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Some Traces of Proto Turkic Primary Long Vowels in Written Kipchak Sources

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I

1. Although there have been significant improvements in the solution of the problems related to vowels in Turkic languages studies, it is hard to say that as yet any comprehensive solution accepted by all Turkologists has been put forth as regards certain problematic issues. For instance, there is no unanimous agreement as to which criteria should be adopted to classify the vowel phonemes of Turkic languages as well as about the number of these vowel phonemes. There are several views as regards the fact that there are 8, 9; 16, 18; 50, 60 vowels in PT. Apart from finding out the number of vowels, the study of vowels in terms of quality and quantity has always been of great importance in casting light over many other dark points concerning the history of Turkic languages.¹

2. One of the main problems of Turkology is PT primary long vowels, whose existence became well established by Otto Böhlingk in 1851 through Yakut. Primary long vowels is a very important phonetic characteristic of the PT period, is considered to be a scientific fact proven by many circles in Turkology. Turkologists such as Radloff, Foy, Grønbech, Németh, Räsänen, Ligeti, Pritsak, Tuna, Korkmaz, Doerfer and Tekin have done valuable research on material identification and the source of primary long vowels.

¹ For example, Doerfer stressed that there are *long, short* and *diphthongized long vowels* (see Khl. *al-* 'nehmen', *āyız* 'Mund', *ā't* 'Name'), not 2 (short, long) in PT, after studying the vowel lengths in historical and modern sources (1971: 233-234).

Primary long vowels have been so comprehensively studied first by Tekin within the framework of the materials in ancient and modern sources (passim. Tekin 1975, 1995). Also included in these studies are a small number of materials found in various sources about vowel lengths in Kipchak languages.²

3. As it's known, PT long vowels have been systematically preserved in modern Turkic languages such as Turkmen, Yakut and Khaladj as well as in a small number of words in Harezmi Oghuz dialect; Chuvash, Kirghiz, Gagauz and Turkish etc. The long vowels of PT have been eventually shortened and become one and the same as short vowels, leaving various phonetic traces in many sources that have reached up to the present.

3.1. The alteration in the quantity of the vowels, that is to say, the shortening of long vowels in the PT period have produced *sound changes* (linguistic phenomena) like palatalization, anaptyxis, gemination, diphthongization, voicing, prothesis, epenthesis, epithesis, pharyngealization, glottalization etc.³ *Sound changes* that result from

² In this study, the term *Kipchak* stands for *Kazakh, Karakalpak, Noghay, Karaim Halich* dialect; *Tatar, Bashkir, Kumyk, Karachay-Balkar, Karaim Trakai* (and *Karaim Crimean*) dialects, which are included in Tekin's classification *X. tawlı group* (Kipchak) (Tekin 1991: 13).

The works named as *historical Kipchak sources* are as follows: *komanisches wörterbuch, ein türkische-arabisches glossar, kitıbu'l idrık li-lisıni'l-atrık, kitıb bulgati'l-muštık fı lıgati'l-türk ve'l-kıfçak, et-tuhfetü'z-zekıyye fı lıgati't-türkıyye, el-kavınıñü'l-küllıye fı dıbı'l-lıgati't-tırkıye, el-dırratü'l-muđı' fı lıgati't türkıyye, dictionnaire armeno-kiptchak.*

For the purpose of narrowing down the subject, only the dictionaries *komanisches wörterbuch* (Grønbech 1942), *ein türkische-arabisches glossar* (Houtsma 1894), *kitıbu'l idrık li-lisıni'l-atrık* (Caferođlu 1931), *et-tuhfetü'z-zekıyye fı lıgati't-türkıyye* (Atalay 1945), *dictionnaire armeno-kiptchak* (Tryjarski 1969-1972) have been used.

³ Among these are examples of other striking phonetic traces in Tuva in which laryngealized vowels correspond to short vowels and normal vowels correspond to long vowels in Yak. and Tkm.:

PT **at* >> Yak., Tkm. *at* 'name', Tuv. *at* id.; but, PT **at* >> Yak., Tkm. *at* 'horse', Tuv. *a't* id.

the shortening of long vowels can be considered to be the result of quantity harmony, or in other words, balancing (Tuna 1960:276).

3.2. With the words in which *sound changes* effects are seen with the shortening of long vowels, it becomes difficult to identify the real cause of sound changes if there are other phonetic factors that might cause the same sound change.

4.2. Whether a voiceless consonant following a long vowel is voiced or remains unchanged may bring out some semantic differences.⁴

4. In historical Kipchak sources, primary long vowels have been preserved in few words and have left non-systemically phonetic traces in a small number of words.⁵

PT **ōt* >> Yak., Tkm. *ōt* ‘fire, Tuv. *ot* id.; but, PT **ot* >> Yak., Tkm. *ot* ‘grass, her, weed’, Tuv. *o’t* id. (Şçerbak 1970: 165)

⁴ For example, in Kar. T. the word *oçax* ‘stove; fire place’ has come to mean ‘association, organization’ by changing into *odjak* [*ocak*]. Likewise, in Krč.Blk various phonetic developments have led to semantic differences in the word PK **yamiş*. Accordingly, while the meaning of ‘fruit’ is preserved in *cemiş*, the form with short vowel, that is, in the word *ceymiş*, the diphthongized form has come to mean ‘food; feed’. In a sense, this can be considered to be the consequence of an unexpected development resulting from long vowels, taking on a different meaning. Many examples with short or long vowels can be given for this function, such as **yati* >> Kkp. *Ceddi* ‘Capricorn’ but *ceti* ‘seven’; **yāşar*- >> TT *yaşar*- ‘1. to become wet 2. to become fresh’ but *yeşer*- ‘to become green; bloom’, **bıçqı* >> TT *bıçkı* ‘cross-cut sow’, but *bıçkı* ‘cutting out of clothes etc.’; Az. *neçe* ‘how many/much’, but *nece* ‘how?’ etc.

⁵ The long vowels have been demonstrated in spelling since the Orkhon, Uighur and Karakhanid periods. The vowels lengths in various sources such as MK, written in Arabic alphabet, are demonstrated with *al-madd* ‘The three long vowels, lengthening letters’ *elif* (ل), *vav* (و) and *ye* (ي) (Tekin 1975: 97). Similarly, *al-madd* were used in Hou. and Tuh. from historical Kipchak scripts in the demonstration of long vowels. For example, the initial *ā* is shown generally with *double elif*, whereas the *a*, which is short in PT, is shown with only one *elif*.

In Old Uig. and CC written in Latin alphabet, similar written techniques were used. However, the fact that the short vowels in the spelling systems of Hou. and Tuh. can be shown with *elif* and *vav* proves that these works cannot be the only reliable sources in determining the lengths.

4.1. While there is no primary long vowel preserved in modern Kipchak written languages, there is a considerable number of long vowel remainders which can also be found in historical sources.⁶ There is no record in modern Krč-Blk. about the primary long vowels claimed by Pritsak to have been preserved in 10 words in Balkar⁷ (1958).

