 'from many', cf. Kowalski 1929: LXXIV), and **3.** harmony may be distorted in loan words and Fremdwörter. The last point is also true for all the other Turkic languages.

Moreover, vowel harmony has not been abandoned entirely: *i* and *y* still act harmonically in suffixes and are preserved in roots except for anlaut.

Finally, it needs to be added that consonant harmony is essentially only visible in what were originally front words, because it is the front series of vowels that has been generally lost and has modified the adjoining consonants, whereas the back series has been preserved without much change. This is not very important synchronically, for in terms of vowels, the great majority of words are now either back or mixed, i.e. front in the first syllable and back in all or almost all the other syllables.

In other words, northwestern Karaim can be called a *consonant* harmonical language because—ideally speaking—all consonants in all words always agree with each other in respect to palatalization, and vowels do not. If both, consonants and vowels always agreed, I would call it a *vowel* harmonical language because in such a case consonant palatalization would be purely allophonic, and also this is the original status of northwestern Karaim and the original and current status of almost all its cognates. This observation is very important because, as it will be seen in 2., the entire discussion concerns in fact only two points: **1.** the quality of vowels (the palatalization of consonants is never questioned), and **2.** the importance of the relationship between vowels and consonants (also reflected in the terminology⁵).

3 In anlaut, *ö*- remained unchanged and *ü*- was preserved in some words, while in others it alternates with *ju*-; cf. Hamp 1976: 212 and others.

4 Except for the first syllable and the suffixes *-čex* and *-ej*—which, however, do not have their *-a-* counterparts.

5 A note on terminology:

The term *consonant harmony* has been used in Turkology in at least three meanings: **1.** palatalization agreement across all consonants in a word, regardless of the intervening

vowels; 2. palatalization agreement in the adjoining consonant and vowel, and 3. voicedness agreement in adjoining consonants on morpheme boundaries.

Even a very quick review shows that the definitions in dictionaries are not entirely compatible, either. Combining the maybe unnecessarily split definitions from Trask 1996, *harmony* might be defined as *the phenomenon, occurring in certain languages, by which only certain combinations of phonemes are permitted to occur in a specified domain, usually a single phonological word; the permitted combinations are usually those which agree (harmonize) in respect of one or more phonetic features*. Crystal 2003 defines it as *a term used in phonology to refer to the way the articulation of one phonological unit is influenced by (i.e. 'in harmony' with) another unit in the same word or phrase*. R.L. Trask's definition is closer to the actual usage of the term in that it allows a syllable as the domain of harmony; D. Crystal's definition on the other hand, appears more 'proper'. (Interestingly, they are worded the other way round: *phenomenon* in Trask 1996 and *term* in Crystal 2003.) I would rather stick with the latter.

Ad 1.: This phenomenon is precisely what I believe should be called *consonant harmony*. Both, Trask 1996 and Crystal 2003 allow for and, as a matter of fact, imply such usage. Räsänen 1949 and Johanson 1991 and later treat this phenomenon in conjunction with 2. The latter employ the term *syllabic harmony* to mean both simultaneously, which is highly misleading. The terms *intra-* and *intersyllabic harmony* they sometimes use to differentiate these meanings would be clearer, had they been used consequently, but are still misleading by suggesting that 1. and 2. are two manifestations of one phenomenon. They are also not very convenient and redundant, since both 1. and 2. already have their names, and already even more than one in the case of 2. The rare calls to treat the meanings separately (as e.g. in Csató 2000: 750) seem to go unnoticed, even by the author herself.

Ad 2.: To the best of my knowledge, Grzegorzewski 1916–18 and Räsänen 1949 (but see 2.2.) are the only works to use the term *consonant harmony* in this meaning. Grzegorzewski 1903 proposes the term *harmonization*. Krámský 1956, Čerkasskij 1965, Jankowski 1989 and other—especially Russian—scholars, use the term *synharmony* (but also often in the meaning 'harmony' in general). Johanson 1991 opts for the term *syllabic harmony* (but see 1. above), which he and É.Á. Csató Johanson later consistently promoted (1995, 1998, TkLangs &c.; but see 2.18.). The last two are also quite popular in Slavonic philology. In Uralic philology, also the term *palatal attraction* is used. See Stadnik 2002: 38 for a more comprehensive summary.

The definitions of Trask 1996 and Crystal 2003 do not disallow such usage. It appears nevertheless to be against their intention (taking into account the examples they give). My personal preference is for the term *synharmony*, given its usage in the Slavonic philology, where the phenomenon is common, and despite the fact that it is often used in the meaning 'vowel harmony' (cf. Stadnik 2002: 38). The term *consonant harmony* is, I believe, misleading in this meaning. *Syllabic harmony* is much less misleading but is still not very useful in Turkology where in most languages only very few consonants act this way. Besides, it has been tainted by L. Johanson and É.Á. Csató Johanson's frequent use of it in meanings 1. and 2. simultaneously. Furthermore, due to the impact of the term *vowel harmony*, it is a more or less common understanding that *harmony* should operate on non-adjoining phones. Finally, the term *palatal attraction* raises an unwanted association with the phenomenon of *labial attraction*.

2. The discussion

It is not my goal here to enumerate every paper mentioning any northwestern Karaim word, but rather to present an overview of the actual discussion on consonant harmony. Works that do not adopt an explicit position on the matter are included only if their authors have not expressed their opinion more overtly elsewhere, or if they are in some way important, or if they have at least been cited by another work. For the most concise overview of the whole, the following path should be taken: 2.1., 2.8., 2.18. and 2.25.

In an effort to rule out any mis- or overinterpretations—of which I believe there has already been enough in the discussion—I tried to pick quotes illustrating the authors' views rather than summarizing them with my own words. Some of the opinions were uttered in somewhat different contexts than the discussion on consonant harmony in northwestern Karaim, or contain numerous (and, in our case, needless) examples. I did my best to shorten them in such a way as to not distort the overall meaning. In rare cases where I found this to be impossible, I chose to quote too much rather than too little.

In some cases, such as for example dictionaries, the authors have only expressed their opinion indirectly through the transcription. I tried to pick a possibly small but still usable number of words to use as yardsticks. For convenience, I present below a list of the originally front-vowelled stems used as examples in the text, both in quotations and those chosen by myself:

<i>ber-</i> < *ber- 'to give'	<i>juž</i> < *jüz 'face; surface'	<i>öbğa</i> < *öbge 'ancestor'	<i>til</i> < *til 'language'
<i>bil-</i> < *bil- 'to know'	<i>kel-</i> < *kel- 'to come'	<i>öktam</i> < *öktem 'proud'	<i>toğul-</i> < *tökül- 'to spill'
<i>bolak</i> < *bölek 'herd'	<i>kijov</i> 'son-in-law'	<i>öksüz</i> < *öksüz 'orphan'	
<i>butün</i> < *büttün 'all'	<i>kok</i> < *kök 'sky; blue'	<i>örnak</i> < *örnek 'example'	<i>toŕa</i> < *töre 'law'
<i>d'ort</i> < *dört 'four'	<i>kolağa</i> < *kölege 'shadow'	<i>özan</i> < *özen 'creek'	<i>toşak</i> < *töşek 'bed'
<i>émañ</i> < *emen 'oak'	<i>kop</i> < *köp 'much'	<i>šen</i> < *sen 'thou'	<i>tuvul</i> < *tövül 'değil'
<i>gerfma</i> < *gertme 'pear'	<i>koŕk</i> < *körk 'beauty'	<i>şokkala-</i> < *şökkele- 'to reproach'	<i>üčün</i> < *üčün 'for'
<i>it</i> < *it 'dog'	<i>kož</i> < *köz 'eye'	<i>şoz</i> < *şöz 'word'	<i>ün</i> < *ün 'sound'
<i>juŕak</i> < *jürek 'heart'	<i>kuč</i> < *küč 'power'	<i>şut</i> < *şüt 'milk'	<i>üst</i> < *üst 'surface'
<i>juv</i> < *üv 'house'	<i>kün</i> < *kün 'day'		<i>üvrat-</i> < *üvret- 'to learn; to teach'

Ad 3.: The situation here is analogical to the usage of the term *syllabic harmony* in meaning 2. Employing the term *harmony* in reference to a phenomenon occurring in adjoining consonants would render it essentially synonymic to the term *assimilation* and introduce just more confusion into linguistic terminology, which is already far too inconsequent as it is.

2.0. 1888, 1893–1911: Wilhelm Radloff

In 1887 W. Radloff made a trip to Karaims in Trakai. The report (Radloff 1888) is unfortunately unavailable to me. Kowalski 1926: 219n, however, mentions that the entire Karaim text included in the report, is printed in Hebrew letters and as such, does not reveal W. Radloff's opinion on the quality of vowels. In his monumental dictionary (1893–1911), on the other hand, there are—according to Kowalski 1926: 220—about 3.000 northwestern Karaim words. They make W. Radloff's view on this matter more than clear: «**ÖKTÄM, ÖKTƏM**»⁶, «**СӖЭ**» and «**КӢН**».

The real value of this material is not clear. Naturally, W. Radloff did not perform any machine phonetic analysis. The first author to conduct this kind of test was K.M. Musaeu in 1964 (see 2.8.). The results partly confirmed W. Radloff's hearing of vowels and differed from the hearing of T. Kowalski who was to strongly criticize W. Radloff (see 2.1.). The second, and to date also the last, to analyze northwestern Karaim phonetics with a machine, were A.I. Nevins and B. Vaux in 2004 (see 2.25.). Their results disagreed with those of K.M. Musaeu, negating the hearing of W. Radloff and confirming that of T. Kowalski.

