

DEVIATIONS FROM THE GENERALIZED PHONOLOGICAL RULES IN TURKIC LANGUAGES

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This article addresses the stems and suffixes which deviate from the generalized phonological rules in individual Turkic languages. This means I am dealing with a kind of lexical allomorphy of both stems and suffixes in inflection. Cases of suppletion, augmented or shortened stems, restricted suffixes are outside the scope of this article. The examination part of the article consists of two main sections: i) dealing with the stems that change or resist change contrary to acting phonological rules in a language, ii) examining the stems which combine with an irrelevant allomorph of an inflectional suffix, again in contradiction to acting phonological rules in a given language. My data is extracted from the Turkological literature and my own knowledge of some Turkic languages. Some of the examples are unique to an individual language, whereas others are shared by some other languages. Some are related to certain lexemes, whereas the others in a specific language may affect all the lexemes having the same/similar phonological features. Determining them is crucial for our understanding of the morphology of Turkic languages. Discussing the reasons that led to such deviations is necessary to understand the triggering factors for a given phonological exception in the course of language change.

Key words: Morphophonology, irregularity, exception, deviation, Turkic languages

1. Introduction

There are many phonological rules in Turkic languages, most of which are also reflected in this work, being either common to most or some Turkic languages, or being specific to an individual language. I will examine phonological deviations in both stems and the allomorphy of suffixes. In word inflection, some word stems are irregular with respect to their expected change or non-change. Some others, on the other hand, are inflected with a phonologically irrelevant allomorph contrary to our expectations for a canonical language system. Note that I do not regard as irregular suffixes which are less

grammaticalized phonologically or are still in the course of grammaticalization. Thus, the Orkhon Turkic evidential suffix *-miš* and 3rd person possessive suffix *-(s)i*, Turkish attributive suffix *-ki*, all of which lack corresponding allomorphs with a back vowel; the Turkish diminutive suffix *-cAğIz*, which lacks corresponding allomorphs with initial devoiced /ç/ [č], will not be considered as irregular. They are just less grammaticalized than the other suffixes in terms of acting phonological rules. Non-generalized or non-productive inflectional and/or derivational categories and their suffixes are also excluded. I will reference the sources for the data from Turkic languages, but the data from Turkish derive from my own knowledge.

2. Stems Behaving Contrary to a Given Phonological Rule

Under this heading I will examine the stems which change when they are expected to stay the same or resist change when they are supposed to change according to acting phonological rules in a Turkic language. My data for this kind of deviation come from Turkmen, Turkish, Chuvash, Gagauz and Tofa.

2.1. Voiced Verb Stems in Turkmen

In Turkmen when the words with essential long vowels and final voiceless consonants are combined with a vowel-initial suffix, the final consonant is devoiced. This devoicing does not occur in words having a short vowel.¹

Table 1. Stems with long vowel in Turkmen

	WORDS WITH LONG VOWELS	WITH A VOWEL-INITIAL SUFFIX	MEANING
a.	<i>gap</i> [ga:p]	<i>gab-y</i> [ga:bī]	‘her/his bowl’
b.	<i>güç</i> [gü:č]	<i>güc-i</i> [gü:cü]	‘her/his strength’
c.	<i>saç</i> [sa:č]	<i>sac-y</i> [sa:ji]	‘her/his sheet-metal’
d.	<i>at</i> [a:t]	<i>ad-y</i> [a:di]	‘her/his name’
e.	<i>dat-</i> [da:t-]	<i>dad-yp</i> [da:di:p]	‘(by) tasting’

¹ ČARYJAROV, B., NAZAROV, O. Turkmenskij jazyk [Turkmen language]. In TENIŠEV, E. R. *Jazyki mira - Tjurkskie jazyki* [The Languages of the World – Turkic Languages], p. 416. See also CLARK, L. *Turkmen Reference Grammar*, p. 67.

Table 2. Stems with short vowel in Turkmen

	WORDS WITH SHORT VOWELS	WITH A VOWEL-INITIAL SUFFIX	MEANING
a.	<i>top</i> [top]	<i>top-y</i> [topu]	‘his ball’
b.	<i>saç</i> [saç]	<i>saç-y</i> [saçi]	‘his hair’
c.	<i>at</i> [at]	<i>at-y</i> [atı]	‘his horse’
d.	<i>sat-</i> [sat-]	<i>sat-yp</i> [satıp]	‘(by) selling’

Despite the described rules, the final /t/ consonant of the verbs *git-* ‘to go’ and *et-* ‘to do’ with short vowels, is devoiced.²

Table 3. Irregular stems with short vowel in Turkmen

	WORDS WITH SHORT VOWELS	WITH A VOWEL-INITIAL SUFFIX	MEANING
a.	<i>git-</i> [git-]	<i>gid-ip</i> [gidip]	‘(by) going’
b.	<i>et-</i> [et-]	<i>ed-ip</i> [edip]	‘(by) doing’

Turkmen is one of the outstanding languages, along with Sakha and Khalaj, that could retain the primary long vowels in Proto-Turkic. The majority of the Turkic languages could not preserve the primary long vowels, but they have preserved some traces of the long vowels, e.g. Tuvan non-low pitch (or in Russian Turkological literature, so-called ‘non-pharyngealized’) vowels, devoicing of the following voiceless consonants in Southwestern Oghuz (Turkish, Azerbaijanian, Gagauz) languages (*including the two verbs in this case*), and in many other languages, traces such as gemination of the following consonants, prostheses such as /v/, /h/, /y/, etc.³. According to Tekin⁴, *ke:t-* ‘to go’ and *e:t-* ‘to arrange, to organize’⁵ had a primary long vowel in Proto-Turkic. It seems that the two verbs in Turkmen have lost their primary long vowels but retained their trace as devoicing, just as in its sister Southwestern Oghuz languages.

² CLARK, L. *Turkmen Reference Grammar*, p. 67.

³ See the traces in TEKİN, T. *Türk Dillerinde Birincil Uzun Ünlüler* [Primary Long Vowels in Turkic Languages], pp. 123–159.

⁴ *Ibid.*, p. 182.

⁵ This meaning was attested in runiform inscriptions. Later the meaning of the verb changed to ‘to do’ in the languages where it exists.

2.2. Lengthening of the Final Vowel of the Stem in Turkish

The vowels in the last syllable of some Arabic and Persian loanwords in Turkish are lengthened when the stems are combined with a vowel-initial suffix, such as genitive, accusative, dative and the possessive suffixes. The stems originally bore long vowels in Arabic and Persian, but they are pronounced short in the nominative or with a consonant-initial suffix.

Table 4. Loan words lengthened with a vowel-initial suffix

	THE STEMS WITHOUT A VOWEL-INITIAL SUFFIX	THE STEMS WITH A VOWEL-INITIAL SUFFIX	MEANING
a.	/cevap/	/ceva:b/	'answer'
b.	/derman/	/derma:n/	'remedy'
c.	/devam/	/deva:m/	'continuation'
d.	/din/	/di:n/	'religion'
e.	/emin/	/emi:n/	'confident'
f.	/esas/	/esa:s/	'base'
g.	/ferman/	/ferma:n/	'edict'
h.	/hal/	/ha:l/	'status'
ı.	/hukuk/	/huku:k/	'law'
j.	/hücum/	/hücu:m/	'attack'
k.	/ıslah/	/ısla:h/	'reclamation'
l.	/idrak/	/idra:k/	'cognizance'
m.	/isnat/	/isna:d/	'attribution'
n.	/iştirak/	/iştirā:k/	'participation'
o.	/kâr/	/kâ:r/	'profit'
p.	/meçul/	/meçhu:l/	'unknown'
q.	/mekân/	/mekâ:n/	'space'
r.	/memnun/	/memnu:n/	'glad'
s.	/merak/	/mera:k/	'interest'
t.	/miktar/	/mikta:r/	'quantity'
u.	/murat/	/mura:d/	'wish'
v.	/ruh/	/ru:h/	'soul'
w.	/tebrik/	/tebri:k/	'congratulation'
x.	/usul/	/usu:l/	'method'
y.	/ümit/	/ümi:d/	'hope'
z.	/zaman/	/zama:n/	'time'

The final vowel of some words of Turkish origin is also lengthened with a vowel-initial suffix or auxiliary. One of them is *umut* (← *um-* ‘to hope’ + the suffix *-ut*) ‘hope’, a case of neologism to replace the Persian loanword *ümit* (< Ottoman *ümi:d* < in Persian *omeed*). Normally, the Turkish deverbal (meaningless) noun suffix *-It* is outside the devoicing mechanism⁶. It is a case of hyperforeignism and analogy with the Persian loanword *ümit* ‘hope’ (see Table 4, y.), by virtue of their being synonymous and phonetically similar. Another lengthening is found in *var olmak* /va:r olmak/ ‘to exist’, derived from *var* /var/ ‘existing’ and *olmak* ‘to be, to become’.

2.3. The Demonstrative Pronoun *ku* ‘this’ Resisting Change in Chuvash

The stem-final high rounded vowels /u/ and /ü/ in Chuvash alternate with /äv/ and /ëv/ when combining with a vowel-initial suffix. This is a kind of hiatus-preventing allomorphy peculiar to this language, that can be labelled as ‘phonologically conditioned suppletion’ e.g. *pü* ‘height’ > *pëv-ëm* (height-1.SG.POSS) ‘my height’, *śu-* ‘to wash’ > *śäv-ă-p* (wash-FUT.1.SG) ‘I’ll wash’⁷. However, the proximal demonstrative pronoun *ku* ‘this’ (cf. with Common Turkic *bu* and Yellow Yugur *kw*) is excluded from this condition.