4.2. Phonetic traces arising from the shortening of PT and PK long vowels might have been preserved in part of Kipchak languages, and sometimes only in one language.⁸

II

1. Sound Changes Related to the Vowels

There is 3 words with long vowels in CC: *āy* (~ *ay*), *yā* (~ *ya*), *tōdaq* (~ *totaq*) (Tekin 1995: 119). PT *hāy* ‘moon’ > CC *āy* (~ *ay*) [ay//aay], Tuh. *āy* id. (cf. Tkm., MK *āy* id., Khl. *hā^ay* id.). The long vowel in PT **tōdaq* is shown with two vowels in CC and with a vav (و) in other historical sources: **tōdaq* (~ *todaq*) ‘lip’ (cf. Tkm. *dōdaq* id.; Hou. *dōdaq* id., Tuh. *tōday* id.). However, this word corresponds to *erin* in Kipchak vocabulary. In this case, it can be admitted that the *tōdaq* (~ *totaq*) example in CC can be said to be the result of an internal borrowing between Turkic dialects or this word became obsolete in Kipchak languages.

PT **yā* ‘bow’ >> CC *yā* (~ *ya*) [yaa//ya] (cf. Tkm. *yāy* id.; MK, Hou., *yāy* id.; but, Tuh. *ya* id.)

In PT *yā(y)* example, the long vowel is preserved in CC; however, a final /y/ emerged as it is shortened in other sources.

⁶ But, in the Crimean dialect of Karaim, the long /ā/ in (*yā* ‘bow’) can be primary. Another phonetic trace of the PT and PK long vowel in *yā* is the palatalization of the word in Tat. and Baš. *yāyā*. But the palatalization of back vowels coming after /y/ (>/c/), which occurs at the beginning of utterances in Bashkir. and Tatar is another common phonetic feature.

⁷ *āq* ‘white’, *āt* ‘name’, *āz* ‘little; few’, *sān* ‘number’, *zōl* ‘road; way’, *ōt* ‘grass’, []*n* ‘flour’, *bḡz* ‘awl’, *ḡḡ* ‘work; action’, *ḡt* ‘dog’

⁸ For instance, while the long vowel /ō/ in PT *yōq* ‘yok’ has been shortened and the last phoneme has been preserved in modern Kipchak languages, it has changed into *yo* ‘no’ in Kar.H. and Kar T., similar to the utterance in TT. This must have been the result of the **yōq* > **yoγ* > **yo*. While the semi-vowel *γ* drops, it brings about a length of compensation in utterance in the vowel that precedes it. In modern Kipchak written languages there are many other examples that illustrate this point.

Among the causes of *sound changes* are the interaction between vowels in terms of their features, changes in the quality of vowels brought about by consonants, and the effect of changes in the quantity of vowels on vowels and consonants etc. Studies on long vowels have concentrated particularly on the first syllable, which can be attributed to the fact that vowels outside the root syllable are subject to the root syllable, in accordance with the rule of vowel harmony in Turkic in phonetic phenomena. The lengths in other syllables, on the other hand, are fewer in number, but of a more problematic nature.

1.1. Palatalization

In modern languages, there is a large number of examples of palatalization that occurs as a result of *adjacent* consonants. That some words with PT and PK long vowels is seen with front vowels in modern languages can be accounted for partly by the effect of /c, ʧ, j, ʃ, y/. While secondary lengths occurring as a result of vowel combinations and contractions sometimes become shorter, they can sometimes become palatalized as in such words Kzk., Nog. as *äkel-* (< *al-ıp* + *kel-*) ‘to bring; cause to reach’, Kzk. *äket-* (< *al-ıp* + *ket-*) ‘to take away, carry off’, Kzk. *äper-* (< *al-ıp* + *ber-*) ‘to obtain, get hold of; take; give’; ‘Nog. *bätir* (< **bätür* << Mo. *bagatur*) ‘hero; young’ etc.

Below are some examples of palatalization occurring as a consequence of the shortening of long vowels:

1.1.1. /ā/ > /ä/: During the developing of the Kipchak languages a number of palatalization processes took place. While the PT /ā/ has become shorter in Kipchak languages, it has become palatalized particularly in Tat. and Baš. However, one must be cautious about the claim that these phonetic traces have originated from the effect of long vowels. Because the Tat. words with short vowels (PT *saç* >>) *çäç* ‘hair’, (PT *saç*- >>) *çaç-* ‘to scatter, to strew; sow...’ and the vowels in Baš. in words *säs* id. *sas-* id. have become palatalized by the effect of /ç/. There are many examples of palatalization in similar forms.

However, there is no other explanation than that of the long vowels in Tat. *äz* (~ *az*) ‘little, few’, Baš. *äδ* (~ *aδ*) id.

/ā/ >> /ä/, /e/ examples are as follows:

1.1.1.1. **āz* >> Tat. *äz* (~ *az*) ‘little, few’, Baš. *äδ* (~ *aδ*) id. (cf. MK, Tkm. *āz* id.)

1.1.1.2. Mo. > **āqa* >> Kzk., Kkp. *äke*⁹ ‘father’ (cf. Krč.Blk *aqqa* ‘grandfather’; Tkm. *āya* id., Yak. *aγa* id.)

1.1.1.3. ? > **āqirañla-* > Kzk. *äkireñde-* (~ *akirañda-*) ‘to cry out, yell; speak loudly’; but, Kkp. *aqirañla-* id.

1.1.1.4. **ālda-* > *yalda-* > Kar.T. *yelda-* ‘to deceive’ (cf. Tuh. *yalda-* id., Tkm. *ālda-* id.)

1.1.1.6. **hāra* >> (?) Kzk. *äre-dik* ‘occasionally, rarely, scarcely’ (cf. Tkm., Yak. *āra* ‘interval’, Khl. *hā^ara* id.). The Kzk. *äredik* must be related with PT *ār-* ‘to pass through; make one’s way through’.

1.1.1.7. **āriγ* >> Nog. *ärüw* ‘nice, beautiful, neat’ (cf. CC *ari* ~ *arrow* id.; Hou., Tuh. *aru* id.; Arm. K. *ari* ‘saint’; Krč.Blk *ariw* id.)

The diphthongisation as in CC and the palatalization in the second syllable in Krč.Blk and Arm.K. may be related to the vowel length.

1.1.1.8. **bār-ı* >> Kzk., Kkp., Nog. *bäri* ‘all, the whole’; but, Kkp. *barı(-coγu)* id. (cf. Tkm., Yak. *bār* ‘exists’, Khl. *bā^ar* id.)

1.1.1.9. **hāri* (~ **hāra*) >> Kkp. *härre* ‘bee’; but, Kzk. *ara* id. (cf. Gag. *āri* id., Khl. *hā^ari*; but, Tkm. *ari* id.)

⁹ *äke* can be thought to be a result of such a development as *ata-ke* > **ateke* >> *äke*, that is regressive vowel assimilation, in these languages (Sevortyan 1974: 122).

1.1.1.10. **qāri* >> Kzk. *kāri* ‘old, elder’; but, Kkp. *qarrı* ~ *ğarrı* id. (cf. Tkm. *ğarrı* id., Tat. *qarıy* ~ *qart* id.).