It is also interesting that W. Radloff only very rarely marks the palatalization of consonants. It seems rather improbable that the complete shift from vowel to consonant harmony (i.e. the palatalization of consonants and the full backing of vowels) should happen entirely during the less than 40 year period between W. Radloff's and T. Kowalski's publications.

It is not impossible, however, that W. Radloff witnessed the last years of an intermediate stage. If his informants were relatively old, or pronounced hypercorrectly in an official situation, it might be that he really heard front or at least centralized vowels (as in «**Э**»). If the processes of consonant palatalization and vowel backing were simultaneous (as suggested by «**ÖKTÄM, ÖKTƏM**»), and if $e > 'a$ happened before $ö, ü > 'o, 'u$, then it is possible that W. Radloff's material is in fact accurate, and T. Kowalski's criticism is ungrounded. As long as there is no certain answer to these questions, the case must remain undecided.

The impact of W. Radloff's data is—maybe unjustly—limited to the highly negative mentions in T. Kowalski's publications.

For the next step, and the actual beginning of the discussion, see 2.1. (T. Kowalski).

6 *э ist mir nur bei den Karaimen von Troki aufgestossen, es liegt zwischen a und ä und entspricht ungefähr dem englischen a in man.* (Radloff 1893–1911: X).

2.1. 1925, 1929: Tadeusz Kowalski

T. Kowalski was the first to label northwestern Karaim as being consonant-harmonical. He did it when delivering a report from his trip to Vilnius and Trakai before the Commission of Oriental Studies of the Polish Academy of Learning on 22 June 1925 (p. 27):

Punkt ciężkości zjawiska harmonizacji [...] przenosi się [...] ze sfery samogłoskowej na spółgłoskową. Zamiast zasady, że w obrębie jednego wyrazu mogą występować samogłoski bądź to tylko szeregu przedniego [...], bądź też tylko szeregu tylnego [...], mamy w narzeczu trockim zasadę, że w obrębie jednego wyrazu mogą występować bądź to tylko palatalne, bądź też tylko niepalatalne odmiany spółgłosek (por. *koklaŕ'dań* ‘z niebios’, obok *kollardan* > *kojłardan* ‘z ramion’).⁷

T. Kowalski also used this opportunity to criticize Radloff 1893–1911 (see 2.0.) for his lack of understanding of northwestern Karaim phonetics. A slightly more extensive criticism is also included in Kowalski 1926: 217n. (p. 218):

Jeżeli jednak przyjrzymy się dokładnie fonetycznej stronie tego materiału [Radloff 1893–1911], to się okaże, że Radloff przeszedł do porządku dziennego nad rzeczywistą wymową Karaimów trockich i, ulegając jakiemuś z góry powziętemu mniemaniu, — jak mu się to zresztą nieraz zdarzało — zataił zupełnie istotne cechy głosowni tego narzecza.

Za taką to istotną cechą fonetyczną północnego narzecza Karaimów polskich uważam przesunięcie punktu ciężkości zjawiska harmonizacji ze sfery samogłoskowej na spółgłoskową.⁸

It is not certain whether this criticism is not overly severe; see 2.0. At any rate, the impact of these observations was very small. Only when they were repeated later in German and in a book rather than as an article or a proceedings, did they become the most often cited work in the entire discussion. In Kowalski 1929 after,

7 The centre of gravity of the phenomenon of harmonization [...] shifts [...] from the sphere of vowels to that of consonants. Instead of the rule that inside one word only vowels of the front row [...], or only those of the back row [...], can appear, we have in the Trakai dialect a rule that inside one word either only palatal or non-palatal variants of consonants can occur (cf. *koklaŕ'dań* ‘from heavens’, and *kollardan* > *kojłardan* ‘from arms’). [own translation—KS]

8 However, a closer examination of the phonetic side of this [Radloff 1893–1911] material, reveals that Radloff waived the factual pronunciation of Trakai Karaims aside and, surrendering to an a priori conviction—as he actually often did—completely effaced the important features of the phonetics of this dialect.

I consider the shift of the centre of gravity of the phenomenon of harmonization from the sphere of vowels to that of consonants, to be such an important phonetic feature of the northern dialect of Polish Karaims. [own translation—KS]

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again, criticizing Radloff 1893–1911, changes 2. and 4. (*ö* > 'o, *ü* > 'u and *e* > 'a, see 1.) are discussed and concluded as follows (p. XXIXn.):

Infolge der eben besprochenen Vokalverschiebung wird die ursprüngliche Vokalharmonie zerstört [...]; dafür entsteht aber eine art Konsonantenharmonie, indem innerhalb einer Lautgruppe (eines Wortes) entweder nur harte (nichtpalatale) oder nur weiche (palatale) Konsonanten erscheinen dürfen. Wir haben also z. B. *Kuñlar'dañ* 'von den Tagen' neben *kunlardān* 'von den Dienern'⁹. Die Vokale sind in beiden Wörtern identisch, die Konsonanten aber im ersten Falle palatal, im anderen Falle nicht palatal.

The point is made very clearly: consonants act harmonically, and vowels are purely velar or palatal, regardless of the harmony of the word. Nearly all the limitations mentioned in 1. are described later in the text.

T. Kowalski's stance on consonant harmony and the quality of vowels is restated directly and indirectly in many of his later publications.

For the next step in the discussion, see 2.8. (K.M. Musaev).

2.2. 1932: Ananjasz Zajączkowski¹⁰

A. Zajączkowski did not explicitly express his view on consonant harmony in northwestern Karaim in any of his works which contributed to the discussion; he did, however, take a stand on the quality of vowels (1937–38: 94):

[...] samogłoski wargowe przedniego szeregu były wymawiane przez Karaimów polskich w w. XVII najprawdopodobniej jako *ö*, *ü* we wszystkich pozycjach wyrazu: *kök* 'niebo', *küçli* 'silny', *üüzü üstü(na)* 'na powierzchni' (a nie jak dziś: *k'ok*, *k'uçl'u*, *üz'u üs't'un'a*).^{11,12}

and on the quality of T. Kowalski's notation (1928: 70):

Nieliczne teksty karaimskie, jakie dotychczas były wydawane [...] były oparte na wadliwej wymowie. To też nie mieliśmy ogólnej charakterystyki tego języka z podaniem właściwych cech fonetycznych [...].

9 This is not, as a matter of fact, a flawless example of a minimal pair for harmony: the velar counterpart of *ñ* is *n*, and the palatal counterpart of *ŋ* is *j*.

10 The spelling of [ñj] (as in [anañjaš]) and [ñ] before vowels was—for reasons unfathomable to me—merged in <ni> in 1936, hence the later spelling <Ananiasz>. Cf. footnote 35.

11 [...] most probably, labial vowels of the front row were pronounced by Polish Karaims in the 17th c. as *ö*, *ü* in all positions in the word: *kök* 'sky', *küçli* 'strong', *üüzü üstü(na)* 'on the surface' (and not like today *k'ok*, *k'uçl'u*, *üz'u üs't'un'a*). [own translation—KS]

12 The same 17th c. letter is also mentioned by É.Á. Csató; see 2.18.

Teksty zamieszczone w artykule prof. Kowalskiego są, jak słusznie stwierdza szanowny autor, „pierwszemi zapiskami w narzeczu północnem [...] z podaniem właściwej wymowy” (str. 216).¹³

This is also evident in the transcription he employed in what is probably his most important work on northwestern Karaim (1932; ⟨ōżań⟩, ⟨śoź⟩, ⟨kuń⟩), the biggest dictionary of Karaim (1974; ⟨кюнь⟩; see 2.11.), and essentially all his other works.

Unfortunately, their influence in our discussion appears to have been negligible.

This is a particularly important evidence: A. Zajączkowski was not only an excellent linguist, but also a northwestern Karaim native speaker. Yet, in the interests of balance, it needs to be remarked that his 1932 work, his Ph.D. dissertation, was supervised by T. Kowalski. This is not to imply that the latter would compel A. Zajączkowski to deny his own, native speaker’s intuition and employ an unjust transcription in order to prove his supervisor’s theory. This would be an entirely unjustified accusation. Should an argument be needed, he apparently repeated his viewpoint—as mentioned above—42 years later in KRPS (see 2.11.), 26 years after the death of T. Kowalski.

2.3. 1949: Martti Räsänen

M. Räsänen fully embraces the evidence of T. Kowalski. He speaks very clearly in favour of both the purely back quality of vowels (p. 59) and consonant harmony¹⁴ (p. 136n.):

Im NW-kar. (Kowalski XXX) ist die Konsonantenharmonie infolge der Vokalverschiebungen so weit gegangen, dass innerhalb eines Wortes entweder nur palatale (mouillierte) oder nichtpalatale Konsonanten erscheinen dürfen [...].

In both cases, it is in fact a summary of the appropriate parts of Kowalski 1929.

Unfortunately, M. Räsänen’s stance on our subject seems to have gone entirely unnoticed.

2.4. 1952: Roman Jakobson, Carl Gunnar Michael Fant, Morris Halle

R. Jakobson, C.G.M. Fant and M. Halle’s stance on our case is clear (p. 42):

13 The few Karaim texts published to date [...] were based on a faulty pronunciation. We did not have, therefore, a general description of this language with a presentation of the proper phonetic features [...].

Texts included in Prof. Kowalski’s article are—as the respected author justly remarks—“the first notations in the northern dialect [...] with a proper pronunciation” (p. 216). [own translation—KS]

14 It needs to be noted, however, that the term *consonant harmony* is used in meanings 1. and 2. (see footnote 5) simultaneously.

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A “consonant harmony” has been developed by the language of NW Karaites (in Lithuania): the consonants of a word unit are either all sharp or all plain; e.g. /*kuŋlaŋdan*/ “from days” - /*kunlardan*/ “from servants”.

Unfortunately, the source of this information is not given. The example and the mistake in it¹⁵ suggest that it was copied from Kowalski 1929 (see 2.1.). This information is repeated in at least some of the numerous editions of the book.

