Rounded–unrounded vowel harmony in Turkish

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The goal of this paper is to demonstrate that rounded–unrounded vowel harmony (R-U harmony) operated in spoken Turkish earlier than it is generally believed. Evidence is provided from the texts written by Karaims and Armenians. Although the existence of Turkish texts in Armenian, Hebrew, Georgian, Syrian, Greek, Cyrillic and Latin scripts is a well established fact, only Latin and to some extent Cyrillic, Greek and Armenian texts were extensively employed in research. For an overview of 'transcription texts' see Hazai (1990). There are also some arguments that can be formulated on a comparative basis. Attention is also drawn to the existence of two social variants of Turkish in its history and different norms.

1. Rounded–unrounded vowel harmony throughout the history of Turkic

The history of this process may be presented in the following way. As for Proto-Turkic, there are different opinions. Serebrennikov and Gadžieva (1986: 26) doubt in its existence in Proto-Turkic, for it is not clearly evident in the majority of modern languages, as they maintain. Róna-Tas supposes that Proto-Turkic had front-back "sound harmony" and probably "some traces of labial harmony" (1998: 73).

There are also different views on R-U harmony in Old Turkic (OT). Gabain (1950: 56–57) does not discuss R-U harmony in the chapter "Lautharmonie" of her grammar. Johanson is of the opinion that the existence of R-U harmony in the OT predecessor of West Oguz is uncertain ([1979] 1991: 31). In Tekin's opinion, this process was at the beginning of its development in OT, and it was mostly binding vowels and CVC suffixes that were harmonized (Tekin 2000: 55).

In Karakhanid Turkic R-U harmony was well in progress. For example, the OT aorist suffix *-Ur, -yUr* (Erdal 2004: 129) is seen in many words in Karakhanid Turkic in the harmonized forms *-Ur, -yUr, -Ir, -yIr*. Most of noun suffixes were harmonized, but some were not, e.g. *+I* (e.g. *közi*), *+nI* (e.g. *közni*), some varied, as e.g. *+ün ~ +in* (e.g. *közün ~közin*). The harmonization of verb suffixes in *Qutadġu Bilig* and *Dīvān Luġāt at-Türk* was well behind noun suffixes, but it was better developed than in OT.[1]

After the Karakhanid period, all literary Turkic languages which used Arabic script acquired the written standards which mostly remained unchanged until the end of its employment. These standards do not reflect phonological processes occurring in the spoken languages and sometimes even the pronunciation of written texts. This was the case

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1 See the index to *Qutadġu Bilig*, e.g. the suffixes attached to the nouns *baş* 'head' and *köz* 'eye' (KBI 62-63 and 287-288), and the verbs *bar-* 'to go' and *kör-* 'to see' (KBI 56-58 and 280-284).

with literary Eastern Turkic or Chaghatai, Tatar,[2] and literary Western Turkic or Turkish throughout all its stages of development. Moreover, the tendency to "dissimilation" in Old Turkish increased in relation to Old Turkic. It is possible that this process started in the Oghuz period before the separation of the Seljuks, as we can conjecture from some indirect hints by Mahmud al-Kashgari, e.g. that the Oghuz say *ben bardum* 'I went' while the other Turks say *men bardım* (Dankoff and Kelly 1982: 85).

More detailed studies tend to establish rules for particular suffixes rather than to formulate general rules for R-U harmony in a language or historical period (e.g. Bombaci 1952, Thomsen 1963, Johanson ([1979] 1991: 31ff, Erdal 2004: 129–130, Grunina 1991: 34). The essence of these views is a classification of the suffixes of the second or non-initial syllables containing close vowels into three classes, (Bombaci 1952: 95, Thomsen 1963: 313, Johanson [1979] 1991: 31, [1979] 1991: 71, [1986] 1991: 78): (1) {I}, e.g. *-mIš*; (2) {W}, e.g. *-dWK*; (3) {X}, e.g. *+lXK*, and if we add a middle vowel, there is also a (4) {O} class, as probably in Old Turkic (Thomsen 1963: 317).