1.1.1.11. **sāriy* >> Kzk. *sāri* (~ *sāre*) ‘twilight’; but Kar. H., Kar.T. *saruw* id.; Kar. K. *sarow* id. (cf. Čuv. *şurā*, *şur* ‘white’ <<**sāriy*, Ceylan 1997: 151).

1.1.1.12. **sāriy-lıq* >> **sāri-lik* > Nog. *sārik* ‘jaundice’ (cf. Kmk. *sarilik* id.)

The reason for the palatalization in Kmk. *sarilik* must have been due to the form of PT *sāriy*. The primary long vowels may affect the vowels in syllables other than the first syllables.

1.1.1.14. **tātyly* >> Kzk. *tātti* ‘sweet’, Nog. *tātli* id.; but, Kkp., Tat., Baš., Krč.-Blk., Kar.T. *tatlı* id. (cf. CC *tatlı* ~ *tātylı* id., Hou. *tātlu* id.; Tuh. *tatlı* id., Arm. K. *tatlı* ~ *tātylı* id.; Tkm. *dādım* ‘taste’)

1.1.1.15. It becomes difficult to claim that the palatalization was caused by the existence of the effect of the primary long vowel, when /y/ (> /c/, /j/); /ç/, /ş/ consonant appears in the word with the primary long vowel.

Some examples are as follows:

1.1.1.15.1. **yāyin* >> Kzk. *jāyin* (~ *jayın*) (KTTS: 225) ‘sheat-fish’; Tat. *cāyēn* id., Baš. *yāyēn* id. (cf. Tkm. *yāyin* id.)

1.1.1.15.2. **bāla-q-ay* >> Baš. *bālākāy* ‘child’; but, Kkp., Tat. *balaqay* id. (cf. Tkm. *bāla* id., Khl. *bāla*, *bā^ala* id.).

1.1.1.15.3. **yārdam*¹⁰ (?) >> Kzk. *jārdem* ‘aid’; but, Nog. *yardam* id., Bşk. *yardam* id.; Kkp., Krč.Blk. *cardam* id., Kmk. *yardım* id. (cf. Tkm. *Yārdam*, Uzb. *yārdām* id.)

¹⁰ cf. Ir. *yār* ‘friend’

1.1.1.15.4. **yārın* >> Baš. *yārān-gě* ‘belonging to next year’; Kzk. *jarın* id., Kkp. *carın* id. (cf. Hou. *yārın* ‘tomorrow’; MK, Tuh. *yarın* id.)

1.1.1.15.5. **yāşıl* >> Kar.H. *yāsil* (~ *isil*) ‘green’; Tat., Baš. *yāşıl* id.; Kar.T. *yāşıl* id.; but, Kzk. *jasıl* id., Kkp. *casıl* id.; Nog. *yasıl* id.

1.1.1.15.6. **yāy-* >> Kzk., Tat. *jäy-* (~ *jay-*) ‘to spread out’; Baš. *yäy-* id.; but, Kkp. *cay-* id.; Kmk., Kar. H., Kar.T. *yay-* id. (cf. Tkm. *yāy-* id.; MK *yāδ-* ~ *yāt-* id., Tuh., CC, Arm. K. *yay-* id.).

1.1.2. /ɪ/ > /i/ (>/ě/)

1.1.2.1. **çīpin* >> Tat. *çěběn* ‘mosquito’, Kmk. *cibin* (? < Az.) id.; Kar.H. *tsibin* id., Kar.T. *çibin* id.; but, Kzk., Kkp., Nog. *şıbin* id.

1.1.2.2. **qīzil* (?) >> Kar.H. *kızıl* (~ *kızıl*) ‘red, scarlet’ (cf. MK *qīzil* id., Karg. *qızıl* ‘rash’; but, Tkm. *ğızıl* id., Yak. *qıhıl* id.) (Atalay 1986).

1.1.2.2. **sīş* >> Tat., Baš. *şěş* ‘spindle’; Nog., Kar.H. *sis* id. (cf. MK *sīş* id.; Kzk. *istik* id.; Kkp. *isik* id.; Kmk. *şışik* id.)

1.2. Vowel Epenthesis:

One of the phonetic outcomes of shortening the long vowels is vowel epenthesis in one -(closed) syllable words.¹¹ In some words, {-I} may be thought as 3rd singular person possessive suffix.

1.2.1. *āq* >> Krč.Blk *aɣɪ*¹² ~ *aq* ‘white’ (cf. MK, Hou., Tuh. *āq* id.)

¹¹ Some examples appearing in historical sources are as follows: Tuh. *acı* ‘hungry’ (cf. Čuv. *viś, viśā* id.); CC *yalı* ‘mane’. The *yalı* form in CC may have come from *yaltıy* in MK (Clauson 1972: 916).

¹² The probability that the /ɪ/ in *aɣɪ* in Krč.Blk is a third singular person possessive is also very strong. Nevertheless, this word, as an entry in the dictionary, corresponds to ‘white’ in Russian language and the sentence ‘*alanı ~n menñe ber.*’ has been shown as an example. {-n} accusative suffix has been used in the sentence. In this case, /ɪ/ is supposed to be a possessive suffix.

1.2.2. **āñ* >> Krč.Blk *añi* (~ *añ*) ‘conscience, mind; intelligence’ (cf. Tkm. *añ* id.)

1.2.3. **qıγ* >> Krč.Blk *qıγı* ‘dung, manure’ (cf. MK, Hou. *qıγ* id.)

1.2.4. **qīn* >> Tat. *qını* (~ *qın*) ‘sheath’ (cf. Tkm. *gīn* id.; Yak. *qīn* id.; Čuv. *yěñě* id.; MK *qīn* id.; Mo. *kui*, *kuyi* < *qıβı(n)* (Tekin 1995: 158).

1.2.5. Ir. (Clauson 1972) >> **qōz* >> Tat. *quzu* ‘walnut’ (cf. Tkm. *xōz* id.)

1.2.6. **ʔ* >> Kar.H. *otu* (~ *ät*) ‘gall, bile’ (cf. MK, Hou. *ʔ* id., Tuh. *öd* ~ *öt* id., Arm. K. *ot* ~ *ot’* ~ *awt*¹³ id.)

1.2.7. **bʹg* (~ **bʹy*) >> Kzk. *büyi* ‘scorpion’, Tat. *böyě* ‘spider’, Baš. *böyö* id.; but Nog., Kar. K. *biy* id. (cf. Tkm. *mʹy* id.; MK *bʹg* ~ *bʹy* id., CC *böv* id., Hou. *bʹy* id., Tuh. *bew* id.)

1.2.8. Baš. *ısq* ‘dew’; but, Kzk. *şıq* id.; Tat. *çiq* id., Krč.Blk *çiq* id. (cf. Tkm., MK *çığ* id.)

1.3. Diphtongisation¹⁴ (Triphthongisation)

¹³ for *o/ö* > *a*, cf. VB *wān* ‘10’; (cf. Čuv. *vat*, *vatā* < *ʔ* ‘gall, bile’; Čuv *var* ‘middle; center’ (<< *z*) ‘own, essential; self’) (Ceylan 1997: 175, 180)

¹⁴ A major part of the diphtongs in Kipchak languages date back to PT and PK periods.