The discussed work is undoubtedly one of the most popular in linguistics. Its influence in our case, however, has been minimal: it is only cited by Lightner 1965 (see 2.9.), who does not elaborate on Karaim beyond this one citation, and by Hansson 2001 (see 2.23.) who in fact expresses no opinion on this matter.

2.5. 1956: Jiří Krámský

J. Krámský seems to have only once taken up the topic of northwestern Karaim. His view is based on, and is entirely in accordance with that of T. Kowalski (p. 130, footnote 1):

Anzeichen der konsonantischen Harmonie erscheinen in einigen Türksprachen, doch ihre volle Entfaltung finden wir im Westkaraimischen [...]; sie entwickelte sich erst nach der Vokalverschiebung und nach der dadurch verursachten Zerstörung der Vokalharmonie.

Next, follows the example from Kowalski 1929: XXX (*kuŋlaŋdan* : *kuŋlardan*) and a summary of his stance.

Despite the authority of J. Krámský, his opinion appears to have passed completely unnoticed.

2.6. 1959: Omeljan Pritsak

O. Pritsak does not seem to have any doubt about the quality of northwestern Karaim vowels and harmony (p. 327):

Die ursprüngliche Vokalharmonie ist im Dialekt von Troki zum größten Teil durch die sogenannte Konsonantenharmonie ersetzt worden [...]. Sie beschränkt sich auf *il'i* (ausgenommen *i-* > *i-* [...]), und auf *a*, *o*, *u* bzw. *ä*, *ö*, *ü* in der ersten Silbe. Außerdem unterliegen der Vokalharmonie die Pronominalsuffixe in der Konjugation: T. *baramin* ‘ich gehe’ und *bäramin* ‘ich gebe’.

His view is also repeated on p. 328 (point 232.) where more examples are produced. The remark on *o* and *u* in the first syllable is but an unfortunate wording.

15 ‘servant’ is *kuł*, but **h* > *ŋl* in northwestern Karaim, so the Pl. form is *kuŋlar*. See also footnote 9. *ŋ* is printed in Kowalski 1929 with the hook between the legs of <n> rather than below the right one, which makes it easy to confuse with <n>.

Examples earlier and later in the text show clearly that he does not postulate the palatalization of *o* and *u* anywhere except for anlaut: ⟨k'uß⟩, ⟨sóž⟩, ⟨üfak, yufak⟩.

Philologiae Turcicae Fundamenta is the first and only of the standard Turkological compendia where consonant harmony is given the attention it deserves. In all the others it is not even mentioned. See 2.24.

O. Pritsak's article is cited quite frequently; his stance on consonant harmony, however, is rarely referenced.

2.7. 1960, 1969, 1973, 1988: Nikolaj Aleksandrovič Baskakov

N.A. Baskakov's interest in Karaim seems to have begun in the fifties (see Baskakov 1957). In 1960 he expressed his certainty with regard as to the back quality of northwestern Karaim vowels (1960a: 149; cf. also p. 126):

Северный диалект [...] характеризуется [...] переходом передних гласных первого и последующего слога в соответствующие задние гласные, но с палатализацией предыдущего согласного, а именно: э > 'а, например: с'анд'ан (вместо с'энд'эн в южном диалекте) 'от тебя'; о > 'о, например: к'ол'аг'а (вместо колэгэ < колэңкэ в южном диалекте) 'тень' и пр.; [...]¹⁶

This information is largely repeated in Baskakov 1969: 275–78 and 1988: 127–129 and is also reflected in the transcription employed in KRPS (see 2.11.). The term *consonant harmony*, however, does not appear in any of these works. It is a pity, and has not been without consequences (see 2.24.), that such an experienced Turkologist failed to recognize (or perhaps just mention?) the phenomenon, and give it a due attention in his compendia.

Later, the material presented by N.A. Baskakov in his paper delivered before the IXth International Congress of Anthropological and Ethnological Sciences (Chicago, 1973) inspired E.P. Hamp to formulate his opinion on the matter (see 2.12.). Otherwise, his impact in the discussion was minimal.

Although a historical analysis of northwestern Karaim phonetic changes is beyond the scope of this paper, I believe that it might be interesting to note that N.A. Baskakov attributes consonant palatalizations to prior historical development on the Turkic ground, rather than later Slavonic influence (1960b: 368):

Palatalizacja spółgłosek w języku karaimskim jest ogólnym zjawiskiem występującym w bułgarskiej grupie językowej. Podobnie też alfabet starotureckich inskrypcji orchońsko-jenisejskich wykazuje istnienie dla większości spółgłosek dwóch par palatalnych i niepalatalnych konsonantów. Wskazywałoby to na wspólnotę cech systemu konsonantycznego z językiem

16 *ü* > *'u* is missing from this description but appears on p. 150.

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karaimskim. Zjawisko palatalizacji spółgłosek występuje też w języku gagauskim.¹⁷

A very similar description can be found in Baskakov 1960a: 126 and 1969: 253. However, in 1960a: 150 and 1969: 277, palatalization of consonants adjoining to front vowels and the following backing of these vowels is considered a Karaim-specific feature.

2.8. 1964, 1966, 1977, 1997, 1998: Kenesbaj Musaevič Musaev

K.M. Musaev's works are in general not easy reading and require a somewhat wider discussion. He was the first to oppose the notion of consonant harmony in northwestern Karaim. He did so very explicitly and on numerous occasions (see below) (1964: 52):

Это явление Т. Ковальского имеет много противоречий и не доказано. Прежде всего здесь отрицается деление гласных на нёбные и ненёбные, что совершенно неверно. Во-вторых, автор делает исключение для *e* первого слога и *ö* в анлауте и заявляет, что «эти гласные палатализируют окружающие согласные»¹⁸, что не вяжется с делением согласных на палатальные и непалатальные, поскольку палатализация является результатом влияния гласного на непалатальный согласный.

Что касается гласных, которые Т. Ковальский обозначал знаками 'a, 'o, 'u, то как показывают экспериментальные данные, они не являются гласными заднего ряда, а представляют собой гласные переднего ряда *ə, ö, ü*, которые приобретают элемент *ʲ* в начале их произношения в окружении палатализованных согласных.

To my understanding, front vowels—according to K.M. Musaev—first palatalized the adjoining consonants, and then palatal consonants returned a part of their palatalization as an inserted *j*. This is possible and matches the evolution in Polish (cf. e.g. Stadnik 2002: 149), quite probably making it another Slavonic influence on Karaim.

17 Consonant palatalization in the Karaim language is a general phenomenon present in the Bulgar language group. Similarly, in the alphabet of Old Turkic Orkhon-Yenisey inscriptions, there exist for most consonants two palatal and non-palatal pairs. This would point to a community of the features of the consonant system. The phenomenon of consonant palatalization is also present in the Gagauz language. [own translation—KS]

18 This is imprecise. T. Kowalski's wording is as follows (p. XXIX): *Von dieser Regel [see 2.1.] sind angenommen: a) das e der ersten Silbe (der Stammsilbe), das, ohne in 'a überzugehen dennoch eine Palatalisierung der umgebenden Konsonanten bewirkt [...]; b) ö, ü im Anlaut: öżań 'Fluß', üvra 'lehre'.*

But this quotation reveals a very interesting point in K.M. Musaev's thinking, namely the letter <ə>. Its usage is described on p. 46:

Вариантом фонемы *a* является звук *ä(ə)*, который во многих тюркских языках [...] выступает как самостоятельная фонема. Звук *ä(ə)* в караимском языке возникает в результате редукции и опереднения *a* как в безударном, так и в ударном слоге [footnote 1: Т. Ковальский считал, что *ä* (*á* по его транскрипции) появляется только в безударном слоге (см. его «Karaimische Texte im Dialekt von Troki». Kraków, 1929, стр. LXXII).].

It appears that K.M. Musaev fell victim to incompatible traditions of transcription in the Cyrillic and Latin alphabets. On p. LXXII, Kowalski 1929 notes:

ä bezeichnet einen aus *a* entstandenen, stark reduzierten Vokal, der nur in unbetonten Silben erscheint, vgl. oben XXIX und Anm. 2.

where (XXIX):

Das aus ursprünglichen *e* entstandene *a* klingt, wenn unbetont, nicht ganz deutlich und nähert sich im Munde mancher Individuen einem undeutlichen *ə* [footnote 1: In meinen Texten mit *ä* bezeichnet.].

and (XXIX footnote 2):

[...] In enklitisch angehängten Suffixen *-ba*, *-ča*, *-da* hört man bei manchen Individuen einen undeutlichen, stark reduzierten Vokal (in meinen Texten durch *ä* kenntlich gemacht, oder auch unbezeichnet gelassen, also *-bä* oder *-ba* etc.). [...]

It is clear that T. Kowalski aimed <ä> = <ə> to mean a reduced vowel, an allophone of /a/—not an [ä], which <ə> is often used to represent in Cyrillic. N.B. Kowalski 1929 on the same, LXXII page:

Durch das Zeichen *e* wird hier derselbe Vokal ausgedrückt, der sonst gewöhnlich durch *ä* bezeichnet wird. Ich wählte es mit Rücksicht auf den Typenvorrat unserer Buchdruckerei.

In the work of Musaev, <ə> is also a variant of /e/ (p. 46):

Гласный *э* имеет много позиционных вариантов от сильно закрытого *э*, сближающегося с узким гласным, до очень открытого *э*, который иногда переходит в закрытый *a* (т.е. имеет диапазон: *э^б*, *э*, *э^о*, *э*, *а^б*; *йэ*, *йэ*, *йа^б*).

and is spelt <я> after palatalized consonants—i.e, as <ä> is often transcribed into Cyrillic (p. 47):

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Звук *йэ* в настоящей работе обозначается знаком *я*, например, Т. *биядляр* [б'илийэд'лийэр'] 'они знают', *келям* [к'йэлийэм'] 'я приду' и т. д.