Table 5. Case declension of *ku* ‘this’ in Chuvash⁸

NOM	GEN	ACC/DAT	LOC	ABL	INSTR
<i>ku</i>	<i>kun-Ø</i>	<i>kun-a</i>	<i>kun-ra</i>	<i>kun-ran</i>	<i>kun-pa</i>

Altaistic and Turkological literature shows that the demonstrative pronouns are always extended with the so-called ‘pronominal n’ in their case (in individual languages also possessive) declensions. As *ku* ‘this’ is one of the most frequent words, and as its equivalents *bu* and *bil* ‘this’ in the neighbouring Tatar and Bashkir languages have an additional /n/ in oblique cases, obviously *ku* has been excepted from the /u/ ~ /äv/ shift in case declensions.

⁶ e.g. *yak-it-ı* ‘her/his fuel’ (from *yak-* ‘to burn’), *dön-üt-ü* ‘her/his feedback’ (from *dön-* ‘to turn’), *yap-it-ı* ‘her/his opus’ (from *yap-* ‘to make’), *sark-it-ı* ‘her/his stalactite’ (from *sark-* ‘to dangle’), etc.

⁷ See the examples in DURMUŞ, Oğuzhan. *Çuvaşçanın Şekil Bilgisi* [Morphology of Chuvash], pp. 53, 74, 146, 152, 304, 311, 383.

⁸ DURMUŞ, Oğ. *Çuvaşçanın Şekil Bilgisi* [Morphology of Chuvash], p. 242.

2.4. Return of the Lost Word-final /h/ in Gagauz

The Arabic loans *Alla* ‘Allah’, *padiša*: ‘sultan’, *saba*: ‘morning’, *güna*: ‘sin’ in Gagauz retake the diachronically lost final /h/ with any kind of suffix, e.g. *Allahim* ‘my God’, *padišahlik* ‘sultanate’, *sabahları* ‘in the mornings’, *günahker* ‘sinful’.⁹ Obviously, the original final /h/ has been preserved in the inflectional and derivational forms of those nouns.

2.5. Two Verb Stems Resisting Change in Tofa

In Tofa stem-final /š/ alternates with /j/ in the event of a combination with a vowel-initial suffix, e.g. *taš* ‘stone’ > *taĵ-ĭ* ‘his stone’, *aš-* ‘to pass over’ > *aĵ-ar* ‘he passes over’, *biliš-* ‘to get acquainted with’ > *bilĵ-ir* ‘they will meet’, etc. This generalized rule in Tofa is not available for the verbs *iš-* ‘to drink’ and *iš-* ‘to swell’, e.g. *iš-er* ‘he’ll drink’ *iš-ar* ‘it will swell’, *iš-ĭt-* ‘to blow up’.¹⁰ According to Rassadin this must have emerged by analogy with a couple of words which could have preserved phonotactically their original intervocalic /š/, e.g. *kiši* (not **kiĵi*) ‘person’, *tuša-* (not **tuĵa-*) ‘(for a horse) stumble’, *uša* (not **uĵa*) ‘tail bone’, *ušar* (not **uĵar*) ‘waterfall’, *uši-* (not **uĵi*) ‘to freeze’, *pišek* (not **piĵek*) ‘knife’, *bišig* (not **biĵig*) ‘strong’.

3. Non-Phonological Uses of Phonological Allomorphs

In any natural language, some phonological rules can cease to apply to certain word forms. For example, the English past tense affix *-ed* is represented by the /t/ allomorph after a final voiceless and by the /d/ allomorph after voiced and sonorant consonants: e.g. *jumped* /dʒʌmp-t/, *missed* /mis-t/, *laughed* /lɑ:t/, *teased* /ti:z-d/, *filled* /fil-d/, etc. However, the affix is pronounced /t/ even in some verbs ending with sonorants in some varieties and in Standard English: *smelt* /smel-t/, *spelt* /spel-t/, *dwelt* /dwel-t/, *burnt* /bɜ:n-t/, *learnt* /lɜ:n-t/.¹¹ Non-phonological uses of phonological allomorphs (hereafter NPUPA) have been detected in the inflectional categories such as possession, case, number, tense, and generalized distributive numerals and participles in Turkic languages. Some of the examples

⁹ POKROVSKAJA, L. A. *Grammatika Gagauzskogo Jazyka. Fonetika i Morfologija* [Grammar of the Gagauz Language. Phonetics and Morphology], p. 71.

¹⁰ RASSADIN, V. I. *Morfologija Tofalarskogo Jazyka v Sravnitel'nom Osveščanii* [Morphology of the Tofa Language in a Comparative Perspective], p. 11–12.

¹¹ ALBRIGHT, A., HAYES, B. Distribution Encroachment and Its Consequences for Morphological Learning. In *UCLA Working Papers in Linguistics* 4, p. 179.

are related to certain lexemes only, whereas some others are reflected in a wide range of lexemes appearing in certain phonetic environments. Each phonological deviation has its own story emerging from diachronic (contact-induced, inheritance, phonetic), sociolinguistic and analogical reasons, and I will mention them as well. Unlike in the previous section, the data under this heading cover examples from a wide range of Turkic languages.

3.1. Phonological Deviations in the Possessive Declension

In order to understand the following irregularities, I will present the allomorphy of the possessive suffixes in Kazakh and Turkish to give an idea of the general picture of the possessive declension in Turkic languages. In the following table, the nouns ending with a consonant mean ‘home’ and the nouns ending with a vowel correspond to ‘father’.

Table 6. Possessive declension in Kazakh and Turkish

VALUES	SUFFIXES	KAZAKH	TURKISH
1.P.SG.POSS	-(<i>I</i>)m	üy-im, ata-m	ev-im, baba-m
2.P.SG.POSS	-(<i>I</i>)η [or -(<i>I</i>)n]	üy-iη, ata-η	ev-in, baba-n
2.P.SG.POSS.POL	-(<i>I</i>)ηIz [or -(<i>I</i>)nIz]	üy-iηiz, ata-ηiz	(ev-iniz, baba-nız)
3.P.SG.POSS	-(s)I [or -(z)I]	üy-i, ata-si	ev-i, baba-sı
1.P.PL.POSS	-(<i>I</i>)mIz	üy-imiz, ata-miz	ev-imiz, baba-mız
2.P.PL.POSS	-(<i>I</i>)ηIAr /	üy-iηder, ata-ηdar	ev-iniz, baba-nız
2.P.PL.POSS.POL	-(<i>I</i>)ηIzIAr [or -(<i>I</i>)nIz]	üy-iηizder, ata-ηizdar	
3.P.PL.POSS	-(s)I [or -(z)I]	üy-i, ata-si	ev-i, baba-sı
	-IArI		ev-leri, baba-ları

As seen in the cells, Kazakh has normal and polite opposition for the 2nd person. This feature is also shared by Uyghur, Kirghiz and Karakalpak. In Southwestern Oghuz languages, Uzbek and Sakha there is an opposition in the 3rd person possessive plural marking. In those languages, a word form like Turkish *analari* and Uzbek *ânäläri* may refer to both “their mother” and “their mothers”. Corresponding segmentation changes according to meaning, such as *ana-ları* ~ *ânä-läri* (referring to the plurality of possessors) and *ana-lar-ı* ~ *ânä-lär-i* (referring to the plurality of possesses). Most of the Turkic languages lack additional oppositions such as politeness and plurality of the possessor as shown in the table.

3.1.1. Pleonasm and Post-Pleonasm in the Possessive Declension

The majority of the anomalous uses of possessive suffixes are related to the 3rd person and diachronically a consequence of pleonasm (double possessive marking). Pleonasm of the 3rd person possessive suffix typically occurs in semi-lexicalized indefinite pronouns and the nouns referring to cherished entities. In an idealized system, any double use of an affix can be regarded as a deviation. On the other hand, such a pleonasm can be functional in both the derivation of an indefinite pronoun or the expression of ‘more love’. Except for a word form in Karaim (see Table 9), formally all examples of pleonasm consist of “a consonant final noun + corresponding 3.P.SG.POSS allomorph with a high vowel + extra 3.P.SG.POSS allomorph *-sI* (or *-zI*)”.¹²

First, I will examine semi-lexicalized indefinite pronouns which are derived with a 3.P.SG.POSS suffix *-(s)I* [or *-(z)I*]. There are examples of pleonasm and post-pleonasm and I define the second one as a NPUPA. The indefinite pronouns are semi-lexicalized in the sense that they can still be used in definite nominal compounds with a possessive meaning, e.g. Turkish *onlar-ın bir-i(-si)* (they-GEN one-3.P.POSS.(-3.P.POSS.)) ‘one of them’, *insan-lar-ın kim-i(-si)* (human-PL-GEN who-3.P.POSS. (-3.P.POSS.)) ‘some of the people’, etc.

¹² Note that some lexicalized words will not be considered irregular. There are variative words in Standard Turkish such as *öbürkü* (other-ATTR) ~ *öbürsü* ~ (other-3.P.POSS) ‘the other one’ and *evvelki* (previous-ATTR) ~ *evvelsi* (previous-3.P.POSS) ‘the previous one’. The word forms with the old 3.P.POSS allomorphs *-sü*, *-si* cannot be considered as irregular, since the grammatical meaning cannot be sensed. They must be shortened variants of dialectal *öbürküsü* ‘the other one’, *evvelkisi* ‘the previous one’. As a matter of fact, the attributive suffix *-ki* needs the *-si* allomorph of the 3.P.POSS for further affixation in some Turkish dialects and in Gagauz. Another example is found in Gagauz: *heryersi* (< **her yerisi*) ‘everywhere’. This indefinite pronoun does not indicate any sense of possession.