ā: **āzɣln* >> Tuh. *awuzɣun* ‘freaked out, furious’ (cf. MK *āzgun* id.)

ī: **qīna-* >> CC *qıyna-* (~ *qına-*) ‘to torture’

ō: **tōllɣ* >> CC *toulu* (~ *tolu*) [*toulu/tolu*] ‘full’ (cf. Tkm. *dōltı* id.); **yōl* >> CC *youl* (~ *yol*) [*joul*] ‘road’

ū: **ūşaq* >> CC *uyşax* ‘slander’; **ūşaqçı* >> CC *uyşaxçı* ‘slanderer, calumniator’ (~ *uşaqçı* ~ *uşaxçı*); **yūt-* > CC *yowut-* ‘to swallow’; **yū-* >> CC *yuw-* (~ *yu-*) ‘to wash’, Arm. K. *yuv-* id. (Tkm. *yuv-* id.); **ūn* >> Arm. K. *awn* (~ *un*) ‘flour’ (cf. Tkm. *ūn* id., Čuv. *šānāh* id.)

ē: **çērig* > CC *çeyri* (~ *çeri*) ‘soldier’; **kēkir-* >> Tuh. *keykir-* ‘to burp, to belch’ (cf. Tkm. *gēgir-* id.)

ḡ: **çḡk* >> CC *çiyik* (*çiyix?*) [*çiyg*] ‘raw, uncooked’ (cf. Tkm. *çığ* id.)

1.3.1. /ā/ > (?) aya

*āz (~ ās) >> Krč.Blk. *ayaz* (<? *aq* 'white' + *az* 'ermine, stoad') 'weasel'; but, Kar. H., Tat., Kmk., Kar.T. *as* 'ermine, stoad'; Baš. *aθ* id. (cf. Alt. *ayaz* id., Čuv. *yus* id., Yak. *ās* 'white horse', Tkm. *ās* 'lizard'; MK *ās* ~ *āz* 'ermine, stoad')

The *aq* + *ās* > *ayaz* development for Krč. Blk. can be considered. However, the *āz* having adjective in front of it meaning 'white' may not be a logical explanation.

1.3.2. /ā/ > aw

*āyu >> Kar. K. *awyu*¹⁵ 'hot, bitter'; but, Nog. *ayuw* 'venom', Baš. *ayıw* id. (cf. Tkm. *āwi* id., KB *āyu* ~ *ayı* id., MK, Hou. *ayu* id., Tuh. *āyu* ~ *awu* id.).

1.3.3. /ā/ > ay; ay-a (> äy-ä)

?: *ʔrō >> CC *tōwre* [*tora*, *toura*] 'the main corner of the tent', Hay. *tōwūr* 'the main corner of the house' (cf. Tkm. *t'r* id., but *töre* 'high class man before October Revolution'; *ʔ >> Arm. K. *awt* ~ *ot'* 'poison' (cf. Tkm. *t* id., Čuv. *vat* 'gall, bile'); *günç >> CC *öygünç* (~ *ögünç*) 'praise'; *š >> Tuh. *öyüş bol-* 'to get wet'; *s'n- >> Tuh. *söwün-dür-* 'to extinguish'; Hou. *säyündür-* id.; *ʔ >> Arm. K. *awç* 'revenge' (cf. Tkm. *ʔ* id.)

?: *ʔn >> Tuh. *yüwün* 'wool' (cf. Tkm. *yün* id.) (Tekin 1995: 125, 126).

Tekin states that the examples of diphthongization in CC are phonetic variations and that words like *toulu* and *toura* are not misspellings but are diphthongized forms of /ō/ and /' long vowels in PT (1987a: 295).

¹⁵ *ayu* and its variations, as seen in modern languages, are not Kipchak forms. As can be seen in the examples in Kzk. *izgi* 'worth of respect, venerable' and *iygi* 'good, well' (< Orh. *edgü* 'good, well') etc., Kipchak and borrowed forms may appear together. The diphthongization seen in the second syllable in Nog. and Baš. may be related with *ayūla-* in MK.

*yā > Kkp. *cay* ‘bow’, Nog., Kar. H., Kar.T. *yay* (~ *yay-a*) id., Tat. *cäy-ä* id., Baš. *yäy-ä* id., Kmk., Krč.Blk *cay-a* id. (cf. CC *yā* ~ *ya* id., Tuh. *yāy* id., Arm. K. *yay* ~ *ya* id., Tkm. *yāy* id., Yak. *sā* id.)

1.3.4. /ī/ > iy(ı), iyi, iy, eyı

1.3.4.1. *qīn >> Kzk., Kkp., Nog., Tat., Baš., Kmk., Krč.Blk *qıyn* ‘1. anguish, grief’ 2. ‘difficult; hard, harsh’, Kar.H. *kıyn* (~ *keyın*) id., Kar.T. *kıyn* id. (cf. Tkm. *qīn* (TLS: 1020); Orh. *qıyn* ~ *qın* ‘punishment; torture’, Uig. *qıyn* ~ *qın* id., KB *qın* ~ *qıyn* id., CC *qın* id.)¹⁶

1.3.4.2. *qīna- >> Kzk., Kkp., Kmk., Krč.Blk *qıyna-* ‘to grieve; to torture’, Kar. H., Kar.T. *kıyna-* id. (cf. Tkm. *gīna-* id.; CC *qıyna-* ~ *qına-* id., Arm. K. *xıyna-* id.)

1.3.4.3. *sīla- >> Kzk., Kkp., Nog., Kar. H., Tat., Kmk., Krč.Blk., Kar.T. *sıyla-* ‘to host, to respect, to serve’, Baš. *hıyla-* id. (cf. Tuh. *sı(y)la-* id., CC *sıy* ‘fame, reputation’)

1.3.4.4. *sīpa- >> Kzk., Kkp., Nog., Tat., Kmk. *sıypa-* ‘to stroke, caress, pad’, Baš. *hıypa-* id., Krč.Blk *sıypa-* (~ *sıypala-*) id. (cf. Tkm. *sīpa-* id.; CC, Kar. K. *sıpa-* id.)

1.3.4.5. *qīqır- >> Kzk. *qıyqır-* ‘to call, invite, Kkp. *qıyqır-* ‘to cry, shout’. (cf. Čuv. *yihār-* ‘to call out, call’; Tkm. *gīyır-* id., Tuv. *qırqıra-* id. MK *qī* ‘exclamation of address’) (Tekin 1995: 127)

1.3.4.6. *qīqıla- >> Kzk., Kkp. *qıyquw-la-* ‘to produce a loud sound as in chorus’ (cf. MK *qī* ‘exclamation of address’).

1.3.4.7. *bīt >> Kzk., Kkp., Nog. *biyt* ‘louse’; but, Kar.H., Kmk., Krč.Blk *bit* id.; Kar.T. *bit* ~ *bit’* id.; Tat., Baš. *bēt* id. (cf. Čuv. *pytā* id., N. Uigh. *pišt* id.)