There is no written evidence to show clearly when R-U vowel harmony reached the stage of a fully accomplished process in any Turkic language. However, owing to the fact that it operates in most Turkic language areas (south-western, north-western and north-eastern), it is hard to believe that it could have developed in each group independently. Therefore, since the last great separation of Turkic languages occurred after the fall of the Golden Horde, we can assume that at least a far-going tendency to R-U vowel harmony must have been present in the 15th century at the latest. If we agree, for example, that Troki Karaim which possesses R-U harmony separated from the Crimea in the 14th century, we have also to agree with the supposition that it must have inherited R-U vowel harmony from 14th-century Crimean Turkic.

What is called 'some traces of labial harmony' or 'labial harmony at the beginning of its development' is that some suffixes are harmonized and some are not.

2.   Written standards and phonology

It is a well established fact that orthography always remains behind phonological processes in a language.

Some Turkic writing systems reflect vowel harmony fairly well, while others do not. Languages which have newly created scripts such as Altai, Tuvan or Yakut usually acquired written standards which mirror their phonetic structure in an adequate way. In contrast, those languages which have a long literary tradition, even if scripts changed, have phonetically inadequate writing systems, since a new alphabet often continues an old standard. Modern Turkish which employs Latin script is exceptional, for it broke up completely with the old standard. Therefore, vowel harmony is well represented by modern Turkish orthography, although some changes are not shown in it, e.g. *olacak* → [olucak] '(it) will be', *görecek* → [görücek] '(he) will see'. In contrast, the new Uzbek

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2 Old written Tatar was based on Eastern Turkic with an important admixture of Turkish. Genuine Tatar features started appearing towards the modern period.

orthography based on Cyrillic script is in fact a transliteration from Arabic and remains indifferent to the question of vowel harmony, enhancing the loss of it in the basic variety of spoken Uzbek. It is also true of the current Tatar orthography which does not reflect R-U harmony, although in fact it does operate in Tatar (e.g. Faseev 1966: 813, Serebrennikov and Gadžieva 1986: 26).

It is also an established fact that through education orthography may affect pronunciation,[3] in this particular case the pronunciation of words as unharmonized sound sequences. We may even speculate what Modern Turkish would be like without its fundamental language and writing reform. One may imagine that because of a very long tradition of ignoring vowel harmony and pronouncing words like *yoline* (Viguier 1790: 285, Zajączkowski 1936: 104) Modern Turkish would be in this respect like Modern Uzbek.

A good example of how an orthography may be durable and how it may influence pronunciation is Kazakh. Kazakh occupies a middle position between the languages that do not have a written tradition (e.g. the aforementioned Altai, Tuvan and Yakut) and languages which have one, e.g. Uzbek just across the border. Old Kazakh texts written with Arabic characters are quite different from Chaghatai texts and demonstrate R-U harmony quite well, e.g. the poem *Ädil Sultan* from the 18th century (Isin 2001): كـورونـسـون [körünsün] 'that it could be seen' (p. 51), قـويـروغى [quyruği] 'its tail' (p. 51), قـولـنـوم [qulunum] 'my dear; lit. my foal' (p. 52), the present standard being көрінсін, құйрығы and кулыным, respectively.

R-U vowel harmony is also well evidenced in the texts written in Cyrillic script from the 19th century and the beginning of the 20th century, e.g. *џүрүп* 'walking', *өлмөс* '(he) does not die', *қуйруҕу* 'its tail', *көргөнмүн* 'I have seen' (Melioranskij 1892: 40, 45, 46); *турғузуб* 'putting', *үйрөнүши* 'pupil' (Svjatoe Evangelìe 1901: 9, 95); *бурунҕудаі* 'wie früher', *өзӳ өзӱн бӳлӳндӳрдӳ* 'er hat sich selbst zu Grunde gerichtet' (Radloff 1911: 1823, 1894); *үідӱң* 'of the house', *тоҕуз* 'nine', *мөсөк* 'bed' (Samojlovič 1915: 164, 166). R-U harmony was also established by Melioranskij in his grammar in which he provided distribution of vowels in suffixes after stems (Melioranskij 1894: 16).