Table 7. Examples of pleonasm in indefinite pronouns¹³

LANGUAGE		MEANING	INDEFINITE PRONOUN
Turkish	a.	‘some (of the people)’	<i>kim-i, kim-i-si</i>
	b.	‘one (of them), somebody’	<i>bir-i, bir-i-si</i>
Karaim	c.	‘all (of them)’	<i>bar-ï-sï</i>
	d.	‘one (of them), somebody’	<i>bir-i-si</i>
Urum	e.	‘one (of them), somebody’	<i>bir-i, bir-i-si</i>
	f.	‘the other one’	<i>öbür-ü, öbür-ü-sü</i>
Kumyk	g.	‘most of them’	<i>köb-ü-sü</i>
	h.	‘one of them’	<i>bir-i-si</i>
	i.	‘each of them’	<i>gar-i-si</i>

In the stage of post-pleonasm a syncope occurs, specifically the regular (the 1st) allomorph of the 3.P.POSS suffix falls and consequently we encounter a NPUPA.

Table 8. Examples of post-pleonasm in indefinite and interrogative pronouns¹⁴

LANGUAGE		MEANING	INDEFINITE PRONOUN
Turkish	a.	‘all (of them)’	<i>hep-si</i>
Karaim	b.	‘most of them’	<i>köp-sü</i>
	c.	‘which (one of them)’	<i>kay-sï</i>
Urum	d.	‘all (of them)’	<i>ep-si</i>
Turkmen	e.	‘one (of them)’	<i>bir-si</i>
	f.	‘which (one of them)’	<i>haý-sy</i>
	g.	‘each (of them)’	<i>her-si</i>
Tuvan	h.	‘anybody, any of them’	<i>dä:r-zi</i>
Yellow Yugur	i.	‘one (of them)’	<i>pür-si</i>
	j.	‘which (one of them)’	<i>qay-si</i>

¹³ Turkish examples are my own data, for Karaim see MUSAEV, K. M. *Grammatika karaimskogo jazyka. Fonetika i morfologija* [Grammar of the Karaim Language. Phonetics and Morphology], p. 138; for Urum see GARKAVETS, O. *Urumskij Slovník* [Dictionary of Urum], p. 330 and UYANIK, Osman. *Urum Türkçesi. İnceleme - Metin – Dizin* [Urum Turkic. Examination – Text - Index], p. 110; for Kumyk see DMITRIEV, N. K. *Grammatika kumyjskogo jazyka* [Grammar of the Kumyk Language], p. 64.

¹⁴ Turkish examples are my own data, for Karaim see MUSAEV, K. M. *Grammatika karaimskogo jazyka. Fonetika i morfologija* [Grammar of the Karaim Language. Phonetics and Morphology], pp. 138, 142; for Urum see GARKAVETS, O. *Urumskij Slovník* [Dictionary of Urum], p. 622; for Turkmen see CLARK, L. *Turkmen Reference*

Cases of pleonasm and post-pleonasm are also found in the nouns denoting cherished entities. Examples with the excessive 3.P.POSS suffix from Turkish and Kazakh are optional, whereas double marking is compulsory in Gagauz, Uyghur and the historical language Chagatay.

 Table 9. Examples of pleonasm in the nouns encoding cherished entities¹⁵

LANGUAGE		MEANING	LEXEME	PLEONASM
Gagauz ¹⁶	a.	‘mind’	<i>akıl</i>	<i>akl-î-sî</i>
	b.	‘son’	<i>o:l, o:lu</i>	<i>o:l-u-su</i>
	c.	‘beloved’	<i>yar</i>	<i>yar-i-si</i>
	d.	‘daughter-in-law’	<i>gelin, gelini</i>	<i>geln-i-si</i>
Turkish	d.	‘God’	<i>Rabb</i>	<i>Rabb-i(-si)</i>
	e.	‘love’	<i>aşk</i>	<i>aşk-ı(-sı)</i>
	f.	‘soul’	<i>can</i>	<i>can-ı(-sı)</i>
Chagatay	g.	‘younger sister’	<i>siñil</i>	<i>siñl-i-si</i>
Uyghur	h.	‘younger sister’	<i>singil</i>	<i>singl-i-si</i>
Kazakh	i.	‘time’	<i>waqıt</i>	<i>waqt-î(-sî)</i>
Karaim	j.	‘owner’	<i>ye</i>	<i>ye-si-si</i>

Grammar, p. 112; for Tuvan see TENIŠEV, E. R. (ed.). *Tuvinsko-russkij slovar’* [Tuvan-Russian Dictionary], p. 197; for Yellow Yugur see ROOS, M. E. *The Western Yugur (Yellow Uygur) Language. Grammar, Text, Vocabulary*, pp. 68, 69.

¹⁵ Examples from Turkish, Kazakh and Uyghur are my own data. For Gagauz see POKROVSKAJA, L. A. *Grammatika Gagauzskogo Jazyka. Fonetika i Morfologija* [Grammar of the Gagauz Language. Phonetics and Morphology], p.111–112, 146-147; for Chagatay see ECKMANN, J. *Chagatay Manual*, p. 80; for Karaim see MUSAEV, K. M. *Grammatika karaimskogo jazyka. Fonetika i morfologija* [Grammar of the Karaim Language. Phonetics and Morphology], p. 138.

¹⁶ In Gagauz most of the cases of pleonasm are a consequence of synchronic or diachronic syncope, see DYBO, A. V. On the Problems of Oghuz Morphophonology. In *Turkic Languages*, 2005, No. 9, pp. 199–200; MENZ, A. (personal communication). Because of that, in the grammatical descriptions of Gagauz, synchronic cases of pleonasm are confused with diachronic lexicalizations of some other nouns. See for the confusions in POKROVSKAJA, L. A. *Grammatika Gagauzskogo Jazyka. Fonetika i Morfologija* [Grammar of the Gagauz Language. Phonetics and Morphology], ÖZKAN, N. *Gagavuz Türkçesi Grameri* [Grammar of Gagauz Turkic], p. 79, 130. Gagauz nouns *annî* ‘forehead’ (cf. Turkish *alın* ‘forehead’ > *aln-ı* ‘his/her forehead’), *boynu* ‘neck’ (cf. Turkish *boyun* ‘neck’ > *boyn-u* ‘his/her neck’), *koynu* ‘bosom’ (cf. Turkish *koyun* ‘bosom’ > *koy-n-u* ‘his/her bosom’), *asli* ‘true’ (cf. Turkish *asıl* ‘origin’ > *asl-ı* ‘its/his/her origin’) have already been lexicalized with older allomorphs of 3rd person possessive suffix and adding an appropriate allomorph of 3rd person possessive suffix does not mean that there is a pleonasm for those nouns.

There are also two nouns of cherished entities from Turkmen and Yellow Yugur with a case of post-pleonasm.

Table 10. Examples of post-pleonasm for cherished entities

LANGUAGE		MEANING	LEXEME	POST-PLEONASM
Turkmen ¹⁷	a.	‘husband’	<i>adam</i>	<i>adam-sy</i>
Yellow Yugur ¹⁸	b.	‘prayer beads’	<i>sanax</i>	<i>sanax-si, sanay-i</i>

3.1.2. The Anomalous use of Possessive Suffixes after Nouns Ending with the Semi-Vowel /y/

The /s-/ initial allomorph of the 3.P.POSS suffix (namely, *-si*) may be seen in a couple of /y/-final nouns in Karakhanid (10-14 cc), Turkish and Uzbek. It is the noun *tewe* or *tewey* ‘camel’ in Karakhanid.¹⁹ *Tewe-si* (camel-3.P.POSS) is regular, whereas *tewey-si* (camel-3.P.POSS) ‘his/her camel’ is a case of NPUPA. Similar variative examples are found in Turkish with the nouns *şey* ‘stuff, thingy’ and *ağabey* ‘elder brother’, e.g. *şey-i* ~ *şey-si* ‘his/her/its thingy’, *ağabey-i* ~ *ağabey-si* ‘his/her elder brother’ (own data). *Şeysi* must be an extension of dialectal *şe:-si*, which, in its turn, is regular because of the final long vowel. It is true that *şey-si* has also pejorative meanings such as *Gazeteci şeysi!* ‘A sorry apology for a journalist’, *Siyasetçi şeysi!* ‘A sorry apology for a politician!’, etc. The word-form *ağabeysi* must be affected with the possessive form of the short variant of *ağabey*, e.g. *abi-si* /a:bisi/ ‘his/her elder brother’. A similar example is found in Uzbek. The Arabic loan *doxi* ‘genius’ is unstable in possessive declension, having as stems *doxi* or *doxiy*.²⁰ The second one leads to NPUPA, since the possessive allomorphs of the five suffixes remain the same.

¹⁷ CLARK, L. *Turkmen Reference Grammar*, p. 112.

¹⁸ TENIŠEV, E. R. *Stroj saryg-jugurskogo jazyka* [The Structure of Yellow-Yugur Language], p. 44.

¹⁹ CLAUSON, G. Sir *An Etymological Dictionary of Pre-Thirteenth Century Turkish*, p. 692.

²⁰ BODROGLIGETI, A. J. E. *An Academic Reference Grammar of Literary Uzbek V. I–II*, p. 96–97.