¹⁶ The *qıyn* form of the word can be seen in modern languages. /ı/ can be thought to be a shortened form of /ıyı/. However, *qīny > *qıyn can be conceived of (see Räsänen 1969).

1.3.4.8. **īt* >> Kzk., Kkp., Nog. *iyt* ‘dog’; but, Kar.H. *it* (~ *yit*), Kmk., Krč.Blk *it* id.; Kar.T. *it* ~ *it’* id.; Tat., Baš. *ēt* id. (cf. Čuv. *yit*, *yutā* id.).

1.3.4.9. **qīmil-da-* >> Kzk., Kkp., Nog., Tat., Baš. *qīymil-da-* ‘to move’; but, Kar. H., Kar.T. *kīmil-da-* id.; Krč.Blk *qīmil-da-* id. (cf. Kmk. *kīymillan-* id.; Tkm. *ēīmil-da-* id.)

1.3.4.10. **qīr* >> Kzk. *qīyır*¹⁷ ‘1. far off, distant 2. frontier; border’ (*qır* ‘hill, high ground’; Kkp. *qīyır* (~ *qır* ‘mountain range, border...’ id.); Krč.Blk *qīyır* (*qır*) id.; but, in Kar.H. *kır* ‘moor’; Tat., Baš. *qır* I ‘edge, border’ (*qır* II ‘moor, field’), Kmk. *qır* id. (cf. MK *qır* ‘an isolated mountain; the high lofty mountain’; Tuh. *qīr* ‘moor’)

1.3.4.11. **īs* (~ *īš*) >> Krč.Blk., Kmk. *iyis*¹⁸ ‘smell’, but Kzk., Kkp., Nog. *is* id.; Baš. *yēθ* ‘scent, aroma’, Tat. *is* id. (~ *is* ‘smoke’) (cf. *yās* ‘smoke’; Az. *his* id.; Yak., Tkm. *īs* id.; Arm. K. *is* id.)

1.3.5. /ō/ > (ou >) uı (uwı)

1.3.5.1. **sōr-* > **sour-* > Tat. *sur-* ‘to suck, to absorb’, but Kzk., Kmk. *sor-* id., Baš. *hur-* id. (cf. MK, Tkm. *sōr-* id., Hou. *sor-* id.)

¹⁷ The vowel in MK *qır* ‘open area’ is short. The *qır* in Tkm. meaning ‘a rocky area which is empty in some parts and hilly in some others’ is very close to the one in MK and is similarly with short vowel.

qır in Kzk. and in Kkp. have similar meanings. *qīr* in Tkm. with a long vowel is an adjective indicating a colour and is not connected with the first word in meaning. In this case, there is nothing in modern languages to explain the gemination in *qīyır*. However, Clauson pointed that the word originally means ‘a high ground’ etc., however, it also means *qır*, ‘edge, border’ in modern languages, stating that this can be a semantic extension (1972: 641). There is no evidence that *qır* and *qīyır* are different words.

There is no evidence in historical sources relating to length and **qīr* in PT can be said to have developed in two different ways from a phonetic perspective. In the first one the vowel was shortened and in the second one it was diphthongized. The original meaning of the word was retained in Kkp. The diphthongized form means ‘the border’.

¹⁸ MK *yıδ* + *is* >> ? *iyis*

1.3.5.2. **yōrt-* > *yourt-* > Tat. *yu(w)irt-* ‘to gallop’ (cf. MK *yōri-* ‘to walk’) (Tekin 1995: 125)

1.3.6. /*ū*/ > *uw/iw*, *uwı/uwu*

1.3.6.1. **yū-* >> Kzk. *juw-* ‘to wash’, Kkp., Kmk., Krč.Blk *cuw-* id., Nog., Kar. H., Kar.T. *yuw-* id., Baš. *yıw-* id.

1.3.6.2. **ūq* (~ *ūγ*) >> Kzk., Kkp. *uwıq* ‘the mast that keeps the tent stand upright’ (cf. TT *huğ* ‘A hut made of reeds or rushes’ (Clauson 1972: 76); Tkm. *ūq* id., MK *ūγ* id.)

1.3.6.3. **hūrçiq* (cf. **hur-* ‘to hit’) >> Kar.H. *uwurtsuk* ‘spindle’, Kar.T. *uwurçox* id.; but Kzk., Nog. *urşıq* id., Tat. *orçiq* id., Baš. *orsoq* id., Kmk., Krč.Blk *urçuq* id. (cf. CC *wurçiq* id.)

1.3.7. /*«*, /*ı*, / > *ey*, *iy*, *öy*

1.3.7.1. **y«miş* >> Krč.Blk *ceymiş* ‘food’; but Kzk. *jemis* ‘fruit’, Kkp., Krč.Blk *cemiş* id., Nog. *yemis* id. (cf. Tkm. *ğmiş* ‘fruit’, MK *yemiş* id., CC, Hou., Tuh. *yemiş* id.; Mo. *cemis*, *cemiş* id.).

1.3.7.2. **ēsin-* >> Kzk., Kkp. *iysin-* ‘(animal) to milk, to give milk at times’

1.3.7.3. **kēme* (~ *kēmi*) > *käyme* > Tat. *köymä* ‘ship’ (dia.) (cf. Ostyak *kömä* id., Sinor 1990: 172; Tkm. *gēmi* id., MK *kämi* ~ *kemi* id.).

The vowel in the root syllable of the word, which exists in Tatar dictionary but alleged to be a dialect, may have been rounded because of the regressive effect of /*m*/ at the beginning of the second syllable after being diphthongised.

1.3.8. /*ɣ*/ > *iy(i)*

**ʒk* >> Kzk. *iyik* ‘spindle’ (cf. Tkm. *ʒk* id.; MK *ʒk* ~ *yʒk* ~ *iyik* id., Hou. *yik* ~ *ʒk* id., Tuh. *ʒk* id.)

1.3.9. /ʎ/ > üwü, iwi, uv’u; üyë, öyü

ʃ > öyş > **öyış* >> Kar.H. *yiwis-* ~ *yüwüs* ‘to damp, humid’, Kar.T. *yuv’uş* (~ *yüwüş*) id.; Tat. *yüyüş-* id. (cf. Baš. *yiviş-lik* (TLS: 646) id.; Tuh. *öyüş bol-* id.)

2. Sound Changes Related to the Consonants

2.1. Voicing¹⁹

2.1.1. /ç/ > /c/

2.1.1.1. **b* *çek* > (?) Tat. *böcäk* ‘bug’. Preservation of /ö/ indicates that this word could have been taken from an Oghuz type dialect.

2.1.1.2. **āçı-* >> Kar.T. *acı-* ‘to hurt, to feel the hurt’ (cf. Kar.T. *açı-* ‘to become grievous’, Kar.H. *atsı-* id.); but Kzk., Kkp., Nog. *aşı-* ‘to become grievous’ Tat., Kmk., Krč. Blk. *açı-* id., Baš. *āsē-* id. (cf. Tkm. *āca-* id., Tuh. *acın-* ‘to pity’).