However, books printed in Tatar and Uzbek printing houses[4] as well as the reformed Arabic script, established by Aqımet Baytursınulı (1926–1928), then Latin (1929–1940) and Cyrillic (from 1940 onwards) scripts that followed it introduced a standard that completely ignored R-U vowel harmony. Therefore, both the Latin and the present-day Cyrillic standards were created on the basis of Baytursınulı's alphabet. We may suppose that it was probably so because Baytursınulı wished to introduce a new script closer to Tatar and Chaghatai written standards. Although Baytursınulı authored grammars and textbooks independently from Islamic Turkic tradition, for some reasons he did not want to break off completely the relations between Kazakh and the kindred Turkic languages.

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3 In relation to Kazakh, it was observed as early as 1894 by Melioranskij who noticed a strong impact of written texts in the pronunciation of some educated people (Melioranskij 1894: 15).

4 It was in 1894 that Melioranskij (1894: 15) noted that vowel harmony is not always represented in the written language.

3.   Rounded–unrounded vowel harmony in Old and Middle Turkish

A general belief that R-U harmony appeared in Turkish by the end of the 18th century is based upon the evidence of Latin 'transcription texts' which in our view reflect a high Ottoman style and imitate the written standard, even such practical texts as Jakab Nagy de Harsány's *Colloquia* (1672). A theory of labial vowel harmony was elaborated by Johanson (1979, 1978–1979). His arguments are valid, but in my opinion only in relation to Old Turkish and Standard Ottoman Turkish. Johanson was aware of the restraints imposed by 'transcription texts', and later he extended his analysis with a non-Latin, Armenian text (1986), though he did not change his theory. He says that the development of vowel harmony in Turkic languages is far from being clear in detail (Johanson [1978–1979] 1991: 71).

Johanson's theory of R-U harmony may be summarized as follows. There are three classes of suffixes with vowels {i}, {W}, and {ₒ} → {U}, {I}. He postulates three stages of development, an initial, a final and a transitional. The essence of the transitional stage is the presence of [± rounded] feature for suffix vowels, which in the final stage developed to [+ rounded] and [- rounded], i.e. to a stage in which the vowel in the suffix is governed by a stem vowel ([1978–1979] 1991: 72–73). Johanson assumes that the first step of this development in Old Turkish started in the 14th century when {I} → {U}.[5] In his view the process of West Oghuz R-U harmony started with the unrounding of the reduced vowel of type [Ö] to the neutral vowel of type [Ǝ] ([1979] 1991: 65). Johanson's observations were predominantly based on western 'transcription texts', though he has taken into account nearly all that had been said and examined before. However, his ideas – with some additions and restraints – were in principle supported by Doerfer (1985: 96) who examined texts written in Arabic script.

In our view the 'transcription texts', at least those examined so far, do no validate the arguments for such a late existence of dissimilating tendencies in Turkish. Phonetic inexactness of many 'transcription texts' is a well established fact. For instance, Doerfer (1985: 7–9) says that he sees problems with conclusions built solely on "transcription texts" and argues that their authors often noted traditional, not really spoken forms, other shortcomings being their poor competence of Turkish and influence of Balkan dialects.

There are opinions supporting our belief that some phonological processes had started in Turkish long before they were noted in writing and that spoken Turkish existed through the whole period of Classical Ottoman, being quite different in style from it

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5 However, owing to al-Kashgari's observation quoted above, we see that it started much earlier as a process of assimilation to bilabial consonants.

(Duman 1999: 331–359).[6] Among the arguments Duman quotes there are texts in Viguier's compendium, recorded in a double style, one high and educated, one colloquial (Duman 1999: 342–343). As we can see, there are very important differences in vowel harmony among those two styles. In the following, we will show some doublets (H – high, Q – qolloquial) quoting them directly from Viguier (1790):