Finally, it can also mean a full, not reduced *ä* and *e* (p. 47):

Древний звук *э* в караимском языке в основах слова перешел в *э* (*e*): *кел* < *кэл* 'приходить', *бер* < *бэр* 'давать' и т. д.¹⁹ Что касается аффиксов, то здесь древний *э* через ступень *э* снова переходит в *э*, который в свою очередь переходит в *а*. Это особенно заметно в Т[ракайском] диалекте.

The description of *ö* and *ü* is more straightforward:

[*ö*, p. 48] В «чистом» виде гласный *ö* употребляется в анлауте и в соседстве с согласными, кроме *к*, *г*: *бöляк* 'стадо', *тöшяк* 'постель', *сöккяля-* 'ругать', *öбгя* 'предок', *öксюз* 'серота'. В других позициях первого слога (*ö* в последующих слогах не употребляется) *ö* иногда приобретает элемент *й* (*йö*), Особенно это заметно при сочетании *ö* с предыдущими или последующими *к*, *г*, иногда *т*. Например: *тёгюл-* [т'йöгй'юл'] 'литься', *кёрклю* [кй'ёрк'лий'ю] 'красивый', *кён* [кй'ён'] 'много', *кёк* [кй'ёк] 'небо' и т.д.

[*ü*, p. 49] Употребление *ü* в слове позиционно ограничивается первым и вторым слогами и в редких случаях — третьим слогом. В «чистом» виде *ü*, как *ö*, употребляется в анлауте [...]. В других позициях в слове *ü* приобретает элемент *й* (*йü*) и его произношение сближается с русским *ю* (*й* + *у*) с той разницей, что караимский *йü* произносится мягче, чем русский *ю* [...].

It needs to be added that even K.M. Musaev acknowledges that

[*ö*, p. 48] [...] у молодых *ö* произносится как русский *ё* (*й* + *о*), но мягче.

[*ü*, p. 49] В речи молодого поколения *ü* почти во всех позициях в слове (в том числе и в анлауте) теряет палатальность и произносится как дифтонг *йу* [...].

To conclude, according to K.M. Musaev 1964 consonant harmony is not a stand-alone phenomenon, but a side effect of vowel harmony (p. 74):

19 It is unclear what forms exactly *кэл* and *бэр* represent. Cf. however e.g. Azerbaijani *gäl-* and *ber-* << Old Turkic *käl-* and *bär-* < **bēr-* < **bār-* respectively (VEWT; **bār* with a question mark but cf. Stachowski M. 1998).

Внутри одного слова, как правило, выступает либо ряд мягких (палатализованных), либо твердых (непалатализованных) согласных. Палатализованность и непалатализованность согласных зависит от состава гласных в слове. Если гласные в слове — нёбные передние, то согласные этого слова произносятся мягче, или палатализируются, например Т. *кюн* | Г. *кин* [к'үн' | к'ин'] 'день'. Если гласные в слове — ненёбные задние, то и согласные произносятся соответственно тверже: *кан* 'кровь'.

This position is repeated in Musaev 1966 and, in a slightly less categorical tone and with an improved transcription, in Musaev 1977 (p. 14):

Внутри одного слова выступает либо ряд палатализованных, либо ряд непалатализованных согласных. Например, в словах Т. *кюнъ* / Г. *кинъ* 'день' выступают палатализованные согласные, а в словах Т., Г. *алар* 'они', *кан* 'кровь' выступают непалатализованные согласные. Употребление ряда палатализованных или непалатализованных согласных тесно связано с наличием в слове передних или задних гласных.

Finally, in Musaev 1997, the term *consonant harmony* is not even mentioned. Vowel harmony is described essentially in the same way as in any other Turkic language and just a note is made that the consonants *d, k, t, m, n, s, š, t, z* are palatalized when in contact with front vowels (p. 257). In Musaev 1998, this view is repeated.

In this way, in all the standard Russian compendia of Turkology and basically both grammars of northwestern Karaim, consonant harmony is either not mentioned at all or described as an unimportant consequence of vowel harmony. The situation is not much better in western European works. See 2.24.

The works of K.M. Musaev are cited quite often. His point of view, however, has been largely ignored except for a criticism in Ščerbak 1970 and support in Csató / Johanson 1995 and later.

For a more thorough understanding, K.M. Musaev's description needs to be contrasted with that of É.Á. Csató / L. Johanson (see 2.18.) and A.I. Nevins / B. Vaux (see 2.25.). Before going further, though, I would like to draw attention to some details:

- On p. 52, K.M. Musaev mentions experimental [phonetic] data. This is very important because it means that he was the first to ever perform this kind of test on northwestern Karaim. His findings—or interpretation, because he does not quote the exact results—differ essentially from those that were obtained 40 years later by A.I. Nevins and B. Vaux (2004; see 2.25.).

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- It is interesting that K.M. Musaev’s phonetic analysis showed *jö* and *jü* outside anlaut. Comparing this to his description of *ö* and *ü* on pp. 48 and 49, especially the latter, I must conclude that the material he analyzed must have been collected from speakers of an older generation. A. Zajączkowski (see 2.2.) was born in 1903, i.e. he was 61 when K.M. Musaev’s grammar was published. Obviously, a testimony from one speaker is too little to disprove a machine analysis, but it does at least indicate an earlier start of the tendency than perhaps K.M. Musaev would have liked to admit.
- His description of these two sounds is in any case very stimulating—because of their weight for our question—in contrast to 2.18. and 2.25.
- The curious entanglement of /a/ and /e/ within ⟨ə⟩ makes K.M. Musaev’s data, in my view, unreliable. My doubts about this have even been confirmed by É.Á. Csató Johanson and L. Johanson (1995; see 2.18.), who both speak clearly against consonant harmony, i.e. in general they share K.M. Musaev’s view.
- K.M. Musaev’s conclusion (p. 74) that consonants agree when it comes to palatalization across the entire word, and that their quality depends on the vowels, is certainly true in the diachronic perspective. However, especially in light of Nevins / Vaux 2004, this statement cannot be upheld from the synchronic point of view.
- If, however, this description was true, we would have in northwestern Karaim a very interesting case of a full harmony expressed by both vowels and consonants simultaneously. Calling it a *vowel-harmony*, as K.M. Musaev does, would be in my opinion too modest and typologically misleading. The same, and more, applies to the term *syllabic* harmony promoted by É.Á. Csató Johanson and L. Johanson (see footnote 5 and 2.18.).

For the next step in the discussion, see 2.18. (É.Á. Csató Johanson and L. Johanson).

2.9. 1965: Theodore M. Lightner

In his paper on vowel and consonant harmony, Th.M. Lightner only mentions northwestern Karaim once, and this is based solely on the evidence of Jakobson / Fant / Halle 1952 (p. 244):

[...] NW Karaite is reported to have a consonant harmony in which the consonants of a word are either all sharp (palatalized) or all plain (non-palatalized): *kuŋlaŋdaŋ* ‘from days’, but *kunlardan* ‘from servants’.

It seems that Th.M. Lightner did not ever go back to our topic.

His impact on the discussion appears to be limited to serving as a source for Hansson 2001 (see 2.23.).

2.10. 1970: Aleksandr Mixajlovič Ščerbak

A.M. Ščerbak speaks clearly against Musaev 1964 (p. 39, footnote 50):

К. М. Мусаев считает, что наличие перехода мягкого качества от гласных к согласным [...] ничем не доказано. Однако высказанные им замечания противоречивы и в конечном итоге свидетельствуют скорее в пользу точки зрения Т. Ковальского, чем против нее.

His transcription, too, leaves no doubt: «к'оз'умд'а» 'in my eye' (< **közümdə*). However, the term *consonant harmony* does not appear. See also 2.24.

Unfortunately, A.M. Ščerbak's work seems to be completely ignored in the discussion.

2.11. 1974: Nikolay Aleksandrovič Baskakov, Seraja M. Szapszał, Ananiasz Zajączkowski

Despite its age, KRPS remains the biggest Karaim dictionary that encompasses all the three dialects. Not surprisingly for a dictionary, the authors do not investigate the issue of consonant harmony in northwestern Karaim. The term itself does not appear in the foreword but the transcription of the naturally numerous examples reveals their opinion quite clearly: «**өрняк**» («я» is only used for 'a, cf. p. 12), «**сёзь**» («ё» = 'o) and «**кюнь**» («ю» = 'u).

I should remark that A. Zajączkowski and N.A. Baskakov have already had their opinions published before (see 2.2. and 2.7. respectively). S.M. Szapszał does not seem to have made an explicit stand elsewhere.

It seems that in our discussion, KRPS has passed entirely unnoticed.

2.12. 1976: Eric Pratt Hamp

E.P. Hamp, basing his analysis on N.A. Baskakov's presentation of northwestern Karaim facts (see 2.7.), expresses his view on our case very explicitly (p. 211):

Now, I would formulate what has happened in Karaite as being a change in the composition of the harmony rule whereby [*α* front] has been transferred from the [- cons] to [+ cons] segments of the word. [...] After that, of course, the vowels simply neutralize.

The paper is very short but E.P. Hamp expresses a few times his certainty as to how the northwestern Karaim facts should be interpreted and never mentions K.M. Musaev's contrary opinion.

This paper had virtually no impact: it is not cited except for in Hansson 2001 (see 2.23.) where in fact no opinion is expressed.