Table 11. NPUPA in possessive declension in Uzbek

1.P.SG.POSS	2.P.SG.POSS	3.P.SG.POSS	1.P.PL.POSS	2.P.PL.POSS	3.P.PL.POSS
<i>doxi-m,</i> <i>doxiy-m</i>	<i>doxi-η,</i> <i>doxiy-η</i>	<i>doxi-si,</i> <i>doxiy-si</i>	<i>doxi-miz,</i> <i>doxiy-miz</i>	<i>doxi-ηiz,</i> <i>doxiy-ηiz</i>	<i>doxi-läri,</i> <i>doxiy-läri</i>

Another example comes from Old Anatolian Turkish. *İs-si* ‘his/her/its owner’ is a kind of fused and petrified outcome of earlier **iði-si* > **izi-si*. In Old Anatolian Turkish *issi* ‘his/her/it owner’ was an orphan word form along with *is-leri* or *is-si-leri* ‘their owner(s)’, being one of the two members of the defective paradigm of **is* ‘owner’. Unlike the above-mentioned NPUPAs, which occurred because of pleonasm and further syncope, this NPUPA may have occurred as result of syncope **izi-si* > **izsi* > *issi*. However, the irregularity in this word form can also be explained as (or motivated by) a gemination of final /s/ (thus, an augment) that was observed in a similar noun in Old Anatolian Turkish, e.g. *us* ‘mind’ > *uss-um* ‘my mind’, *uss-uη* ‘your mind’, *uss-ï* ‘his/her mind’, etc. Old Anatolian Turkish also had diachronic geminations such as *assi* (< Old Turkic *asig*) ‘useful’, *issi* (< Old Turkic *isig*) ‘hot’.²¹

3.1.3. Possessive Declension of Some Arabic Loanwords in Uzbek and Turkish

In the historical literary languages Chagatay (East Turkic) and Ottoman (West Turkic) there were Arabic loanwords ending with pharyngeal fricative consonant /ʕ/ (in Arabic ع). Those loanwords used to be combined with vowel initial allomorphs as the roots ended in a consonant. They have irregular or variable forms in the modern successors Uzbek (inheritor of Chagatay) and Turkish (inheritor of Ottoman) although the Arabic consonant has not remained either in pronunciation or in writing. We don’t know the beginning of the loss of the consonant in the pronunciation, but their Latin or Cyrillic-based alphabets, which were adopted in the first half of the 20th century, may have further motivated the change in pronunciation. Hence Borovkov²² states in the introduction to his Uzbek-Russian dictionary that “the words like *manba*, *misra* used to be written with an apostrophe until 1956”. The nouns in question mostly match in both languages, although the scope of NPUPA overlaps for only the 3.P.SG.POSS declension. The non-matching nouns have either a final consonant

²¹ BACANLI, E. Türk Dillerinde Alomorfi Koşullanması [Conditioning of Allomorphy in Turkic Languages]. In *Türkbilig*, 2014, No. 27, p. 33.

²² BOROVKOV, A. K. *Uzbeksko-russkij slovar'* [Uzbek-Russian Dictionary], p. 9.

(*masjid* and *sanoat* in Uzbek, *talih* in Turkish) or have already been regularized (such as Turkish *veda*). Uzbek *satuvchi* is of Turkic origin, whereas *niza* in Turkish is obsolete.

Table 12. The Arabic loan nouns with former final /ʕ/ in Uzbek and Turkish

	UZBEK	TURKISH	MEANING
a.	<i>manba</i>	<i>menba</i>	‘source’
b.	<i>mavqe</i>	<i>mevki</i>	‘position’
c.	<i>mavzu</i>	<i>mevzu</i>	‘topic’
d.	<i>misra</i>	<i>misra</i>	‘verse’
e.	<i>mudofe</i>	<i>müdafi</i>	‘defender’
f.	<i>nizo</i>	N/A <i>niza</i>	‘quarrel’
g.	<i>vido</i>	N/A <i>veda</i>	‘farewell’
h.	<i>tole</i>	N/A <i>talih</i>	‘fortune’
j.	N/A <i>masjid</i>	<i>cami</i>	‘mosque’
k.	N/A <i>satuvchi</i>	<i>bayi</i>	‘dealer, distributor’
l.	N/A <i>sanoat</i>	<i>sanayi</i>	‘industry’

Bodrogligeti provides the following information from Uzbek.²³ The 3rd person plural possessive suffix *-lāri* is outside the final vowel or consonant dichotomy, so it is always regular.

Table 13. NPUPA in some Arabic borrowings in Uzbek

1.P.SG.POSS	2.P.SG.POSS	3.P.SG.POSS	1.P.PL.POSS	2.P.PL.POSS	3.P.PL.POSS
<i>manba-im</i>	<i>manba-ij</i>	<i>manba-i</i>	<i>manba-imiz</i>	<i>manba-ijiz</i>	<i>manba-lāri</i>
<i>mavqe-im</i>	<i>mavqe-ij</i>	<i>mavqe-i</i>	<i>mavqe-imiz</i>	<i>mavqe-ijiz</i>	<i>mavqe-lāri</i>
<i>mavzu-im</i>	<i>mavzu-ij</i>	<i>mavzu-i</i>	<i>mavzu-imiz</i>	<i>mavzu-ijiz</i>	<i>mavzu-lāri</i>
<i>misra-im</i>	<i>misra-ij</i>	<i>misra-i</i>	<i>misra-imiz</i>	<i>misra-ijiz</i>	<i>misra-lāri</i>
<i>mudofe-im</i>	<i>mudofe-ij</i>	<i>mudofe-i</i>	<i>mudofe-imiz</i>	<i>mudofe-ijiz</i>	<i>mudofe-lāri</i>
<i>nizo-im</i>	<i>nizo-ij</i>	<i>nizo-i</i>	<i>nizo-imiz</i>	<i>nizo-ijiz</i>	<i>nizo-lāri</i>
<i>tole-im</i>	<i>tole-ij</i>	<i>tole-i</i>	<i>tole-imiz</i>	<i>tole-ijiz</i>	<i>tole-lāri</i>
<i>vido-im</i>	<i>vido-ij</i>	<i>vido-i</i>	<i>vido-imiz</i>	<i>vido-ijiz</i>	<i>vido-lāri</i>

²³ BODROGLIGETI, A. J. E. *An Academic Reference Grammar of Literary Uzbek* V. I–II, pp. 66, 97–99. Note that my Uzbek informant does not confirm the accuracy of all the declensional cells. For him, the nouns *manba*, *misra*, *mudofe* have regular declensions for all persons, and the rest of the nouns have regular formations for 3.P.SG.POSS along with NPUPAs.

The similar nouns in Turkish display NPUPA variably and only for the 3rd person. The variable forms of *cami* ‘mosque’ are confirmed in the Manual of Turkish Orthography (Türkçe Yazım Kılavuzu)²⁴, although the others can be confirmed only by online databases.

Table 14. NPUPA in some Arabic borrowings in Turkish

3.P.SG.POSS	
REGULAR CELLS	IRREGULAR CELLS
<i>cami-si</i>	<i>cami-i</i>
<i>bayi-si</i>	<i>bayi-i</i>
<i>sanayi-si</i>	<i>sanayi-i</i>
<i>mevzu-su</i>	<i>mevzu-u</i>
<i>mısra-sı</i>	<i>mısra-ı</i>
<i>müdafî-si</i>	<i>müdafî-i</i>
<i>menba-sı</i>	<i>menba-ı</i>
<i>mevki-si</i>	<i>mevki-i</i>

3.3. Phonological Deviations in Case Declension

3.3.1. Examples from Chagatay

Chagatay had a developed vowel harmony for almost all suffixes, e.g. *su-ya* (water-DAT), *kişi-gä* (person-DAT), *kök-kä* (sky-DAT), *qulaq-qa* (ear-DAT). However, as a rule, Arabic and Persian loanwords with a clear front vowel in the last syllable or a palatal final consonant used to combine with back-vocalic allomorphs.²⁵ For most of the examples given by Eckmann we can find justification as the pronunciation may have occurred with back vowels or non-palatal consonant, as Eckmann²⁶ himself applies it in transcription e.g. *bayt-ya* ‘to the house’, *âdam-ya* ‘to the man’, *vahdat-qa* ‘to the unity’, *saâdat-liq* ‘fortunate’, etc. However, there are clear instances of the use of back-vocalic allomorphs after the stems containing short /i/ or long /î/, e.g. *adamî-liy* ‘humanity’, *cism-îm* ‘my body’, *dîn-ya* ‘to the religion’, *yalib-raq* ‘more powerful’, *raqîb-î* ‘his/her rival’, etc. The regularity of the loan nouns is only available when the stems contain final velar /k/ or /g/, e.g. *âhâng-i* ‘its

²⁴ Available from < http://tdk.gov.tr/index.php?option=com_yazimkilavuzu&view=yazimkilavuzu > [Cit. 16 May 2018].

²⁵ Cf. ECKMANN, J. *Chagatay Manual*, p. 29–32.