> H vudjoudi (*vücudi*) – Q vudjoudou (*vücudu*), H oldoughi itschun (*olduği içün*) – Q oldoughou itschin (*olduğu için*), H kèndu (*kendü*) – Q kèndi (*kendi*), H qorqousi ilè (*korkusi ile*) – Q qorqousouy la (*korkusuyla*), H olmech (*olmış*) – Q olmouch (*olmuş*), H sanour (*sanur*) – Q saner (*sanır*) (p. 284), H yolinè (*yoline*) – Q yolouna (*yoluna*), H euzindè (*özinde*) – Q euzundè (*özünde*), H idub (*idüb*) – Q èdib (*edib*), H chukrini (*şükrini*) – Q chukrunu (*şükrünü*) (p. 285), H 'aqillou ('*akillu*) – Q aqelle (*akıllı*), H qarchousindè (*karşusinde*) – Q qarshesenda (*karşısında*), H yolsez mi (*yolsız mı*) – Q yolsouz mou (*yolsuz mu*), H èyu (*eyü*) – Q èyi (*eyi*) (p. 286), H dosten (*dostın*) – Q dostoun (*dostun*) (p. 287).

As we can see, in spoken style R-U harmony works perfectly, whereas in high style it follows the literary standard. Viguier's evidence is one of the most important, since his book is a brilliant work and in our opinion a recapitulation of Turkish studies from premodern time, being one of the best compendia of Turkology prior to the 19th century. Viguier was able to discover how Turkish phonotactic rules work and was aware of different social variants of language. One of the next authors shortly after Viguier in whose works the pronunciation of spoken Turkish is really demonstrated is Hindoglu (1829).

However, Viguier composed his work at the end of the 18th century and it does not invalidate the periods of development in Johanson's theory. Therefore, we have to refer to other evidence.

3. 1. Evidence of Karaim Turkish

Turkish texts written by Karaites, Armenians and Greeks who lived in Turkey are very important, since their authors were at least bilingual and Turkish was a natural environment to them. As a rule, the Levantines knew Turkish much better than Western traders and travellers. However, those of them who wrote in Turkish were educated and knew Arabic writing,[7] they were aware of the written standard. Some authors and copyists

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6 One of the first researchers who has pointed to the difference between a high variety of Ottoman Turkish and spoken language on the basis of 'transcription texts' was Ananiasz [Ananjasz] Zajączkowski. Comparing the original text of a letter by Sultan Süleyman I to the Polish King Sigismund August of 1551 with its Latin transcription by İbrahim Bey, a Polish-born Turkish interpreter at Sultan's *divan*, he demonstrated that many Arabo-Persian constructions were in the transcription replaced with Turkish equivalents, even such verbs as *tavakkuf etmek* by *katlanmak* 'to withhold' (Zajączkowski 1936: 112-113). However, in this transcription vowels are shown as they were pronounced in the high style (*ibid* 103–109).

7 Even the appearance of many manuscripts and books demonstrates Ottoman influence, e.g. the ornaments on the title page of the Armenian manuscript reproduced in Sanjian and Tietze (1981: 3). See also the *mihrab*-like ornaments on Jewish tombstones in Turkey (Rozen 1994: 116ff).

conformed to this standard and therefore, their works are roughly of the same relevance as Western 'transcription texts', but some apparently preferred spoken forms. It seems that in most cases two social and stylistic variants of Turkish, one high and the other low, were intertwined in their writings. Nevertheless, an analysis must take into account such factors as who was the addressee in correspondence, the readership to which a work was directed, as well as the genre and topic of a work.

1. The first evidence for R-U harmony is a very scarce Turkish material in a Karaite Hebrew prayer book published in 1741/1742 in Qale (Poznański 1913–1914: 40, 224):[8] *İbadetlen baş urarım, şu 'alam yaradana; bir münazi padişahdır, ķarar olmaz aķlına; avval aḥır ol gendidir, kimse ermez sırına; ancak ki az şefa'atın eyler ese kuluna* 'I bow to the Creator of this world; He is like a ruler who fights, his wisdom is unequalled; He is the first and the last, nobody can understand his secret, unless He gives some grace to his servant'.

In this short text we see normal spoken forms which contrast with the literary standard of Middle Turkish: *padişahdır* versus *padişahdur*, *gendidir* versus *gendüdür*, *kuluna* versus *kulına*.

2. Two financial documents prior to 1758, published in Jankowski (2010). The documents were written in the Crimea in Crimean Turkish, with some admixture of Crimean Karaim. There are two phonotactic rules relevant to the question we are concerned with in this paper.