2.13. 1976–80: Zsuzsa Kakuk

Zs. Kakuk's 1976 work was meant as a textbook. She does not use the term *consonant harmony* but rejects very clearly the idea that *e* and *ö*, *ü* could be palatal except for in the first syllable and anlaut, respectively (p. 54):

A karaim nyelv alakulásában jelentős szerepet játszott az állandóan és erősen ható szláv környezet. Ennek legszembetűnőbb megnyilvánulásai a következők: A mássalhangzók palatalizálódása palatális magánhangzók után, a palatalizálódás során a magánhangzó velárisává lesz, ami által a magánhangzó-harmónia is megzavarodik /*kozumd'a* 'szememben', *özañ* 'patak' < *özen*; hasanló jelenséget találunk – ugyancsak szláv hatásra – a gagauzban/ [...]²⁰

She restated her point of view in 1980 by including in the second volume of the book, northwestern Karaim texts as transcribed by Kowalski 1929 (⟨kuñ⟩; 2.1.), Kobecki 1932 (⟨kiuñ⟩) and KRPS (⟨кюнь⟩; 2.11.).

The only way this work contributes to the discussion is through a quotation in Csató / Johanson 1995 (see 2.18.).

2.14. 1981: Bernard Comrie

Despite a polite acknowledgment that *Musaev (1964) is the standard work on Karaim* (p. 90), B. Comrie clearly supports consonant harmony (p. 63n.):

Although the distinction palatalised versus velarised consonants is in general less salient phonetically than that between front and back vowels, and can therefore be considered purely allophonic, there are some Turkic languages and dialects where the phonetic onus of maintaining the distinction has been shifted from the vowels to the consonants, so that one has a tendency towards consonant harmony rather than vowel harmony. In [...] Karaim, front vowels are backed after a palatalised consonant, so that [...] we have *kozumda* for expected *közümde* 'in my eye', and *özañ* for expected *özen* 'stream'; [...]. It will be seen from these examples that the front-back opposition is not carried completely by the consonants: words with an initial vowel still retain initial front, including front rounded, vowels, since the backing takes place as a historical process only after consonants.

His influence in the discussion, however, was minimal.

20 An important role in the development of the Karaim language was played by the continuous and strong influence of the Slavonic surrounding. Its most eye-catching results are: the palatalization of consonants after palatal vowels—after the palatalization vowels turn velar—which disarranges the vowel harmony (*kozumd'a* 'in my eye', *özañ* 'creek' < *özen*; a similar feature is found—under Slavonic influence, too—in Gagauz) [...] [own translation—KS]

Going beyond the point, as a Polish native speaker, I find B. Comrie's remark on the salience of consonant palatalizations rather amusing; particularly in the context of northwestern Karaim consonantism, which is in fact richer in palatalizations than that of Polish (cf. e.g. northwestern Karaim $c : c' : \acute{c} : \check{c}$ vs. Polish $c : \acute{c} : \check{c}$).

2.15. 1982: Ahmet Temir

A. Temir's treatment of Karaim is puzzling. The dialect is never marked in the (very rare) Karaim examples. In the references section, the only works on Karaim are: Kowalski 1929 (NW), Räsänen 1949 (all dialects), Zajączkowski 1931 (SW) and Zajączkowski 1932 (NW and SW). The examples—the great majority of which are back harmonic and are therefore unapplicable in our case—are clearly not in southwestern Karaim phonetics. The term *consonant harmony* does not appear. I believe therefore that the spelling of <közlär> and <küçlü> should be considered to be a sign that A. Temir opposes the notion. This is rather surprising, as all the authors cited are clear supporters, there is no discussion, and the only opponent at that time (K.M. Musaev) is never mentioned. It is not surprising therefore that A. Temir's 1982 work is not cited in our discussion at all.

2.16. 1989, 1994: Henryk Jankowski

H. Jankowski overtly expressed his view on consonant harmony in 1989 (p. 89): *Kowalski /1946: 41/ shows a palatal velar consonant harmony as a substitution for vowel harmony in the Troki dialect of Karaim*. However, this is the only mention of Karaim in this paper, and H. Jankowski's stance seems to have been overlooked in the discussion.

In his 1994 work, although without using the term *consonant harmony*, he restates his opinion on the quality of northwestern Karaim vowels:

[p. 107] W niniejszym artykule przeciwstawiam się dowodzeniu Józefa Sulimowicza, jakoby w języku krymskokaraïmskim zaszło zjawisko przejścia -e w -a w niepierwszej zgłosce, jak to jest w dialekcie trockim, oraz utylnienia przednich okrągłych (ö ü) w każdym położeniu.²¹

[p. 112] [...] w trockim dialekcie zachodniokaraïmskiego, gdzie przednie odmianki (ö ü) omawianych fonemów realizowane są tak tylko w pierwszej zgłosce z nagłosem samogłoskowym (por. Kowalski 1929: XXIX).²²

Unlike his previous statement, this one was noticed—and misinterpreted—by Csató / Johanson 1995 (see footnote 26).

21 In the present paper, I oppose Józef Sulimowicz's argumentation that the change of $e > a$ in non-first syllables took place in eastern Karaim—as it did in northwestern Karaim—and that front labials (δ , \acute{u}) were backed in every position. [own translation—KS]

22 [...] in the Trakai dialect of Western Karaim, where the front variants (ö ü) of the discussed phonemes are pronounced as such only in the first syllable with a vocal anlaut (cf. Kowalski 1929: XXIX). [own translation—KS]

2.17. 1991: Fuat Bozkurt

Although F. Bozkurt's article does not seem to have had much—or any, for that matter—impact, I would like to mention it because of the transcription used in it. The regrettable tradition of forcing all Turkic languages into the modern Turkish orthography bears various kinds of fruits. In F. Bozkurt's contribution, it is puzzlement²³ (p. 10):

Ünlü uyumu bozulmuştur. Türkçenin kimi ünlülerinde aşağıdaki yönde değişimler olmuştur:

e > a ö > o ü > u

Ünlülerin böylesine inceden kalına dönüşümüne karşın yanlarındaki ünsüzler ince söylenir.

kozumda 'gözümde' suvarlık 'sevgilik, sevgi'

[...] Buna karşı Karayca'da ünsüz uyumu vardır.

Obviously, modern standard Turkish orthography does not offer a good way to express surrounding-independent consonant palatalization. However, discarding this information is—especially in the case of northwestern Karaim—quite unacceptable. I fail to understand why F. Bozkurt, who was aware of the existence of consonant harmony, nonetheless decided not to mark it.

2.18. 1995, 1999: Éva Ágnes Csató Johanson and Lars Johanson

É.Á. Csató Johanson is currently the most vigorous and prolific opponent of the existence of consonant harmony in northwestern Karaim. Her resistance to this notion appears to have begun in 1995 (p. 329n.):

Es wurde sogar behauptet, daß die für Türksprachen charakteristische sogenannte Vokalharmonie im Karaimischen „zerstört“ worden sei (Kowalski 1929:xxix). Diese Auffassung wird heute in turkologischer wie linguistischer Literatur — trotz der Kritik von Musaev 1964 — immer noch oft zitiert (Kakuk 1976:54, Comrie 1981:63–64). [footnote 2, in which Kakuk 1976: 54 is quoted only in the Hungarian original; cf. 2.13.] Hier werden wir, ausgehend von einem in Johanson 1991 vorgeschlagenen Beschreibungsmodell²⁴, dafür argumentieren, daß die typisch türkischen Prinzipien der Lautharmonisierung im Nordwest-Karaimischen trotz der erwähnten phonetischen Eigentümlichkeiten geblieben sind.

The criticism is based on the phonological status of consonant palatalizations, i.e. the same as in Musaev 1964 (p. 331):

Im Karaimischen ist die phonologische Funktion der Palatalisierung nur im Zusammenhang mit den Regeln der Harmonisierung zu sehen. Wie Johanson

²³ See also 2.16. and 2.25.

²⁴ The gist of Johanson 1991 is that since consonants [sometimes] have their back and front variants (i.e. act harmonically, the same as vowels), we should be talking about a *syllabic* harmony rather than about a *vowel* one. See footnote 5.

1994 [pro: 1993] argumentiert, ist das Merkmal [\pm vorn] ein suprasegmentales distinktives Merkmal, das sich nach bestimmten Regeln über eine ganze Silbe der ein ganzes phonologisches Wort verteilt und ihre distinktive Funktion auf diese Weise ausübt. Dieses gesamttürkische Prinzip wird im Nordwest-Karaimischen sehr deutlich.

and this status is a derivative of the quality of vowels (p. 332):

Auch [referring to Kowalski 1929: XXVIIIIn.] unseren Beobachtungen nach können die Vokale *e*, *ö*, *ü* im Inlaut mit einer weniger deutlichen vorderen Artikulation ausgesprochen werden als im absoluten Anlaut. Der Behauptung Kowalskis, daß dieses Phänomen die Harmonie zerstöre, wurde aber schon von Musaev zu recht kritisiert. [footnote 5 where Musaev 1964: 52 is quoted; see 2.8.] Wie auch Musaev feststellt, besitzen die zentralisierten Vokale keine hintere Qualität.

Next, follows a description of the vowels *ü*, *ö*, *e* and *ə*. The order is different from that in the previously discussed Musaev 1964 (see 2.8.) but I will keep it so as to stay true to the original work:

[*ü*, p. 332] Außer im absoluten Anlaut wird das Phonem *ü* als ein mehr oder weniger zentralisierter [ü]-Laut ausgesprochen. Dieser [ü]-Laut ist phonetisch und phonologisch gesehen nicht identisch mit einem velaren [u]. Das Wort {'učun}²⁵ 'für, über' wird als [+ vorn] kategorisiert. [...] Die beiden Vokale werden mit nicht-hinterer Artikulation gebildet, jedoch in unterschiedlicher Weise. Der erste *ü*-Laut, [ü], hat eine deutlichere vordere Qualität als der zweite, [ü], der in der akzentuierten Silbe steht und mehr oder weniger zentralisiert ausgesprochen wird. [...]