2.1.1.3. **hōtçuq* >> Kar.H. *odzak* (~ *otsaq*) ‘the fire place’; Kmk. *ocaq* ‘room’ but *oçaq* ‘the fire place’; Kar.T. *ocax* ‘unity, organization’; but, *oçaq* ‘the fire place’; Krč. Blk. *ocaq* id.

¹⁹ There are /ç/ > /c/, /p/ > /b/ examples in historical sources. Words such as *acı* ‘hot, bitter’, ‘sour’; *acı* ‘bitter yoghurt’; *acı* ‘hungry’; *acıq* ‘hungry’; *acın-* ‘to feel pity’; *bucaq* ‘corner’ etc. in Tuh.; CC *tüb* ~ *tüp* ‘the bottom’, Arm. K. *tib* ~ *tibi?* id.

Tuh. *ada* ‘island’ does not reflect the characteristic of Kipchak. The form in Tuh. would be expected to be *ataw* ~ *atow*.

Other examples: Tuh. *ada-(n)-* (~ *atan-*) ‘to name, to be named’; Tuh. *adım* (~ *atlam*) ‘pace’; Tuh. *buda-* ‘to prune’; Hou. *odun* ‘wood’; CC *tōdaq* (~ *totaq*) ‘lip’; Hou. *dodaq* id.; Tuh. *dudag* (?) id.; Tuh. *öd* (~ *ıt*) (!) ‘gall, bile; bitterness’, Tuh. *yedi* ‘7’

2.1.1.4. **h'çeş-* >> Kkp. *öces-* 'to quarrel' (cf. Khl. *h^ecäş-* 'to take revenge' MK, CC, Müh. *öçäş-* 'to compete', Tuh. *öçeç-* id.)

2.1.1.5. **h'çet* (cf. **h'ç* 'revenge') >> Kzk. *öjet* 'adamant, determined', Kkp. *öcet* 'quarrelsome', Tat. *ücat* id.

2.1.1.5. **tūç* >> Kar.H. *tuc* 'bronze' (cf. TT *tuc* (TS V) ~ *tunç* id.; Az. *tunç* id.; cf. MK *tūç* id., CC *tuç* id.)

2.1.2. /p/ > /b/, /w/

2.1.2.1. **qāp* >> Krč.Blk *qab* 'plate; case, box' (cf. MK *qāp* id.)

2.1.2.2. **kēp* >> Kkp. *kew* (~ *kep*) 'stuffed dead bird'; scarecrow'; Krč.Blk *keb* 'figure' (cf. Tkm. *gep* 'stuffed dead sucking-calf', Yak. *kiep* 'shape, form'; figure', Tat. *köyē* ~ *kebi* 'like')

2.1.2.3. **tāp*²⁰ >> Krč.Blk *tab* 'scar'; but Tat., Baš., Kzk., Kkp., Nog. *tap* 'smear, spot, trace' (cf. MK *tāp* 'marks left from injury', CC *tap* id.)

2.1.2.4. **t̃p* >> Krč.Blk *tüb* 'the bottom'; but Kzk., Kkp., Nog., Kmk. *tüp* 'dip'; Kar. H *tip* id.; Tat., Baš. *töp* id.; Kar.T. *t'up* id. (cf. CC *tüb* ~ *tüp* id.; MK, Tuh. *t̃p* id., Arm. K. *tib* ~ *tibi?* id.)

In words with short vowels such as Krč.Blk *sab* 'handle', *tob* 'ball' and the /p/ > /b/ examples with adverbial suffixes reduces the probability that this voicing is directly related to the quantity of the vowel.

2.1.3. /t/ > /d/

2.1.3.1. **āt* >> Kar. H., Kar.T. *ad* (~ *at*) 'name' (cf. MK *āt* id.)

²⁰ According to Clauson (1972: 434), this word in modern language vocabularies may have been borrowed from Ir. *tāb* 'furrow', or it may have been mixed up with *tap* with Turkic origin.

2.1.3.2. **āta-* >> Kar. H., Kar.T. *ada-* (~ *ata-*) ‘to name’; but Kkp., Nog., Tat., Baš., Krč.Blk *ata-* id., Kmk. *ata-* ‘to allocate’ (cf. Tuh. *ada-* (*n-*) ~ *atan-* ‘to be given a name’)

2.1.3.3. **ātdaš* (cf. **āt*) >> Kzk., Kkp., Nog. *adas* ‘namesake, of the same name’, Tat. *adaš* id., Baš. *aδaš* id.; but Krč.Blk *atdaš* id. (cf. CC *ataš* id.; Tkm. *ātdaš* id., Tuv. *adaš*. id.)

2.1.3.4. **ātum* >> Kzk., Kkp., Nog., Tat. *adım* ‘pace, step’, Baš. *ādim* id. (cf. Kar. H., Krč.-Blk., Kar.T. *atlam* id.)

2.1.4. /q/ > /ɣ/

**āq* >> Blk. *āɣ* (~ *aq*, *ax*), ‘white’; but, Blk. *āɣ-* ‘to flow’ (~ *aq-*, *ax-* (Pröhle 1914-15: 200)

2.2. /y/ (> /c/, /j/) Prothesis²¹

Primary long vowels have caused the prothesis at early stages in the words below:

2.2.1. **īyla-* >> Kzk. *jila-* ‘to cry, to weep’, Kkp., Tat., Krč.Blk *cila-* id., Nog., Kar. H., Baš. *yila-* id., Kar.T. *yila-* ~ *ila-* id. (cf. Uig., MK *ıyla-* ~ *yıyla-* id.; KB *yıyla-* id., CC *ıyla-* ~ *ila-* id., Hou. *ıyla-* id., Tuh. *yıyla-* ~ *yila-* id., Arm. K. id., Arm. K. *yıyla-* ~ *igla-* id.)

²¹ In historical sources:

/w/: Tuh. *wayna-* (< **woyna-* < **ōyna-*) ‘to play’ (cf. Čuv. *văyă* ‘play’; Tuh. *waynaš-* ‘to play with one another’; Hou. *wuçaq* (!) (~ *ōçaq*) ‘fireplace’; Hou. *wur-* (~ *ur-*) ‘to hit’; CC *wurçiq* ‘spindle’

/y/: Hou. *yäki* ‘2’; Hou. *yäkindü* (Tkm.) ‘mid-afternoon’; Hou. *yekiz* ~ *yikiz* ‘twins’; Hou. *yunçuq-* ‘to sprain’; Hou. *yik* ~ *žk* ~ *iyik* ‘spindle’; Kkp. *iyik* id.; Tuh. *yalda-* ‘to cheat’; Tuh. *yila-* (~ *yıyla-* ~ *yıyla-*) ‘to cry, to weep’; Arm. K. *yıyla-* (~ *ıyla-*) id.; Tuh., Arm. K. *yırla-* (~ *yerla-*) ‘to sing’; Hou., Tuh. *yırmaq* ‘river’; Tuh. *yüleştir-* (~ *üleştir-*) ‘to distribute in equal shares’ (cf. Čuv. *vales-* ‘to share, go shares’). but, as in *yaşıq* ‘knuckle bone’ in Tuh. /y/ before short vowels can appear.