(1)   Rounded stems + rounded suffixes.

Two suffixes obey to this rule: *+lXK*, and *-(X)r*, e.g. *günlük ~ günlik* 'daily; for a day, for ... days', and *olur* 'is; will be'. Because of *kömürlik* 'coal cellar', we may assume that this process did not go further than the second syllable. There is one exception to this rule, i.e. *götiren* 'leads',[9] while the forms *ķapu* 'door' and *yapulan* 'made' are phonetically motivated.

(2)   Unrounded stems – unrounded suffixes.

The suffixes which obey to this rule are the following: *+(X)m*, *+(X)mXz*, *+lX*, *+lXK*, *+ArI*, *-DXKtA(n)*, e.g. *şahım* 'my Shah', *efendimiz* 'our lord', *telli* 'here: embroidered', *beşlik* 'five-piaster piece', *oķalıķ* 'of one okka, of ... okkas', *yuķarı* 'above', *çıķtıķta* 'when going out', *verdikten (sonra)* 'after giving'.

R-U harmony also works in stems of both genuine words, e.g. *çubuķ* 'rod', *gümüş ~ gümiş* 'silver', *kömür* 'coal', *kütük* 'balk', 'textile'; *urçuķ* 'distaff', *ulu* 'great', *üçün* (4 occurrences) *~ içün* (2 occurrences) 'for', *yüzük* 'ring'; and loanwords, e.g. *zümrüt* 'emerald' and *ḥavlı* 'towel'.

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8 Poznański, who did not understand Turkic languages, called this poem "Tatar". He also quoted another "Tatar" poem which was later (p. 224) identified as a Tatar refrain of a Greek hymn first printed in Venice in 1528/1529. Unfortunately, Poznański's quotation in Hebrew characters seems to be inexact, therefore further research is needed, the more so as in his later paper (Poznanski 1918: 43) he confused the numbers of these two poems. More for the discussion on this controversy see Shapira (2003: 692) and Aqtay (2009: 20).

9 Although it may be affected by confusion with *ketiren*, since the verb *ketir-* also occurs in these text in a similar meaning.

We have to stress that unrounded stems are better attested to in the material available than rounded ones.

3. A manuscript of *mucuma* type, copied in the 18th century, among the holdings of the Institute of Oriental Manuscripts in St. Petersburg, shelfmark A 59. As in the preceding document, the vowel harmony seems to be operating in most cases, though there are a few exceptions. R-U harmony may be evidenced in the following suffixes:

(1)   Possessive suffixes, e.g. *sözü* (1a) 'his speech', *sözüñ* (67b) 'your speech', *oġlunda* 'at his son', *malım* (68b) 'my property'.

(2)   Genitive case suffix, e.g. *Osmanlınıñ* 'of the Ottomans', *şehirlerininñ* 'of their cities', *dunyanıñ* 'of the world' (1b); an exception being *bunıñ* (28b) 'of this'; this suffix may be influenced by the Karaim genitive suffix which occurs in only two variants, *+nıñ* and *+niñ*, cf. *İbrahimniñ* (32b) 'Ibrahim's'.

(3)   Jussive suffix, e.g. *gitsinler* (12b) 'let them go', *öptürsün* (12b) 'let him / make him kiss', *gelsin* (68b) 'let him come'.

(4)   Past tense suffix, e.g. *(aman) oldular* (12b) 'they became (safe)', *(müzeyyin) oldular* (12b) 'they became (elegant)', an exception being *ḳodı* (12a) 'he put'.

(5)   Aorist suffix, e.g. *veririm* (12a) 'I give', *verirler* (12a) 'they give', *severim* (68b) 'I love'.

(6)   Participle or verbal noun suffix *-DIG-*, e.g. *getirdigi* (28b) 'brought by him', *met ėttigi* (32b) 'praised by him'.

This manuscript contains popular stories and the language mirrors a low style. Beside the forms showing such accommodated forms as *cemaliçin* (32b) 'for his grace', there are some unharmonized suffixes like *+LIK*, e.g. *uzunlıḳları* (1b) 'their distance' and *ḳonşulıġımızdan* (12a) 'from our neighbourhood'.