Obwohl zu den phonetischen Eigenschaften des zweiten Vokals [ü] keine instrumentalphonetischen Untersuchungen vorliegen, möchten wir ihn — von auditiven Eindrücken ausgehend — als stark zentralisiert einstufen.

[*ö*, p. 332] Auch die halboffenen gerundeten *ö*-Laute werden im Inlaut zentralisiert. Dies Tendenz ist besonders stark in einsilbigen Wörtern, z. B. in {'kop} 'viel', das als [k'öp] ausgesprochen wird.

[*e*, p. 333] Der vordere Vokal *e* hat mehrere Varianten. In erster Silbe, sowohl im absoluten Anlaut als auch nach einem Anlautkonsonant, wird er oft als ein stark geschlossenes [e] ausgesprochen. [...] In nicht-ersten Silben kommen ein halb-geöffnetes [ɛ] und ein stark geöffnetes und zentralisiertes [á] als Varianten vor. Alle drei Varianten [e], [ɛ] und [á] sind vom velaren Vokal [a] phonetisch deutlich unterschieden [...]. [footnote 6: Musaev (1964: 47) bemerkt, daß eine Tendenz vorhanden ist, den offenen ungerundeten Vokal *á*,

25 Csató / Johanson 1995 employ an unusual notation in Turkology (derived from Johanson 1991) where words are written in curly brackets, and a ' or " sign is prepended to denote front or back harmony respectively, and appropriate consonant palatalizations, e.g. {'un} = [ün] 'sound', and {'un} = [un] 'flour' (p. 331).

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z. B. im Wort *k'el'am*, mit hinterer Artikulation auszusprechen (in seiner Notation: [кӥелӥӓм]). Unserer Meinung nach gibt es keinen ausreichenden Grund, diesen Vokal phonetisch als hinteren Vokal zu betrachten. Außerdem kommt dieser Vokal ausschließlich in vorderen Silben vor, was schwer zu erklären wäre, wenn er wirklich ein hinterer Vokal wäre. Siehe auch Jankowski (1994).²⁶]

[p. 334] Ein neutralisierter Vokal, ə, kommt in einigen nicht betonbaren Suffixen vor. Als Beispiele erwähnen wir hier das adverbiale Suffix *-če* sowie *-be*, die suffigierte Form der Postposition *bila* 'mit'. In diesen beiden Suffixen wird der Vokal [ə] ausgesprochen.

The main point of Csató / Johanson 1995 is therefore that vowels do take part in harmony, on a par with the consonants, and therefore *consonant* harmonic is not a good term to describe the phonological status of northwestern Karaim

[p. 332] Der Unterschied zwischen der ersten und der zweiten Silbe des Wortes [üčün¹] besteht darin, daß in der ersten der Vokal allein die Palatalität der Silbe signalisiert, während in der zweiten auch die beiden stark palatalisierten Konsonanten diese Funktion deutlich ausüben.

[p. 333] Alle drei Varianten [e], [ɛ] und [â] [...] üben zusammen mit den Konsonanten die Signalfunktion in der palatalen Silbe aus.

[p. 334] Wie die Beispiele zeigen, werden die Silben, in denen die Assimilation von *a* zu *e* stattgefunden hat, auch weiterhin als [-vorn] kategorisiert. Ihre Konsonanten signalisieren die nicht-vordere Qualität der Silbe, die auch die Palatalität der nachfolgenden Silben bestimmt.

[p. 334] Wieder bleibt es Aufgabe der Konsonanten, die v/h-Kategorisierung der Silben zu signalisieren. Man vergleiche die Aussprache des Konsonanten č in den Suffixsilben der Wörter *karayčə* 'auf Karaimisch' und *čil'siz'čə* 'auf Litauisch'.

They admit that in some positions the frontness of the vowels is lost, which, however, does not stop them from marking it in the transcription (p. 335):

In betonten Silben, die mit dem palatalen Halbkonsonanten *y* anfangen und im Auslaut einen Konsonanten enthalten, der in dieser Position die Palatalität nicht deutlich markieren kann, entsteht ein phonetischer Zusammenfall zwischen vorderen und hinteren Silben. So werden das Nomen *yuv* [yuv] 'Haus' und der Imperativ *yuv!* [yuv] 'wasche!²⁷ gleich ausgesprochen. Die

26 I fail to understand É.Á. Csató Johanson and L. Johanson's appeal to the authority of H. Jankowski here. His 1994 article is essentially on eastern Karaim, and wherever northwestern Karaim is mentioned, it is against É.Á. Csató Johanson and L. Johanson's point of view. See 2.16.

27 = *juv* and *juv* in Kowalski 1929. The next example, *kijov*, is missing from Kowalski 1929.

phonetische Form kann die beiden Bedeutungen nicht unterschieden. [...] Eine phonetische Neutralisation findet z. B. auch in der zweiten Silbe des Wortes *k'iyóv* 'Schwiegersohn' statt. Die zweite Silbe wird also als [yov] ausgesprochen, obwohl sie, wie die Suffixe eindeutig zeigen, als [+vorn] kategorisiert wird [...].

All this leads É.Á. Csató Johanson and L. Johanson to the conclusion that northwestern Karaim is best described as *syllable*-harmonic, i.e. that the harmony is carried by both, vowels and consonants (see footnote 5). For this or another reason, they decided to exemplify this conclusion by a comparison with Hungarian (pp. 335–37) where indeed, consonant palatalization is entirely independent of harmony and the quality of the adjoining vowels.

This conclusion and her view on northwestern Karaim vowels is later restated by É.Á. Csató Johanson in numerous publications, some co-authored with D. Nathan. In some, her 1995 work is cited in the literature section but an actual reference in the text itself is missing, which I nevertheless consider to be supporting her point of view. Cf. e.g. 1998, 1999, 2000, 2001, 2002, 2007b²⁸, 2009 &c.

There are some exceptions, however, both in vowel notation and in adherence to syllabic harmony. E.g.:

– In Csató / Nathan 2006, the traditional Lithuanian based orthography is used: <kiuń> and <sioź>, <örniak>. In Csató 2007a, the northwestern Karaim text included in G. Peringer's letter is given in the transcription by Dubiński 1991, i.e. with the form <üstüna> instead of *<â>.

– The shorthand suffix notation apparently favoured by É.Á. Csató Johanson (-lAr Pl. &c.) is thoroughly non-syllabic harmonic. Admittedly, she foresees the spelling <LAR>, but only to denote *lnldlt* (TkcLangs: xxii). In her descriptions of Turkish (TkcLangs: 203–35, with L. Johanson and 2003, with D. Nathan), suffixes are transcribed as <LA>, <LAR>, &c. See also footnote 32.

Because, however, she expressed her (opposite) opinion very explicitly elsewhere, and has restated it more than once, I believe that these cases should be considered accidents rather than anything else.

In general, the point of view on northwestern Karaim facts presented in Csató / Johanson 1995 and later, is very similar to that of K.M. Musaev (see 2.8.): they agree that vowels are not fully back, and consonants are palatal. The main difference is in the theoretical interpretation. For K.M. Musaev, palatalization agreement in consonants was a side effect of vowel harmony. For É.Á. Csató Johanson, L. Johanson and D. Nathan, it is just one half of the phenomenon of syllabic harmony, the other being the agreement in vowels.

28 Where she and D. Nathan actually suggest inexplicitly that T. Kowalski used <â>, <ô> and <û> for what they think are centralized front vowels [!]; cf. pp. 217 and 219 &c.

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É.Á. Csató Johanson has had quite an impact on our discussion. To some degree this is surely a result of the sheer quantity of her work. On the whole, however, her most important contribution is the notion of syllabic harmony and the inspiration she gave to A.I. Nevins and B. Vaux to conduct a long-awaited machine phonetic analysis of northwestern Karaim material. Their results cannot be considered anything other than conclusive but É.Á. Csató Johanson seems to have turned a completely blind eye to them.

For the next step in the discussion, see 2.25. (A.I. Nevins and B. Vaux).

2.19. 1996: Kemal Aytaç

K. Aytaç's work is a translation of the dictionary part of Kowalski 1929 (pp. 149–80) into Turkish, or rather—despite the information in the foreword—of most of it. He does not express his opinion on consonant harmony explicitly, and the transcription he employs does not make it absolutely clear either. Following the same tradition as F. Bozkurt and T. Çulha (see 2.17. and 2.27.), he too, discards all signs of consonant palatalization. In this case, some of the results are simply amusing²⁹, and others are rather less so³⁰.

kuñ is spelt <kun>, *koź* is spelt <koz>, *örnäk* is spelt <örnäk>, and I take this to be a non-explicit support of consonant harmony.

The impact of K. Aytaç's work appears to have been non-existent.

2.20. 1996: Mykolas Firkovičius, Regina Venckutė

M. Firkovičius' 1996 work is essentially a textbook of northwestern Karaim. Grammatical comments are extremely scarce or in fact, almost non-existent. However, when introducing some suffixes, he remarks that they follow the law of vowel harmony—which does not seem to be described anywhere by himself, only in the introductory chapter delivered by R. Venckutė.

In the short introduction to the northwestern Karaim language (in Lithuanian on pp. 7–13, in English on pp. 14–20 and Russian on pp. 21–27), R. Venckutė does not take an overt stance on consonant harmony. What she does, though, is a fascinating somersault between theory and notation (p. 19)³¹:

29 In Kowalski 1929, palatalization does not count for alphabetical ordering. Chapter headers in the dictionary have therefore the form “Č (č, č̣)” &c. This header is rendered as “CCC”. The chapter on *g* (see footnote 30) has a quite singular header, too: “G (?)”.