²⁶ *Ibid.*, pp. 30–31.

harmony’, *fäläk-kä* ‘to the firmament’, *mühlik-räk* ‘more destructive’, etc. Thus, it is explicit that the vowel harmony which was generalized in all Chagatay and some loanwords was disrupted for the nouns containing front /i/ or /î/ [IPA /i:/]. It is not reasonable to assume that the authors of the Chagatay manuscripts, who were competent in both Arabic and Persian, did not know the original pronunciation of those borrowings. Therefore, they must have reflected the pronunciation of colloquial Turkic practice, which must have already been generalized before the scriptural practice. I think the most reasonable explanation for this irregularity was ‘hypercorrection’, which, in its turn, is defined as “the incorrect use of a word, pronunciation or other linguistic feature in speaking as a result of the attempt to speak in an educated manner and in the process replacing a form that is itself correct”.²⁷

3.3.2. *Examples from Tatar*

In Tatar, the conditioning of allomorphy for dative comprises both vowel harmony and consonant assimilation, e.g. *bala-ga* ‘to child’, *östäl-gä* ‘to table’, *at-ka* ‘to horse’, *mäktäp-kä* ‘to school’.²⁸ The personal pronouns *min* ‘I’ and *sin* ‘you.SG’ are combined with the *-ga* allomorph, instead of the expected *-gä*. The /ŋg/ sound string fuses as /ŋ/.²⁹

Table 15. NPUPA in Tatar

	LANGUAGE	MEANING	NOM	DAT
	Tatar	‘I’ ‘you.SG’	<i>min</i> <i>sin</i>	<i>miŋa</i> <i>siŋa</i>
cf.	Bashkir	‘I’ ‘you.SG’	<i>min</i> <i>hin</i>	<i>miŋä</i> <i>hiŋä</i>

The reason for the NPUPA in Tatar is a partial preservation of old suppletion in the dative forms of the two personal pronouns, which are observed in many Turkic languages since the Orkhon inscriptions (e.g. /ä/ ~ /a/ ablaut, as in *män* ~ *maŋa* ‘I ~ to me’, *sän* ~ *saŋa* ‘you ~ to you’). Apparently, Bashkir has

²⁷ RICHARDS, J. C., SCHMIDT, R. et al. *Longman Dictionary of Language Teaching and Applied Linguistics*, p. 243.

²⁸ Cf. BURAN, A., ALKAYA, E. *Çağdaş Türk Lehçeleri* [Contemporary Turkic Dialects], p. 250.

²⁹ BERTA, Á. Tatar and Bashkir. In JOHANSON, L., CSATÓ, É. Á. *The Turkic Languages*, p. 289.

developed totally canonical forms whereas Tatar could only regularize the stems.

Like Chagatay, Tatar also has loanword-specific phonology. The Russian loanwords *sov'et* and *sov'etnik* are combined with the allomorphs containing back vowels: *Sov'et-lar Sojuz-ă* [soviet-PL union-3.POSS] ‘Soviet Union’, *ilselek sov'etnik-ă* [embassy counselor-3.POSS] ‘embassy counselor’.³⁰ Henry³¹ gives another example: *slesar'^l-lär* ‘locksmiths’. However, it seems that any loanword (from Russian and Persian) with a final palatal consonant in Tatar, accepts the allomorphs with a front vowel; e.g. *slesar'^l-lär* ‘locksmiths’, *sekretar'^l-lär* ‘secretaries’, *pak'^l-lek* ‘cleanness, purity’.³²

3.3.3. Examples from Altay

Some of the accusative allomorphs in Altay used to behave irregularly until the midst of 20th century. To understand the situation, first, let me illustrate the phonological conditions.

Phonological allomorphy of the accusative in Altay:³³

CONDITIONS	EXAMPLES
After vowels: <i>-ni/-ni</i>	<i>ada-ni</i> ‘father-ACC’, <i>ne-ni</i> ‘what-ACC’
After sonorants: <i>-di/-di</i>	<i>jilan-di</i> ‘snake-ACC’, <i>jer-di</i> ‘ground-ACC’
After voiceless consonants: <i>-ti/-ti</i>	<i>at-ti</i> ‘horse-ACC’, <i>mös-ti</i> ‘cedar-ACC’

There is an additional condition for the nouns ending with the high rounded vowels /u/, /u:/, /ü/, /ü:/. Both expected *-ni/-ni* and irregular *-di/-di* allomorphs could be used variably until the midst of the 20th century:³⁴

³⁰ COMRIE, B. Tatar Phonology. In LAKE, W. (ed.). *Phonologies of Asia and Africa: (including the Caucasus)*, Vol. II, p. 904.

³¹ HENRY, C. An Optimality Theoretic Analysis of Vowel harmony in Kazan Tatar. In *Proc Ling Soc Amer* 3. 4, p. 5.

³² COMRIE, B. Tatar Phonology. In LAKE, W. (ed.). In *Phonologies of Asia and Africa: (including the Caucasus)*, Vol. II, p. 904, 905.

³³ DYRENKOVA, N. P. *Grammatika ojrotskogo jazyka* [Grammar of the Ojrot Language], pp. 63–64.

³⁴ DYRENKOVA, N. P. *Grammatika ojrotskogo jazyka* [Grammar of the Ojrot Language], pp. 67–68.

Table 16. Regular and irregular accusative formations in Altay

	REGULAR ACCUSATIVE	IRREGULAR ACCUSATIVE	GLOSS
a.	<i>ayu-ni</i>	<i>ayu-di</i>	‘bear-ACC’
b.	<i>tu:-ni</i>	<i>tu:-di</i>	‘mountain-ACC’
c.	<i>üredü(:)-ni</i>	<i>üredü(:)-di</i>	‘education-ACC’
d.	<i>čerü(:)-ni</i>	<i>čerü(:)-di</i>	‘army-ACC’

The declension of such nouns has been totally regularized in contemporary Altay. Altay is a Kipchak language, sharing many phonological and morphological features especially with Kirghiz. Irregular forms must have resulted from the pronunciation of the labio-velar approximant /w/ (IPA /ʋ/) in the history of the Kipchak languages. Kazakh and Karakalpak are known for retaining this /w/.

Table 17. Labialization in Kipchak group

	OLD TÜRKİC	KAZAKH	ALTAY	MEANING
a.	<i>ađıy</i>	<i>ayuw</i>	<i>ayu</i>	‘bear’
b.	<i>taγ</i>	<i>taw</i>	<i>tu:</i>	‘mountain’
c.	<i>čerig</i>	<i>šerüw</i>	<i>čerü(:)</i>	‘soldier; army’
d.	<i>ayız</i>	<i>awız</i>	<i>o:s</i>	‘mouth’
e.	<i>baγır</i>	<i>bawır</i>	<i>bu:r</i>	‘bosom; liver’

Thus, the original forms in Altay also must have had the forms **ayuw-di*, **tuw-di*, **üredüw-di*, **čerüw-di*, obeying the phonological allomorphy. When the labio-velar approximant began to turn into the high round vowels /u/ and /ü/ in Altay, the regularization process must have started, as well.

3.4. Phonological Deviations in Both Possessive and Case Declensions

The Turkish noun *yâr* /j^har/ ‘beloved, love’, which is a borrowing from Persian, fits the vowel harmony with consonant-initial suffixes, whereas the harmony is suspended for vowel-initial case and possessive suffixes. The declension of the same noun is regular in Azerbaijani.

Table 18. Case and possessive declensions of the noun *yâr* in Turkish and Azerbaijani

VALUES	TURKISH	CF. AZERBAIJANI
PLURAL	<i>yâr-lar</i>	<i>yâr-lar</i>
LOCATIVE	<i>yâr-da</i>	<i>yâr-da</i>
ABLATIVE	<i>yâr-dan</i>	<i>yâr-dan</i>
GENITIVE	<i>yâr-in</i>	<i>yâr-in</i>
ACCUSATIVE	<i>yâr-i</i>	<i>yâr-ı</i>
DATIVE	<i>yâr-e</i>	<i>yâr-a</i>
1.P.SG.POSS	<i>yâr-im</i>	<i>yâr-ım</i>
2.P.SG.POSS	<i>yâr-in</i>	<i>yâr-in</i>
3.P.SG.POSS	<i>yâr-i</i>	<i>yâr-ı</i>
1.P.PL.POSS	<i>yâr-ımız</i>	<i>yâr-ımız</i>
2.P.PL.POSS	<i>yâr-iniz</i>	<i>yâr-ınız</i>
3.P.PL.POSS	<i>yâr-i, yâr-ları</i>	<i>yâr-ı, yâr-ları</i>

Being a borrowing from Persian does not explain this irregularity, since the similar borrowing *kâr* /kʰɑr/ ‘profit’ in Turkish is regular in corresponding cells. The reason must be the long tradition in Turkish poetry of pronouncing the word according to Arabic poetic rhythms.³⁵

3.5. Phonological Deviations in Number Marking

3.5.1. Plural Formation of Two Nouns in Sakha

In Sakha, the allomorphic cluster *-dar/-der*, *-dor/-dör* of plural suffix *-LAR* are added to nouns ending with /y/ or /r/, e.g. *xirur-dar* ‘surgeons’, *üör-der* ‘herds’, *tomtor-dor* ‘fruit buds’, *kötör-dör* ‘birds’.³⁶ Two nouns ending with /r/ are combined with the variant *-lar*, and the final consonant /r/ in the stems undergoes regressive assimilation: *jaxtal-lar* (< *jaxtar-lar*) ‘women’, *ba:l-lar* (< *ba:r-lar*) ‘they exist’.³⁷ Sakha is famous for many irregularities concerning plural marking, such as suppletion (*küis* ~ *kürgüttar* ‘girl ~ girls’), a series of

³⁵ We can track the irregularity even in Yunus Emre’s poems in the late 13th century: *Nidem elim ermez yâre* / *Bulunmaz derdime çâre* / *Oldum ilimden âvâre* / *Beni bunda eğler misin?* (English translation: I’m desperate, I cannot reach my beloved / No-one can find a cure for my nuisance / I became a wanderer leaving my land / (Oh God) do you still retain me here (in this sorrowful world?))