4. Translation of the Bible into Karaim Turkish, printed edition of 1832–1835 in Istanbul (Tora 1832–1835).[10] The Karaim Turkish text[11] is vocalised, so we can clearly see the quality of each vowel. R-U harmony is in this translation demonstrated as a fully operating process, with some exceptions in morphological archaisms, e.g. the genitive case suffix *+nIñ* after stems ended with a consonant or phonetically motivated environments like the presence of bilabial consonants [b p m ɸ]. R-U harmony in this translation may be exemplified by the following pairs: *Tañrımız* 'or God' – *gücümüz* 'our strength' (p. 709); *göğü* 'heaven-ACC' – *yeri* 'the earth-ACC' (p. 5); *eyidir* 'it is good' – *yoḳtur* 'there is not' (p. 5); *ḳıldı* '(He) did' (p. 5), *verdi* '(He) gave' (p. 709) – *gördü* '(He) saw', *oldu* '(it) was' (p. 5); *gizlenmiş* 'hidden' – *olunmuş* 'been' (p. 709); *devşirilsinler* 'that they could be assembled' – *görünsün* 'that it could be seen' (p. 5).

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10 In Poznański's bibliographies it is shown as printed in Constantinople (Poznański 1913: 45, Poznanski 1918: 71), but a catalogue note in the copy I saw says that it is "Ortakoi 1835".

11 The language of this translation is called by the editors ישמעל לשון i.e. *lešon yišma'el*.

As said above, exceptions are rare, e.g. some suffixes that only have *I* vowel, e.g. *üçünci* 'third' (p. 6), and the old genitive suffix *+nIñ*, e.g. *suvnıñ* 'of the waters', *gökniñ* 'of heaven' (p. 5), but if the suffix appears in the form *+Xn*, the vowel is harmonized, e.g. *göğüñ* (p. 7).[12]

3. 2. Evidence of Armenian Turkish

The observations below are based on Armenian Turkish and the abundant Armeno-Kip-chak literature of the 16th and 17th centuries from outside Turkey, though also influenced by Turkish, is disregarded. Since most Armenian Turkish texts available are late, mostly from the second half of the 19th century, our observations are limited to two 17th century texts by Yeremya/Eremya Kömürciyan, published by Schütz (1971: 401–430) and *The Jewish Bride*, a longer poem written by the same author, published by Sanjian and Tietze (1981).

1. The letters. The importance of these texts to Turkish phonetics was obvious for Schütz (1971: 421). With reference to R-U harmony, Schütz finds out that personal suffixes are mostly harmonized (1971: 425–426), but only of 1PS, e.g. *efendim* 'sir', *sultanım* 'my lord', *gyozum* 'my eye(s)'. However, in his analysis Schütz does not quote such harmo-nized forms as *senin oylun* 'your son' for 2PS and *onunde* (*önünde*) 'before of' for the 3PS (p. 415).

As for grammatical noun and verb suffixes, Schütz says that normally unrounded var-iants are employed. Despite this it should be remarked that the old evidential suffix *-mIš* often takes a round vowel, e.g. *olmuš, olunmuš, tutmuš, gyormuš* after a rounded stem, but retains its unrounded shape after an unrounded one, e.g. *vermišimdir, olmamištir* (p. 415), while the converb *-(U)b* is mostly rounded, what Schütz explains by the effect of billabial *-b* (Schütz 1971: 426). In general, the unrounding tendency is stronger than the rounding tendency. After most unrounded stems suffixes appear in unrounded variants while in Turkish written with Arabic characters they are rounded, e.g. *devletli, geldin, dukendikde* (*tükendikte*).