30 E.g. the whole chapter on *c* ~ *č* seems to be removed. Chapters on *g* and *γ* are merged, and no difference is made between these two phonemes.

31 M. Firkovičius and R. Venckutė employ an orthography based on Lithuanian, in which <i> always denotes a palatalization of the preceding consonant, and is otherwise mute if used before a vowel; e.g. <biž> = *biž*, <tioria> = *tōra* &c.

Attached to the stems with front vowels, the same affixes acquire front vowels as well, e.g.: giert'mia 'pear' → giert'mia-lik 'pear-tree', [...]; tioria 'court of justice' tioria-či 'judge', tioria-či-liar 'judges' [...].

In other words, back/front vowels of the stems regularly require suffixes, containing corresponding formative suffixes -lych/-lik, [...], -čy/-či or grammatical affixes -lar/-liar [...].

R. Venckutė never mentions consonant harmony but vowel harmony is discussed quite extensively, which I understand probably to be a non-explicit rejection of the former.

Both, M. Firkovičius and R. Venckutė use the same, Lithuanian-based orthography: ⟨kiuń⟩, ⟨sioź⟩, ⟨ömiak⟩. In theory, such a case should perhaps be treated as unclear and excluded from the eventual reasoning. Still, it appears quite obvious to me that this is in fact a vote for consonant harmony, only one that the voter is either unaware of, or does not want to confess to.

This is a particularly important piece of evidence as M. Firkovičius is a native speaker. The fact that he used this transcription in a textbook aimed primarily at popularizing and saving the language from extinction, must imply that he considers it fit for northwestern Karaim phonetics and phonology.

Unfortunately, it seems that their work has had no impact on our discussion.

2.21. 1998: Árpád Berta

Á. Berta does not express his opinion on consonant harmony very explicitly (p. 303):

In Trakai Karaim, front vowels occur with palatalised consonants and back vowels with non-palatalised consonants, e.g. *it'ler'im'iz* 'our dogs', *atarimiz* 'our horses'. There are various exceptions to the intersyllabic front vs. back harmony.

He seems generally to support the views of É.Á. Csató and L. Johanson (see 2.18.), judging from the terminology, the references and the transcription (⟨b'üt'ün'⟩, ⟨k'öz'⟩, ⟨k'özl'ár'⟩³² &c.). The term *consonant harmony* does not appear, and I think it is a great pity: see 2.24.

32 There is some confusion on the exact sounding of the front version of the Pl. suffix: on p. 303, there is ⟨-l'er'-⟩; on p. 306, there is ⟨-l'ár'-⟩. The general form is given as ⟨-lAr⟩ (p. 306), which would imply that only the vowel changes. It did, indeed, change, only between the roots *it'* and *k'öz'* which are both supposed to be equally front. Moreover, the notation ⟨-lAr⟩ should mean that the consonants do not change—or at least, that their change is unimportant—which is clearly not in step with Á. Berta's observation from p.

The influence of this work on the discussion seems to have been non-existent.

2.22. 1999, 2003: Talat Tekin, Mehmet Ölmez

The book in question is a handy overview of the Turkic languages. Because of limits on space, each language is described in only a few pages, including facsimiles of various prints. Karaim is dealt with on pp. 126–30. I understand that in this situation a proper analysis of harmony in just one of three dialects is impossible. The term *consonant harmony* does not appear in this very compact sketch but the transcription employed reveals the authors' view on the quality of the vowels: <yur'ak>, <k'oz>, <t'uv'ul> &c.

The same applies to the second edition from 2003. Despite two editions and their relatively high popularity, the work appears to have had no impact on the debate.

2.23. 2001, 2007: Gunnar Ólafur Hansson

In his Ph.D. dissertation, G.Ó. Hansson adopts a very careful attitude (p. 106):

As for consonant palatalization harmony, evidence for its existence is tentative at best. One language, Karaim, is sometimes cited as having 'transphonologized' the palatal vowel harmony typical of Turkic languages into a palatalization harmony on consonants [...]. However, this claim seems to depend on a particular structuralist-phonemic analysis, whereby the palatal feature is assumed to be *distinctive* on consonants only, rather than on vowels (or on both). Such an analysis ignores the issue of whether the relevant feature/gesture is also present *phonetically* on the intervening vowels—since this would be a matter of mere allophonic detail.

He then labels Karaim as consonant-harmonic with a question mark (p. 532). Such an attitude is only natural, given that the only sources he uses are: Jakobson / Fant / Halle 1963 where just one example is given (erroneously and without a reference, see 2.4.), Lightner 1965 where this example is copied and not elaborated upon (see 2.9.) and Hamp 1976 where no examples are given at all (see 2.12.).

Six years later, and three years after the Nevins and Vaux's work where a *detailed phonetic evidence* is offered, G.Ó. Hansson is no longer in doubt, and speaks overtly in favour of consonant harmony (see 2.25.; p. 91):

There are two reasons to reject the claim that phonological backness harmony in Northwest Karaim harmony targets vowels and consonants equally, and that it is therefore not a case of consonant agreement. Firstly, even Musaeu (1964) acknowledges that in the speech of the younger generation, rounded vowels in palatalised contexts (Csató's <ö, ú>) are fully back [...], even in

303 and generally with the emphasis that É.Á. Csató Johanson and L. Johanson put on *syllabic* harmony. See 2.18.

absolute initial position³³ [...]. Secondly, in examining the acoustics of Karaim vowels in recordings from Csató & Nathan (2002), Nevins & Vaux (2003 [pro: 2004]) find many instances where fully back tokens occur between palatalised segments. [...] In any case, the fully [+ back] quality of the vowels of the peripheral syllables in this form, as well as in many other instances, clearly indicates that the harmony is genuinely a non-local palatalisation agreement among consonants.

It seems that G.Ó. Hansson has played a role similar to my own here, summarizing the state of play rather than altering it. His impact on the discussion is therefore quite difficult to quantify.

2.24. 2002: Elena Stadnik

E. Stadnik, basing for Karaim on Musaev 1966: 262 and 1977: 13 (see 2.8.), acknowledges that *die meisten Turksprachen kennen eine an die Umgebung vorderer Vokale gebundene Palatalisierung* (p. 47n.). A little later however, now basing her conclusions on Baskakov 1960: 126 and 149, she states that (p. 49):

In den Turksprachen wird die Lautharmonie und somit die Regel für die Positionierung der konsonantischen Allophone manchmal verletzt, so daß sich die palatalisierten Konsonanten mit hinteren Vokalen verbinden und, umgekehrt, die nicht-palatalisierten mit vorderen Vokalen. In diesem Fall ist das Auftreten der Palatalisierung nicht vorhersagbar, sie hat dann einen distinktiven Status. Eine distinktive Palatalisierung kennen [...] Karaimisch [...].

E. Stadnik's opinion on the quality of consonants is clear but the term *consonant harmony* does not appear.

The work does not seem to have had any influence on the discussion.

It is undoubtedly a pity that the notion of palatalization harmony did not make it into a book on the typology of palatalization. (In the very short chapter *Fernassimilation*, only Mordvin is mentioned, and on harmony, there is no chapter at all.) E. Stadnik—a typologist, not a Turkologist—appears simply to have had bad luck in choosing her source of information. I should like to emphasize, however, that she would have to be quite lucky indeed to find even a mention of the phenomenon in a Turkological compendium: Pritsak 1959 is the only one who describes it, and the remaining six standard ones ignore it or disregard it entirely (see 2.6., 2.7., 2.8., 2.15. and 2.21.).

What is more, the phenomenon is also generally absent from general works on Turkic phonetics and phonology (see e.g. Čerkasskij 1965, Tenišev 1984 &c.), and from encyclopaedias and dictionaries (see e.g. *Britannica Online*, Glück 1993, Musaev 1998 &c.). Räsänen 1949 and Ščerbak 1970 (see 2.3. and 2.9. respectively) are exceptions in this regard. Brown 2005 is partly an exception: in the article

33 This is imprecise. Musaev 1964 only admits this for *ü*; see 2.8.

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Phonetics of Harmony Systems (M. Gordon), Karaim is clearly labelled as *consonant harmonical* (p. 423), but in the article *Turkic Languages* (L. Johanson), *consonant harmony* does not appear.

This is a strange situation. Harmony is one of the most basic features of the Turkic languages, and northwestern Karaim appears to be the only one where it is clearly expressed by consonants, not vowels.

2.25. 2004: Andrew Ira Nevins, Bert Vaux

A.I. Nevins and B. Vaux's 2004 work is crucial for our discussion. It offered the *detailed phonetic evidence* called for by G.Ó. Hansson 2007 (see 2.23.) and, indeed, which was needed to further the whole debate. It is very important that they performed the analysis on the material provided by É.Á. Csató Johanson and D. Nathan (2002), i.e. by currently the most active opponent of consonant harmony in northwestern Karaim. The actual goal of the work, a discussion on the Strict Locality theory, is in our case quite irrelevant, and I will limit myself to summarizing their results on the quality of vowels in front words (p. 193):

While on the topic of phonetic effects on non-participating segments, we note in passing that [...] Csató and Johanson are right in observing that vowels which are fronted in other Turkic languages are sometimes centralized in Northwest Karaim. [...] this centralization, which appears more prominently in super-short segments, is best explained as a coarticulatory effects from neighboring consonants [...]. This coarticulatory effect is considered to be a separate low-level phenomenon that occurs in the phonetic implementation in this latter set of languages, though, and we find it more reasonable to treat the Karaim facts with the same mechanism than to postulate a separate one designed just for Karaim and just so we can make the Karaim data more closely resemble what we find in other Altaic languages.

which is concluded as follows:

[...] it is clear that Kowalski was correct in stating that Northwest Karaim has consonant harmony that does not affect (most) intervening vowels. We have seen that he needed good reason to depart from the transcriptions that a turcologist would expect, he displayed the ability to discriminate the relevant phonetic contrasts for backness, and his findings are supported by phonetic analysis of native Karaim speakers.