³⁶ KRUEGER, J. R. *Yakut Manual*, pp. 74–75.

³⁷ KORKINA, E. I., UBRJATOVA, E. I. et al. *Grammatika sovremennogo jakutskogo literaturnogo jazyka* [Grammar of the Modern Yakut Literary Language], p. 92.

augmented or shortened stems inflected with the restricted suffix *-ttAr*, etc.³⁸ The NPUPA and regressive assimilation in the two nouns are other irregularities, which cannot be linked or traced back to any historical fact. It may be a result of dialectal interference, a hypercorrection, etc.

3.5.2. *Plural Formation of a Demonstrative Pronoun in Chulym Turkic*

In Chulym the plural suffix *-LAr* has six allomorphs reflecting vowel harmony and (nasal and voiceless) consonant assimilations. The allomorphs *-nar/-när* are used after nasal-final (i.e. /n/, /ŋ/, /m/) stems, e.g. *kün-när* (day-PL) ‘days’.³⁹ The plural form of the demonstrative pronoun *teg* ‘that (one)’ is *teg-när* ‘those (ones)’.⁴⁰ The reason for this NPUPA could be the analogy with the plural of the other demonstrative pronoun *ol* ‘that (one)’, e.g. *anar* ‘those’.

3.5.3. *Plural Forms of Russian Loans in Khakas*

Khakas has the same allomorphy for the plural suffix *-LAr* but the vowel harmony is disrupted in the borrowings from Russian. Although the following Russian nouns clearly include a front vowel in the last syllable or end with a palatal consonant, they are combined with the allomorphs having a back vowel: *Avtomobil’-lar* ‘automobiles’, *predsedatel’-lar* ‘chair people’, *lötčik-tar* ‘pilots’, *kapitalist-tar* ‘capitalists’, *poezd-tar* ‘trains’, *trudoden’-nar* ‘working days’.⁴¹ As this is a contact-induced irregularity with a motiveless reason in the donor language, I can only explain it as hypercorrection, like the irregular inflections of Arabic and Persian loan words in Chagatay or some Russian loans in Tatar.

³⁸ KRUEGER, J. R., *Yakut Manual*, p. 75; KORKINA, E. I., UBRJATOVA, E. I. et al. *Grammatika sovremennogo jakutskogo literaturnogo jazyka* [Grammar of the Modern Yakut Literary Language], p. 126.

³⁹ BIRJUKOVIČ, R. M. Čulymsko-tjurkskij jazyk [Chulym Turkic Language]. In TENIŠEV, E. R. *Jazyki mira – Tjurkskie jazyki* [The Languages of the World – Turkic Languages], p. 493.

⁴⁰ BIRJUKOVIČ, R. M. *Morfologija čulymsko-tjurkskogo jazyka I* [Morphology of Chulym Turkic Language I], p. 67.

⁴¹ DYRENKOVA, N. P. *Grammatika xakasskogo jazyka* [Grammar of the Khakas Language], p. 20.

3.6. A Phonological Deviation in the Distributive Suffix

The distributive suffix in Turkish is *-(ş)Ar*, in Urum *-(ş)Ar* and in Trakai Karaim *-(ş)ArI* (and in Galician dialect *-(s)Ar*). The suffix is represented with fricative-initial allomorphs after vowel-final stems.

Table 19. Phonological allomorphy of the distributive suffix in Turkish, Urum and Karaim

ALLOMORPH	TURKISH	URUM ⁴²	KARAIM ⁴³	MEANING
<i>-şar</i>	<i>altı-şar</i>	? <i>altı-şar</i>	<i>altı-şari</i>	‘six each’
<i>-şer</i>	<i>iki-şer</i>	<i>eki-şer</i>	<i>eki-şari</i>	‘two each’
<i>-ar</i>	<i>on-ar</i>	<i>on-ar</i>	<i>on-ari</i>	‘ten each’
<i>-er</i>	<i>bir-er</i>	<i>bir-er</i>	<i>bir-eri</i>	‘one each’

The noun *yarım/yarım* ‘half’ in those languages, although ending with a consonant, is combined with *-şar* (or *-şar*, *-şari*, *-sar*): Turkish *yarım-şar*, Karaim⁴⁴ *yarım-şari* (Galician *yarım-sar*), Urum⁴⁵ *yarım-şar* ‘half each’. The emergence of this NPUPA must be the transmission of the distributive form of the cognate and synonymous *yari* ‘half’, which is still used in Turkish dialects as *yarışar* ‘half each’.

3.7. Phonological Deviations in Tense Conjugation

3.7.1. An Exception for *bar-* ‘to go’ in Old Turkic

In runiform inscriptions (Orkhon and early Old Uyghur), allomorphic conditioning of *-d/-t* initial suffixes such as *-DI* general past, *-DA* locative-ablative, *-DAčI* future, *-DOK* participial, *-DUR* causative, was such that after /l/, /r/, /n/-final stems they used to be represented with /t/-initial allomorphs, in other cases /d/-initial allomorphs were used, e.g. *qal-ti-m* (stay-PST-1.SG) ‘I stayed’, *bol-tači* (become-FUT) ‘will become’, *baş-ın-ta* (head-3.P.POSS-LOC/ABL) ‘on his/her head’, *kazyan-toq* (conquer-PART) ‘that he conquered’,

⁴² GARKAVETS, O. *Urumskiy Slovník* [Dictionary of Urum], pp. 103, 323, 615.

⁴³ MUSAEV, K. M. *Grammatika karaimskogo jazyka. Fonetika i morfologija* [Grammar of Karaim Language. Phonetics and Morphology], pp. 209–210.

⁴⁴ *Ibid.*, p. 210.

⁴⁵ GARKAVETS, O. *Urumskiy Slovník* [Dictionary of Urum], p. 226.

yan-tur- ‘to turn someone/something back’, etc.⁴⁶ However, the verb *bar-* ‘to go’ was constantly combined with /d/-initial allomorphs, e.g. *bar-dī* ‘he went’, *bar-dī-miz* ‘we went’, *bar-dī-γ* ‘you.SG went’, *bar-dī-γiz* ‘you.PL went’, *bar-doq* ‘(the place) that (they) went’.⁴⁷ This fact implies the possibility of a final vowel in the original form of that particular verb.

3.7.2. Irregular Verbs in the Use of the So-called ‘Aorist’

One of the most extensive irregularities in Turkic languages is related to the allomorphy of so-called ‘Turkic aorist’. In order to understand the allomorphy of the aorist, which is also labelled as ‘present tense’, ‘broad tense’, ‘future’ or ‘presumptive future’ in the modern Turkic languages, I need to mention the allomorphy in the Old Turkic period (8th –12th cc). In Old Turkic, after vowel-final verb stems, the allomorphs *-γUr/-r* are used.⁴⁸ The frequency of the use of short or long variants depends on the text and the period. There are verbs with both short and long variants (e.g. *te-yür* ~ *te-r* ‘says’, *tilä-yür* ~ *tilä-r* ‘wishes’) while some verbs tend to combine with one of the variants (e.g. *oyna-r* ‘plays’, *yorī-r* ‘walks’, etc.). There is an observable diachronic increase in the use of short variants until Middle Turkic (13th century). After consonant-final verbs the variants *-Ur*, *-Ir*, *-Ar*, regardless of whether the root is mono- or multi-syllable, e.g. *al-ar* ‘takes’, *uq-ar* ‘understands’, *öč-är* ‘dies down, burns out’, *bälgür-är* ‘appears’, *bar-ir* ‘goes’, *käl-ir* ‘comes’, *bil-ir* ‘knows’, *tur-ur* ‘stands/am/is/are’, *är-ür* ‘am/is/are’, etc. There are apparently some morphological conditions for using *-Ur* variants after voiced suffixes as explained by Erdal.⁴⁹ Despite the obvious phonological rules, for most of the verbs the choice of allomorph was lexically conditioned in the Old Turkic period. This vagueness continued through the history of the Turkic languages but most of the modern languages have regular allomorphy in the use of aorist. Here are the regularized micro-systems in three Turkic languages.

⁴⁶ For more examples see ERCİLASUN, A. B. L, N, R’den Sonra Niçin T? [Why T after L, N, R?]. In *TDAY Belleten* 2000, pp. 191–194.

⁴⁷ TEKİN, T. *Orhon Türkçesi Grameri* [The Grammar of Orkhon Turkic], pp. 75–76, 169; ERDAL, M. *A Grammar of Old Turkic*, p. 238.

⁴⁸ ERDAL, M. *A Grammar of Old Turkic*, p. 240.

⁴⁹ *Ibid.*, p. 241.

Azeri (presumptive future)⁵⁰

CONDITIONS	EXAMPLES
After vowel-final verbs <i>-r</i>	<i>oxu-r</i> ‘will read’, <i>dilä-r</i> ‘will wish’, etc.
After consonant-final verbs <i>-ar/-är</i>	<i>yaz-ar</i> ‘will write’, <i>käç-är</i> ‘will pass’, <i>toxun-ar</i> ‘will touch’, <i>öyrän-är</i> ‘will learn’, etc.

Uzbek (presumptive future)⁵¹

CONDITIONS	EXAMPLES
After vowel-final verbs <i>-r</i>	<i>oqi-r</i> ‘will (presumably) read’, <i>tišlä-r</i> ‘will (presumably) bite’, etc.
After consonant-final verbs <i>-ar/-är</i>	<i>yâz-ar</i> ‘will presumably write’, <i>kel-är</i> ‘will presumably come’, etc.