The language of these two Armenian Turkish texts is closer to spoken Turkish than native Turkish or 'transcription texts' of a similar genre, though the second text demon-strates a stronger impact of written standard, e.g. *hazretlerinun* (2 occurrences), *giru*,

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12 It seems that Karaim Turkish publications printed in the Crimea were more conservative. For instance, the language of a publication that appeared at the same time in Gözleve/Eupatoria (1835) and which contains three texts in Karaim Turkish shows the lack of R-U harmony in many suffixes, e.g. *iktizadır, 'akılımız*, but *doğrudır, üsttir, olmış*, with alternations like *uçun, onuñ* etc. (Tov Ta'am 1835: 1a). It may be attributed to two reasons. One is because the impact of North-Western Karaim was stronger in the Crimea, though the authors and editors were often members of the same community or closely related congregations. A more important reason should be searched in readership. Namely, the readership in the Crimea was more receptive to the old standard with remnants of Kipchak Karaim.

idesuz, serifünuz (şerifiniz), kendu and *kïlu,* probably because this letter was written to the Persian Shah.

2. The poem. According to Tietze, the poem reveals "a relatively well developed labial harmony" (Sanjian and Tietze 1981: 57; see also p. 60). On the basis of the analysis of phonetic features and that what we know about the history of Turkish Tietze explains the irregularities by the transitional shape of 17th-century Turkish staying between Old Ottoman and Modern Turkish (Sanjian and Tietze 1981: 56). However, it seems that these irregularities may be explained by what Tietze writes later, namely by the fact that Kömürciyan tried to imitate the high style in Ottoman poetry (Sanjian and Tietze 1981: 66). There is no need to present R-U harmony in this poem, since it has been done by Johanson. Johanson regarded this text as a low variety style and more vital "der soziolektisch niedrigere, vitalere" (1986 [1991]: 79). Comparing it with the language of Jakab Nagy de Harsány's *Colloquia,* which was written at roughly the same time, Johanson came to the conclusion that Kömürciyan's poem is phonologically more progressive and shows a clear rounding tendency. We should only add that:

(1)   Some suffixes are mostly harmonized, e.g. possessive suffixes expect for the third person singular suffix if not followed by another suffix (Sanjian and Tietze 1981: 56–58); jussive (Sanjian and Tietze 1981: 60, 188, 189); participle or verbal noun suffix -*DIG-* (Sanjian and Tietze 1981: 165, 166).

(2)   Some suffixes are mostly rounded, unharmonized, e.g. the converb -*ub* (Sanjian and Tietze 1981: 60). Therefore, the assimilating tendency of the billabial consonant [b] is still stronger than R-U harmony.

(3)   Some suffixes are mostly unrounded, unharmonized, e.g. -*ci* (Sanjian and Tietze 1981: 176). In this case we are faced with the retention of the Old Turkish feature.

As a whole, we may say that the evidence of Armenian texts is weaker than that of Karaim texts. It may be attributed to the fact that Kömürciyan was an educated man and adhered more to the Turkish written standard, trying to imitate the Ottoman verse style, although it is true that there are many colloquial features in his poem.

4.   Conclusion

It is an indisputable fact that the process of the development of R-U harmony in Old Turkish, which was inherited from Common Oghuz in an initial stage, was weakened by the assimilating and dissimilating tendencies in phonetic environments. A relatively late tendency to R-U harmony in Turkish may be explained by its early separation from other languages. However, with the course of time the power of R-U harmony or distant assimilation became stronger. In other words, the force of a distant vowel turned stronger than the force of an adjacent consonant. However, the written standard fixed the forms of the suffixes and sometimes stems from the period before R-U harmony had developed and it imposed a norm that was in use as long as Arabic script was employed. The Ottoman

policy of *elsine-i selâse* and the dominating position of Arabic and Persian words to which R-U harmony could not be applied additionally favoured unharmonized writing and pronunciation. It is for this reason that even genuine Turkish words started to be pronounced in a vocalically dissimilating way, opening the way to such forms as *anleri* (onları) 'they-ACC' and *olmage* (olmağa) 'to be; for being'. This way of pronunciation was adopted by high Ottoman social groups as a label of education and social position to distinguish them from ordinary people. Needless to say, this fashion could not be without any effect on language development, but it could not stop the inherent tendencies of spoken Turkish. It is very likely that even educated people employed spoken Turkish in their private life, but used a different style to show their social position in official discourse.

Therefore, theories built on the evidence of 'transcription texts' and Turkish texts written in Arabic script should only be applied for high Standard Ottoman Turkish. They are of a limited value in relation to Turkish used in natural situations.

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