2.2.2. **īr* >> Kzk. *jir* ‘song, ballad’, Kkp., Tat. *cir* id., Nog., Kar. H., Baš., Kmk. *yir* id., Kar.T. *yir* ~ *ir* id. (cf. Čuv. *yurǎ* ‘song’; MK *yir* ~ *ir* id., CC *ir* id., Arm. K. *yir* ~ *yer* id.)

2.2.3. **īr-* >> Tat., Baš. *yir-* to split; cleave, cut through; excavate’ (cf. MK *yir-* id.) (Tekin 1994: 53)

2.2.3.1. **īрмаq* >> Tat., Baš. *yırmaq* ‘groove, trench; irrigation canal’; Kmk. *yırmaq* ‘river’ (ES: 664) (cf. Čuv. *śırma* id., Tuh. *ırmaq* id.) (Tekin 1994: 54)]

2.2.3.2. **īra* >> Kzk. *jira* ‘flood line; valley’

2.2.3.3. Nog. *yıranaq* ‘a deep narrow rocky hole’; Baš. *yıranaq* id.

2.2.4. **īd(u) + b_{or}-* >> Kzk. *jiber-* ‘to send’; Kkp. *ciber-* id.; Nog. *yiber-* id.; Kar.H. *yäbär-* id.; Tat. *cēbär-* id.; Baš. *yēbär-* id.; Kar.T. *yäb’er-* id.; but Kar. H., Kar. T., Krč.Blk *iy-* id. (cf. Arm. K. *yebär-* ~ *yebir-* ~ *yeber-* id.).

2.2.5. **ālda-* >> Kar.T. *yelda-* ‘to cheat, to deceive’ (cf. Tuh. *yalda-* id., Tkm. *ālda-* id.)

2.2.6. **īm* (?) >> Kzk. *jim* (< **yim*) ‘trace’; Kmk. *yum* ‘signal’ (cf. Tkm. *üm* id.; MK *īm* ‘password’)

This word appears with a short vowel in Tkm.

2.2.7. **īs* (~ *īš*) >> Baš. *yěθ* ‘scent, aroma’; but, Tat. *is* id. (~ *ıs* ‘smoke’); Krč.Blk *iyis* id.; Kzk., Kkp., Nog. *ıs* id., (cf. Tkm. *īs* id.; Arm. K. *is* id.)

2.2.8. **īt* >> Kar.H. *yit* (~ *it*) ‘dog’; but, in Kzk., Kkp., Nog. *iyt* id.; Kmk., Krč.Blk *it* id.; Kar.T. *it* ~ *it’* id.; Tat., Baš. *ět* id. (cf. Čuv. *yitǎ* id.).

2.2.9. Kar.H. *yits* ‘3’ (cf. Čuv. *viś*, *višě*, *viśśě* id.; MK, Hou. *ç* id.; OB *vāçēm* Räsänen 1969: 518a).

Kar. /y/ can be seen before short low vowels as in Kar.H. *iç-* > *yits-* ‘to drink’.

2.3. Gemination

While PT or PK primary long vowels are shortened, the consonants next to them can be geminate (doubled). There are many examples of gemination caused by primary long vowels in Kipchak sources.²² However, /ɣ/ and /g/ in the end of PT multi-syllable words must be causing a secondary length while they are dropped in nouns.²³ In this case, it becomes rather difficult to decide whether the gemination has been caused by the primary long vowel or *secondary* long vowel.

2.3.1. āç >> açç

**āçiq* >> Kzk., Kkp. *aşşı* ‘bitter’; Kmk. *aççı* id.; but, Nog. *aşı* id., Kar.H. *atsı* id., Krč.Blk., Kar.T. *açı* id. (cf. Tkm. *ācı* id., Uzb. *āççiq* id., N. Uig. *aççiq* id.; Čuv. *yüśě*, *yüś* ‘bitter; sour’; MK *ācı-* ‘to be bitter; to be painful’).

2.3.2. āq >> aqq

²² *ēk* > *ekki* CC *ekki* (~ *eki*) ‘2’; MK *ikki* (~ *iki*) id.; Tuh. *ikki* id.; Tuh. *ikkiz* ‘twin’; *ikkindi* ‘mid-afternoon’ (cf. MK *ekindü* ~ *ikindi* < **ēkinti* id.). Doerfer (1971: 292) thinks that the original form of this word was *ekki* or *ēkki*.

āl >> all: CC *allında* (< **āl-ı-n-da*) (~ *alında*) ‘in front of’

ār >> arr: CC *arri* (~ *arı* ~ *arov*) ‘clean, pure’; MK *arriγ* (~ *arıγ*) id.

ās >> ss: CC [*assow*] ~ [*assi*] ‘benefit’ Hou. *assıγ* id.; Tuh. *assı* ~ *ası* id.

āş >> aşş: CC [*aşşa-*] (~ *aşa-*) ‘to eat’; CC [*yaşşılıq*] ‘the greenness’

ēt >> ett: CC *yetti* (~ *yeti*) ‘seven; week’; MK *yetti* id.

²³ MK *işig* > **işğ* > Kkp. *ıssı* ‘warm’, Nog., Krç.Blk. *ıssi* id., Tat. *ışsě* id.; MK *yılıg* > (*y*)*ılı* > Kkp. *cilli* ‘heat, temperature’ and MK *kiçig* >> Kmk. *giççi* ‘small’.

Mo. >> **āqa* >> Krč.Blk *aqqa* ‘grandfather’; but Kzk., Kkp., Nog., Kmk. *aya* ‘old; elder’ (cf. CC *aya* id.)

2.3.3. *āl* >> all

āl* >> (āl* – *ι* > ?) Krč.Blk *allı* ‘the beginning’; but, Tat., Baš. *al* ‘the front’ (cf. CC *allı* id., Kzk., Kkp. **ald* < **all* < *āl*, Tkm. *ālin* id.)

2.3.4. *āp* >> app (amm)

2.3.4.1. **āp* + *āq* >> Kzk., Kkp. *appaq* ‘extremely white’, Kar.H. *appak* id., Kmk. *appaq* (~ *ap-aq*) id., Krč.Blk *appa-aq* (~ *appaq*) id.; but Nog. *ap-aq* id., Tat., Baš. *ap-aq* id. (cf. Tat. Baš. *appayım* ‘my dear white’)

Because of the fact that the syllable is emphasized, the gemination may have emerged. While *ap-aq* means ‘white’ in Tat. and Baš., *appayım* with 1st singular person possessive suffix, which expresses ‘love, compassion’.

2.3.4.2. **āpa* (?) >> Krč.Blk *amma* ‘grandma, grandmother’ (~*appa* ‘grandpa, grandfather’); but Kzk. *apa* ‘elder sister’, Kkp. *apa* ‘mother, mom’, Nog. *aba* ‘mother, mom’, Kmk. *apa*²⁴ id. (cf. Čuv. *appa* ‘elder sister’, TS III *ebe* ‘grandmother’).

2.3.5. *ār* >> arr

2.3.5.1. **qāri* >> Kkp. *qarri* ~ *ğarri* ‘old, elder’; but Kzk. *kāri* id., Tat. *qarıy* id. (cf. Tkm. *ğarri* id., MK, CC, Hou, Tuh *qarı* id.)