Altay (presumptive future)⁵²

CONDITIONS	EXAMPLES
After consonant-final verbs <i>-ar/-er, -or/-ör</i>	<i>al-ar</i> ‘will take’, <i>üz-er</i> ‘will break’, <i>ton-or</i> ‘will freeze’, <i>kör-ör</i> ‘will see’, etc.
After vowel-final verbs <i>-ar/-er, -or/-ör, -ir/-ir</i>	<i>sura-ar</i> ‘will ask’, <i>ište-er</i> ‘will work’, <i>sakî-ir</i> ‘will wait’, <i>biçi-ir</i> ‘will write’, <i>tokto-or</i> ‘will stop’, <i>böktö-ör</i> ‘will lock’.

By Middle Turkic (Turkic languages such as Khorezm, Old Anatolian Turkish and Old Kipchak between 13th and 15th centuries) phonological allomorphy became more canonical as follows:

- i) After vowel-final verbs *-r*
- ii) After mono-syllabic consonant-final verbs *-ar/-är*
- iii) After poly-syllabic consonant-final verbs *-ur/-ür*

⁵⁰ ŠIRALIEV, M. Š., SEVORTJAN, E. V. et al. *Grammatika azerbajdžanskogo jazyka. Fonetika, morfoložija i sintaksis* [Grammar of the Azerbaijanian Language. Phonetics, Morphology and Syntax], pp. 137–138.

⁵¹ BOESCHOTEN, H. Uzbek. In JOHANSON, L., CSATÓ, É. Á. *The Turkic Languages*, p. 368.

⁵² DYRENKOVA, N. P. *Grammatika ojrotskogo jazyka* [Grammar of the Ojrot Language], pp. 177–178.

Some high frequency mono-syllabic verbs, however, retained the irregular allomorphs with high (close) vowels just as they did in older Turkic languages. In modern languages unrounded high vowels are also incorporated in the same cluster of allomorphs. Most of the irregular verbs end with a liquid /r/ or /l/, but this cannot be a criterion for them, since many similar verbs obey the phonological rule, e.g. Tuvan *böl-er* ‘will collect’, *kir-er* ‘will get in’, Turkish *sar-ar* ‘s/he wraps’, *sal-ar* ‘s/he lets go’, etc. The irregular verbs that I could find or extract from Turkological literature are listed below. Old Anatolian Turkish, Chagatay have allomorphs with only the rounded high vowels /u/ and /ü/. Ottoman had the same allomorphs until the 18th century, then it had two more allomorphs with the unrounded high vowels /i/ and /i/. The modern languages given below have four allomorphs with rounded and unrounded high vowels. Kumyk verbs given below can accept both irregular (with high vowels) and regular (with low vowels /a/, /e/) allomorphs.⁵³ Two of the Tuvan verbs have also fused forms: *bolur* ~ *boor*, *kelir* ~ *käär*. Tuvan has three verbs (namely, *bar-* ‘to go’, *ber-* ‘to give’, *kör-* ‘to see’ respectively) which are always used with their fused forms: *baar* (go-PRESUM.FUT), *bäär* (give-PRESUM.FUT), *köör* (see-PRESUM.FUT).⁵⁴ However, the existence of too many other fused verb forms with the presumptive future suffix and the lack of clear forms with high vowels in Tuvan make it hard to label them summarily as irregular. The number of irregular verbs differs in individual languages, e.g. 20 verbs in Old Anatolian Turkish, 18 in Khorezm and Ottoman Turkish, 15 in Turkish, 14 in Old Kipchak, 13 in Chagatay, 12 in Kumyk, 11 in Karachay-Balkar and Karaim, 9 in Tofa, 8 in Tatar, 7 in Crimean Tatar and Tuvan. Except for Old Anatolian Turkish, examples of which I have mainly chosen myself from the indexes of various manuscripts, the accuracy of the data can be checked in the Turkological literature.⁵⁵

⁵³ Cf. DMITRIEV, N. K. *Grammatika kumykskogo jazyka* [Grammar of the Kumyk Language], pp. 96 – 101; PEKACAR, Ç. Kumuk Türkçesi [Kumyk Turkic]. In ERCİLASUN, A. B. *Türk Lehçeleri Grameri* [Grammar of Turkic Dialects], p. 985.

⁵⁴ ARIKOĞLU, E. Tuva Türkçesi [Tuvan Turkic]. In ERCİLASUN, A. B. *Türk Lehçeleri Grameri* [Grammar of Turkic Dialects], p. 1198.

⁵⁵ For Khorezm Turkic, see ECKMANN, J. Harezmi Türkçesi [Khorezm Turkic]. In AKALIN, M. *Tarihi Türk Şiveleri* [Historical Turkic Dialects], p. 195; for Old Anatolian Turkish, see TİMURTAŞ, F. K. *Eski Türkiye Türkçesi - XV. Yüzyıl. Gramer - Metin - Sözlük* [Old Turkish – XV Century. Grammar – Text – Dictionary], pp. 122–124; for Ottoman Turkish, see DENY, J. *Türk Dili Grameri (Osmanlı Lehçesi)* [Grammar of the Turkish Language (Ottoman Dialect)], pp. 378–380; for Old Kipchak, see GÜNER, G. *Kıpçak Türkçesi Grameri* [Grammar of Kipchak Turkic], pp. 213–220; for Chagatay, see ECKMANN, J. *Chagatay Manual*, p. 141; for Tatar, see BERTA, Á. Tatar and Bashkir. In JOHANSON, L., CSATÓ, É. Á. *The Turkic Languages*, p. 293;

Table 20. Irregular verbs with aorist in the Turkic languages

LANGUAGE	VERB	MEANING
Khorezm, OAT, Old Kipchak, OtT, Chagatay, Turkish, Kumyk, Karaim, Karachay-Balkar, Tatar, Crimean Tatar, Tuvan, Tofa	<i>al-</i> <i>kel-, gel-, kil-</i> <i>bol- ol-, bul-</i>	‘to take’ ‘to come’ ‘to become’
Khorezm, OAT, Old Kipchak, OtT, Chagatay, Tuvan, Tofa	<i>kil-, qil-</i>	‘to do’
Khorezm, OAT, Old Kipchak, OtT, Chagatay, Turkish, Tuvan, Tofa	<i>bil-</i>	‘to know’
Khorezm, OAT, Old Kipchak, OtT, Chagatay, Turkish, Tatar, Kumyk, Karachay-Balkar, Karaim	<i>bar-, var-</i>	‘to go’
Khorezm, OAT, Old Kipchak, OtT, Turkish, Karachay-Balkar	<i>ur-, vur-</i>	‘to hit’
OAT, OtT, Turkish, Kumyk, Tatar, Crimean Tatar, Karachay-Balkar, Karaim	<i>kör-, gör-, kür-, kyor-</i>	‘to see’
Khorezm, OAT, Old Kipchak, OtT, Chagatay, Turkish, Kumyk, Karaim, Tatar, Crimean Tatar	<i>ber-, bir-, ver-, vir-</i>	‘to give’
Khorezm, Old Kipchak, Chagatay, Karachay-Balkar, Tatar, Crimean Tatar, Karaim	<i>ayt-</i>	‘to tell’
Khorezm, OAT, Old Kipchak, OtT, Chagatay, Turkish, Karachay-Balkar, Karaim	<i>tur-, dur-</i>	‘to stand’
Khorezm, OAT, Old Kipchak, OtT, Chagatay	<i>yat-</i>	‘to lie’
OAT, OtT, Turkish, Karachay-Balkar, Tofa	<i>öl-</i>	‘to die’

for Kumyk, see DMITRIEV, N. K. *Grammatika kumykskogo jazyka* [Grammar of the Kumyk Language], pp. 97–98; PEKACAR, Ç. Kumuk Türkçesi [Kumyk Turkic]. In ERCİLASUN, A. B. *Türk Lehçeleri Grameri* [Grammar of Turkic Dialects], p. 985; for Karachay-Balkar, see BASKAKOV, N. A., ABDULLAEV, A. Z. et al. *Grammatika karaçaevo-balkarskogo jazyka* [Grammar of the Karachay-Balkar Language], pp. 218–219, 253–255; KETENCIEV, M. B. *Qaraçay-Malqar Tilni Morfologijasy* [Morphology of the Karachay-Balkar Language], p. 82; for Crimean Tatar, see SEVORTJAN, E. V. Krymskotatarskij jazyk [The Crimean Tatar Language]. In BASKAKOV, N. A. *Jazyki narodov SSSR. Tjurkskie jazyki* [The Languages of the Peoples of the USSR. Turkic Languages], p. 246; YÜKSEL, Zühâl. Kırım-Tatar Türkçesi [Crimean Tatar Turkic]. In ERCİLASUN, A. B. *Türk Lehçeleri Grameri* [Grammar of Turkic Dialects], pp. 853, 861; for Tuvan, see ISXAKOV, F. G., PAL'MBAX, A. A. *Grammatika Tuvinskogo Jazyka. Fonetika i Morfologija* [Grammar of Tuvan Language. Phonetics and Morphology], pp. 302 – 307; ARIKOĞLU, E. Tuva Türkçesi [Tuva Turkic]. In ERCİLASUN, A. B. *Türk Lehçeleri Grameri* [Grammar of Turkic Dialects], p. 1198; for Tofa, see RASSADIN, V. I. *Morfologija Tofalarskogo Jazyka v Sravnitel'nom Osveščanii* [Morphology of the Tofa Language in a Comparative Perspective], pp. 193–194.