Both, A.I. Nevins and B. Vaux used their results in some of their further publications but to the best of my knowledge, this did not lead to any further research on this topic.

A proper phonetic analysis of northwestern Karaim has indeed been long-awaited. It is surprising—but also perhaps characteristic in some way—that no-one had undertaken this task before. K.M. Musaev's (unpublished) results from 40 years previously, taking into account the development of phonetic machinery, had long been obsolete and the discussion was beginning to take on an almost religious

character. Unfortunately, A.I. Nevins and B. Vaux's findings, while conclusive and, as it appears, quite popular in American linguistics, seem to have been somewhat ignored by Europeans, which is a great shame.

It is also quite important to note that the analysis they have performed clips the wings of K.M. Musaev, but not exactly those of É.Á. Csató Johanson and her co-authors. The notion of syllabic harmony for the Turkic languages, the way they present it (cf. footnote 5), remains essentially unaltered, and only the details of its manifestation in northwestern Karaim change in that it is, in the great majority of cases, expressed by consonants only, i.e. it is not *syllabic*. But this does not make a very big difference since in nearly all the other Turkic languages, it is expressed almost exclusively by vowels, i.e. it is not *syllabic*, either. This naturally renders the idea rather questionable.

2.26. 2005: Ann Denwood

The title of A. Denwood's 2005 work (*Consonant-vowel interactions in Karaim phonology...*) gives a false impression that the article will be relevant to our discussion. Her paper is highly theoretical. It is so highly theoretical indeed that she does not see fit to be bothered by actual facts (p. 73):

No real criticism or comparison of these two analyses [Csató 1999 and Nevins / Vaux 2004] is proposed here, since the theoretical foundations on which their proposals are made differ from those of G[overnment]P[honology].

Not only does A. Denwood fail to contribute to the debate but she even fails to understand what it concerns (p. 66):

Csató (1999) [...] proposes syllabic harmony; Nevins & Vaux (2002) propose consonant harmony. The problem of how Karaim harmony should be defined reveals differences in theoretical approaches to analysing the data.

An equal disregard for factual data manifests itself in the references. The only works on Karaim are: Csató / Johanson 1995 (quoted as 1996), Csató 1999, Csató / Nathan 2002 (see 2.18. for all three), Hansson 2001 (see 2.23.) and Nevins / Vaux 2004 (quoted as 2003 in the references and as 2002 in the text (pp. 66 and 73); see 2.25.).

2.27. 2006: Tülay Çulha

T. Çulha does not make an overt stand on the question of consonant harmony. Her transcription, however, leaves little room for doubt. She follows the same unfortunate tradition as F. Bozkurt and K. Aytaç (see 2.17. and 2.19.), but not as literally. She, too, does not mark palatalization but is generally readier to introduce letters unknown to modern Turkish orthography. While the spelling of <kün> and <söz> could possibly be interpreted as a desperate attempt at marking the palatalization, the spelling of <örnäk> can only be understood as an explicit rejection of consonant harmony: introducing a non-Turkish letter (<ä>) just to mark the

palatalization of adjoining consonants—and actually the backness of the vowel itself—would be absurd.

T, Çulha's work seems to have passed unnoticed in the discussion.

2.28. 2008: Szymon Juchniewicz and Gabriel Józefowicz

Juchniewicz 2008 and Józefowicz 2008 are the newest dictionaries of northwestern Karaim. With 654 pp., the latter is also the biggest. I choose to discuss them together here for three reasons: they are both written by non-linguists native speakers, they use the same, Polish-based orthography, and none of them takes an explicit stance on consonant harmony. In Józefowicz 2008's extremely short grammatical sketch, vowel harmony is described, but without any examples. The entries, however, make both authors' view on the quality of vowels absolutely clear: <kiuń>, <sioż>, <örnïak>. Józefowicz 2008 additionally provides a phonetic transcription, which is— where possible—borrowed from T. Kowalski.

3. Conclusions

The majority of authors mentioned here did not take an active part in the discussion and limited themselves to taking a stance without any mention of the existing controversy. Their views can be summarized as follows:

– vowels back, consonant harmony: F. Bozkurt, B. Comrie, C.G.M. Fant, M. Halle, E.P. Hamp, G.Ó. Hansson, R. Jakobson, Zs. Kakuk, T. Kowalski, J. Krámsky, Th.M. Lightner, A.I. Nevins, O. Pritsak, M. Räsänen, A.M. Ščerbak, B. Vaux;

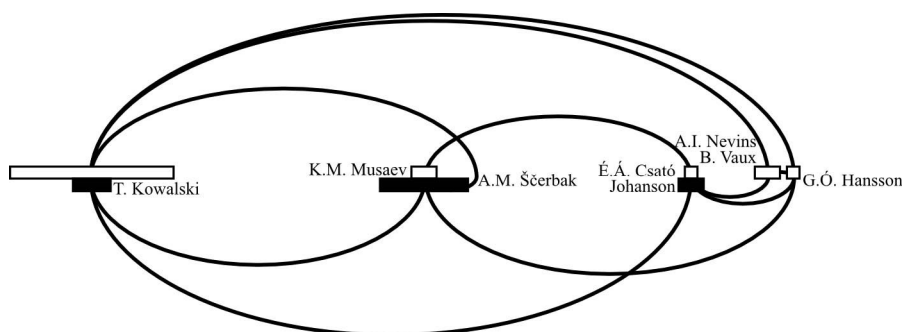
– vowels back: K. Aytaç, N.A. Baskakov, M. Firkovičius, H. Jankowski, Sz. Juchniewicz, G. Józefowicz, M. Ölmez, E. Stadnik, S.M. Szapszał, T. Tekin, R. Venckutė, A. Zajączkowski;

– vowels not back: T. Çulha, K.M. Musaev, W. Radloff, A. Temir;

– vowels not back, syllabic harmony: É.Á. Csató Johanson, L. Johanson, D. Nathan, probably Á. Berta.

The actual discussion was led by nine authors in six teams: T. Kowalski, K.M. Musaev, A.M. Ščerbak, É.Á. Csató Johanson with L. Johanson and D. Nathan, A.I. Nevins with B. Vaux and G.Ó. Hansson. It can be illustrated with the following diagram³⁴:

34 The diagram presents patterns of citation. Arcs above are positive citations, and arcs below are negative ones. The size of the bars is relative to the total number of citations (i.e. by all the authors quoted here). White bars represent positive citations, and black bars—negative ones. To avoid clutter, I only used one set of bars per team. When a work is cited in a neutral or even positive context but the author apparently expresses a



The discussion might be roughly divided into four periods: **1.** 1925–64: there was no doubt about the existence of consonant harmony, **2.** 1964–95: there was some doubt cast by K.M. Musaev but it was generally ignored, **3.** 1995–2004: the doubt was consolidated by É.Á. Csató Johanson and her co-authors, and was no longer ignored to the same degree; **4.** 2004–: the doubt was cleared up, but not completely removed from the discussion, by A.I. Nevins and B. Vaux.

As a matter of fact, there were only three opinions: **1.** T. Kowalski, A.M. Ščerbak, A.I. Nevins with B. Vaux and G.Ó. Hansson believe vowels that are fully back, and the system is best described as *consonant* harmonic; **2.** K.M. Musaev believes that vowels are not fully back, and interpretes consonant harmony as a side effect of *vowel* harmony; **3.** É.Á. Csató Johanson with L. Johanson and D. Nathan believe that vowels are not fully back and that the system is best described, just as with any other Turkic phonology, as *syllabic* harmonic.

It is noteworthy perhaps that the relationship between European and American linguists is in our discussion quite peculiar. It might be difficult to see the general picture from the very selective parts adduced here, but it appears to be roughly and with some exceptions, as follows: on the European side, scholars collect the material and use it to argue between themselves. American linguists pick up some data every now and then and offer a theoretical interpretation which the Europeans ignore and the Americans forget.

As for the actual crux of the matter, I believe that there is hardly any room for doubt:

different opinion elsewhere, I put an arc below and a black bar. I did not count self-citations.

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– Vowels: The evidence of native speakers (see 2.2., 2.11., 2.20. and 2.28.) speaks unequivocally in favour of backness. As far as the opponents are concerned, W. Radloff's data is unclear and at any rate, obsolete; K.M. Musaev's data is partly unreliable and partly proved wrong by Nevins / Vaux 2004; A. Temir's data is unsure; É.Á. Csató Johanson and her co-authors', Á. Berta and T. Çulha's data is proved wrong by Nevins / Vaux 2004.

– Consonants: With the exception of W. Radloff, who could actually have been true to the state of late 19th c., and the Turkish-orthographical works, all authors agree that the consonants are palatal.

– Vowel harmony: Since the only front vowel appearing regularly in non-initial syllables is *i*, vowel harmony can only be described as vestigial.

– Consonant harmony: If the vowels are fully back and consonants are palatal, than we clearly have in northwestern Karaim a case of consonant harmony in meaning 1. (see footnote 5).

– Syllabic harmony:

Intrasyllabic harmony (= synharmony) is only present in a very partial way, i.e. only where the original front vowels have been preserved after consonants: *e* in the first syllable and in suffixes *-čex* and *-ej* (but see footnote 4) and *i* in all positions.

Intrasyllabic harmony (= harmony) is present and expressed by consonants and vowels (*i* : *y* only, except for anlaut).

Combining these two phenomena in one term is, in my opinion, incorrect and misleading. See also footnote 5. The notion itself, given its poor manifestation in the Turkic languages, is questionable.

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35 Currently *Rocznik Orientalistyczny*; cf. footnote 10.

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