2.3.5.2. **hāri* (~ *hāra*) >> Kkp. *härre* ‘bee’; but, Kzk. *ara* id. (cf. Tkm. *arı* id.; but Gag. *āri* id., Khl. *hā^ari* id.)

²⁴ “words of this form, connoting various terms relationship abound in modern Turkish languages with meaning as (1) ‘ancestor’; (2) ‘grandfather’; (3) ‘grandmother’; (4) ‘father’; (5) ‘mother’; (6) ‘paternal uncle’...” (Clauson 1972: 5)

2.3.6. āt >> att

2.3.6.1. **tātlyly* >> Kzk. *tätti* ‘sweet’; Nog. *tätli* id.; but Kkp., Tat., Baš., Kar. H., Krč. Blk *tatlı* id. (cf. CC *tatlı*, *tatrylı* id., Hou. *tätlu* id., Tuh. *tatlı* id., Arm. K. *tatlı* ~ *tatly* id.)

2.3.6.2. **āta* ? >> Kar. H., Kar. T. *itta* (~ *ata*) ‘father; grandfather’; Tat. *äti* id. (~ *ata* id.); Nog. *ata* ~ *atay* id.; (cf. MK *atā* id.; Tuh. *āta*, but, Tkm. *ata* id.)

2.3.7. ūç >> uçç

2.3.7.1. **buçyaq* >> Kmk. *buççaq* ‘corner’ (MK *buçyāq* ‘angle’, CC *buçyaq* id., Hou. *būçāq* ~ *buçyāq*) id., Arm. K. *buçxax* id.)

2.3.8. «t > tt (~dd)

2.3.8.1. **y<ti* >> Kmk. *yetti* ‘7’, Kkp. *ceddi* ‘Capricorn’ (but *ceti* ‘7’) (cf. MK *yetti* ~ *yeti* id., CC *yetti* ~ *yeti* id., Hou. *yeti* id., Hay. *yedi* ~ *yeddi* id., Tuh. *yedi* id.). If Kumyk *yetti* had been borrowed from Az., it would have been *yeddi*.

2.3.9. ~ç > uşş

**s~çig* >> Kzk. *tuşşı* ‘meal without salt, unspoiled ayran, the yoghurt drink, and horse milk’, Kmk. *duşşı* ‘sweet; saltless’ (cf. Tkm. *süyci* id., MK *s~çig* id.)

2.4. Epenthesis, Epithesis²⁵

2.4.1. r

**hōtçuq* >> Nog. *orçaq* (~ *oçaq*) (dia.) (Baskakov 1940) ‘hearth, fireplace’; but Kzk., Kkp., Nog. *oşaq* id., Kar. H. *otsaq* id., Tat. *uçaq* id.,

²⁵ /l/: Tuh. *şılıbıq* ‘tree, stick, rod’; /r/: Arm. K. *ort’ak* (~ *otax* ~ *ot’ax*) ‘room, section’

Baš. *usaq* id., Kmk. *oçaq* id., Krč.Blk *ocaq* id., Kar.T. *oçak* id. (cf. MK, Hou. *oçaq* id.)

2.4.2. t^{26}

2.4.2.1. **bārs*²⁷(?) >> Kar.H. *barst*²⁸ ‘leopard’; but Kar.T. *bars* id. (cf. MK, Hou. *bars* id.; *Pārs* ‘one of Iranian peoples and their homeland’)

2.4.2. 2. Kar.H. *yoxt* (?<< *yōq* + *turur*) (~ *yo* ~ *yok*) ‘no, not’, Kar.T. *yoxt* ~ *yox* ~ *yo* ~ *yok* id.

2.4.2. 3. Kar. H., Kar.T. *bart* (< ? *bār* + *turur*) ‘there is, it exists’

Conclusion

Proto Turkic long vowels are partially preserved in Proto Kipchak. Historical Kipchak and Oghuz are closely related is mentioned in MK. Naturally, it is possible to talk about Oghuz influence on Kipchak sources to a certain degree. In other words, it can be claimed that some of the words with long vowels may have been borrowed from Oghuz dialects. However, the main part of the traces related to primary long vowels are peculiar to Kipchak languages. In this case, long vowels in many sources or their phonetic traces are supposed to have come from a single source.

In the event that the long vowels are a characteristic stemming from pronunciation, they will absolutely not demonstrated in writing. For this

²⁶ In the above mentioned words in Kar.H. and Kar.T. dialects there is a final *t*. There are two arguments as whether this *t* sound is the remain of a suffix or epenthesis. Therefore, *t* is what remained of *tur-ur*. As *yoxt* and *bart* are taken into consideration this becomes a reasonable explanation. However, there is no need for a copula in the word ‘*barst*’. While the long vowels are shortened they generally leave behind phonetic traces. No other example has been spotted where a *t* has derived because of long vowels. Therefore, it is more probable that *t* is the remain of a suffix. With the same token, *yoxtur* is included as an entry in SKRP.

²⁷ According to Clauson: ‘a very early Iranian loan word, but from which Iranian language it was taken is uncertain’ (1972: 368).

²⁸ cf. English *sack*, German *Sekt* id. (Hartmann, Stork 1972).

reason, the remains of primary long vowels in Kipchak languages can only be defined through a survey or an audio study.

Abbreviations

Alt.	Altay
Ar.	Arabian
Arm. K.	Armenian Kipchak
Az.	Azeri
Baş.	Bashkir
CC	Codex Cumanicus
cf.	Compare
CT	Common Turkic
Čuv.	Chuvash
dia.	Dialect
ES	Etymologiçeskiy Slovar' Tyurkskix Yazıkov
Gag.	Gagauz
Hay.	Hayyan (kit+bu'l idr+ık li-lis+ni'l-atr+ık)
Hou.	Houtsma (ein türkische-arabisches glossar)
Id.	Same
Ir.	Iran languages
Karg.	Karagas
Kar. H.	Karaim Halich dialect
Kar. C.	Karaim Crimean dialect
Kar. T.	Karaim Trakai dialect
KB	Kutadgu Bilig
Kh.	Khaladj
Kkp.	Karakalpak
Kmk.	Kumyk
Krč-Blk.	Karachay-Balkar
Krg.	Kirghiz
Kzk.	Kazakh
MK	Mahmoud Kashgari (Dīwān Luḡāt at-Turk)
Mo.	Mongolian
Müh.	Dictionary of İbn-i Mühenna
N. Uig.	New Uighur
Nog.	Noghay
OB	Old Bulgarian
Orh.	Orkhon Turkic
PK	Proto Kipchak
PT	Proto Turkic
SKRP	Slownik Karaimsko-Rosysko-Polski

Tat.	Tatar
Tkm.	Turkmen
TLS	Türk Lehçeleri Sözlüğü
Trans.	Translator
TS	Tarama Sözlüğü
TT	Turkish
Tuh.	Et-tuhfetü'z-zekıyye fı lûgati't-türkıyye
Uig.	Uighur
Uzb.	Uzbek
VB	Volga Bulgarian

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