LANGUAGE	VERB	MEANING
Khorezm, OAT, OtT, Turkish, Karachay-Balkar, Kumyk, Tuvan, Tofa	<i>kal-</i>	‘to stay’
Old Kipchak, Kumyk, Tuvan, Tofa	<i>sal-</i>	‘to put’
Khorezm, OAT, OtT, Turkish	<i>bul-</i> <i>san-</i> <i>ten-, den-, din-</i>	‘to find’ ‘to think’ ‘to be said’
Khorezm	<i>ïd-</i> <i>qayt-</i>	‘to send’ ‘to return’
OAT, OtT, Turkish	<i>yen-</i>	‘to be eaten’
Khorezm, OAT, Old Kipchak	<i>kir-, gir-</i>	‘to enter’
OAT	<i>gäy-</i>	‘to wear’
Old Kipchak	<i>elt-</i>	‘to send’
Chagatay	<i>čal-</i> <i>er-</i> <i>sön-</i>	‘to play’ ‘to be’ ‘(fire) to die down’
Kumyk	<i>qaytar-</i> <i>yañılıš-</i> <i>čaqür-</i>	‘to return’ ‘to mistake’ ‘to call’
Kumyk, Karaim	<i>tol-</i>	‘to get full’
Karaim	<i>kyul-</i> <i>yür-</i>	‘to laugh’ ‘to walk’
Tatar	<i>yaz-</i>	‘to write’
Tofa	<i>xal-</i>	‘to bring’

3.7.3. Future form of *ayt-* ‘to tell’ in Karachay-Balkar

A similar NPUPA regarding future is found in Karachay-Balkar in the case of the verb *ayt-* ‘to tell’. The categorical future suffix has several allomorphs as described below:⁵⁶

- i) After vowel-final stems *-rIk* *išle-rik* ‘will work’, *qoru-ruq* ‘will protect’, etc.
- ii) After liquid-final stems *-lIk* *bar-liq* ‘will go’, *kel-lik* ‘will come’ etc.

⁵⁶ BASKAKOV, N. A., ABDULLAEV, A. Z. et al. *Grammatika karačaevo-balkarskogo jazyka* [Grammar of the Karachay-Balkar Language], pp. 255 – 257; BERTA, Á. Tatar and Bashkir. In JOHANSON, L., CSATÓ, É. Á. *The Turkic Languages*, p. 311.

- iii) After /n/-final stems *-nIk* *kiyin-nik* ‘will dress’, *žuwun-nuq* ‘will swim’, etc.
- iv) After mono-syllabic stems (other than the previous conditions) *-ArIk* *žaz-ariq* ‘will write’, *öt-erik* ‘will pass’

The fourth condition is coordinated with the allomorphy of the aorist (*-r*, *-ar/-er*, *-ir/-ir*, *-ur/-ür*), i.e. the monosyllabic verbs which do not share the previous three conditions will combine with *-ariq/-erik* allomorphs. However, the verb *ayt-*, which meets this condition, combines with *-iriq*, that is peculiar to this verb: *ayt-iriq* ‘will tell’. This irregularity emerged by analogy with the aorist form of the verb: *ayt-ir* ‘tells, will tell’.

3.8. General Irregularities in Uyghur

Diachronic aspects of the umlauting and the loss of /i/ led to far-reaching changes and irregularities in Uyghur. The conditions of Uyghur umlauting are described by Yakup⁵⁷ as follows: “(i) Raising of the low vowels /a/ and /ä/ due to the regressive assimilation of the following high vowels: /baš/ ‘head’ + (i)m 1.SG.POSS → /bešim/ ‘my head’, /bar-/ ‘to go’ + (i)p CONV → /berip/ ‘going’; ii) reduction of the two low vowels mainly because of the shift of the primary accent (a few instances due also to the shift of the secondary accent) to the following syllable: /orda/ ‘palace’ + (s)i 3.SG.POSS → /ordisi/ ‘his/her palace’, /bala/ ‘child’ + lAr PL → /balilar/ ‘children’”.

Table 21. Diachronic changes due to the umlauting

MEANING	OLD TURKIC	TURKISH	UYGHUR
‘mouth’	<i>aγiz</i>	<i>ağız</i>	<i>eyiz</i>
‘bosom’	<i>baγır</i>	<i>bağır</i>	<i>beyir</i>
‘tent’	<i>čadır</i>	<i>çadır</i>	<i>čedir</i>
‘fish’	<i>balıq</i>	<i>balık</i>	<i>beliq</i>
‘to mistake’	<i>yañıl-</i>	<i>yanıl-</i>	<i>yeyil-</i>
‘to spread’	<i>yayıl-</i>	<i>yayıl-</i>	<i>yeyil-</i>

Uyghur has also lost the /i/ (IPA /u/) vs /i/ dichotomy diachronically, replacing /i/ with /i/ in all words.

⁵⁷ YAKUP, A. ‘Uyghur umlauting’: Characteristics, Diachronic Aspects, Consequences and Triggers. In *Turkic Languages*, 2009, No. 13, p. 35.

Table 22. Diachronic changes due to the loss of /i/

MEANING	OLD TURKIC	TURKISH	UYGHUR
‘girl’	<i>qiz</i>	<i>kız</i>	<i>qiz</i>
‘tooth’	<i>tış ~ tiş</i>	<i>diş</i>	<i>čiş</i>
‘work’	<i>iş ~ iş</i>	<i>iş</i>	<i>iş</i>
‘tongue’	<i>til</i>	<i>dil</i>	<i>til</i>
‘thousand’	<i>mıñ</i>	<i>bin</i>	<i>mıñ</i>
‘to split’	<i>yır-</i>	<i>yar-</i>	<i>yir-</i>
‘to get warm’	<i>isın-</i>	<i>ısın-</i>	<i>isin-</i>

Both of the above-mentioned changes led to many irregularities in inflection and derivation, since the stems, which once diachronically had /i/ at the last syllable still accept the allomorphs with back vowels. For example, the plural suffix in Uyghur has two allomorphs in accordance with synharmony. *-lar* after the stems having a back vowel in the last syllable; *-lär* after front vowels: *čečäk-lär* ‘flowers’, *kitap-lar* ‘books’.⁵⁸ However, the following nouns with a front vowel still accept the allomorph with a back vowel:⁵⁹

Table 23. Nouns with irregular plural allomorphs

	PLURAL	MEANING		PLURAL	MEANING
a.	<i>til-lar</i>	‘languages’	b.	<i>iş-lar</i>	‘deals’
c.	<i>qış-lar</i>	‘winters’	d.	<i>čiş-lar</i>	‘teeth’
e.	<i>qiz-lar</i>	‘girls’	f.	<i>mıñ-lar</i>	‘thousands’

The same roots, again, accept irregular allomorphs of the dative suffix, although the suffix has *-gä/-kä* and *-ya/-qa* variants:

⁵⁸ KAJDAROV, A. T. Ujgurskij (Novoujgurskij) jazyk [Uyghur (New Uyghur) Language]. In BASKAKOV, N. A. *Jazyki narodov SSSR. Tjurkskie jazyki* [The Languages of the Peoples of the USSR. Turkic Languages], p. 371; YAZICI ERSOY, H. Uyğur Türkçesi [Uyghur Turkic]. In ERCİLASUN, A. B. *Türk Lehçeleri Grameri* [Grammar of Turkic Dialects], p. 376.

⁵⁹ YAZICI ERSOY, H. Uyğur Türkçesi [Uyghur Turkic]. In ERCİLASUN, A. B. *Türk Lehçeleri Grameri* [Grammar of Turkic Dialects]. p. 376; ÇAKAN, V. (personal communication).

Table 24. Nouns with irregular dative allomorphs

	DATIVE		DATIVE
a.	<i>til-γa</i>	b.	<i>iš-qa</i>
c.	<i>qiš-qa</i>	d.	<i>čiš-qa</i>
e.	<i>qiz-γa</i>	f.	<i>miŋ-γa</i>

A similar irregularity occurs in verbs. The infinitive *-mäk/-maq* and negative *-mä/-ma* are represented with their irregular allomorphs with many verb stems.⁶⁰ Because of diachronic umlauting, Old Turkic *yaŋil-* ‘to mistake’ became *yeŋil-* falling into homophony with *yeŋil-* ‘to be defeated’. However, the former still accepts the allomorphs with a back vowel: *yeŋilmaq* ‘to mistake’, *yeŋilmas* ‘infallible’, cf. with *yeŋilmäk* ‘to be defeated’, *yeŋilmäs* ‘invincible’.⁶¹ Although the verb *eyt-* ‘to tell’ (which is *ayt-* in many other Turkic languages) does not bear a high vowel, it is also combined with irregular allomorphs.

Table 25. Irregular verb stems in Uyghur

	INFINITIVE	MEANING		INFINITIVE	MEANING
cf.	<i>bil-mäk</i>	‘to know’		<i>al-maq</i>	‘to take’
a.	<i>piš-maq</i>	‘to ripen’	b.	<i>isin-maq</i>	‘to get warm’
c.	<i>silji-maq</i>	‘to approach’	d.	<i>yir-maq</i>	‘to split’
e.	<i>yirt-maq</i>	‘to tear’	f.	<i>yilit-maq</i>	‘to warm up’
g.	<i>il-maq</i>	‘to hang’	h.	<i>sič-maq</i>	‘to sh*t’
j.	<i>šil-maq</i>	‘to peel’	k.	<i>tiy-maq</i>	‘to forbid’
l.	<i>tiz-maq</i>	‘to align’	m.	<i>tin-maq</i>	‘to be consoled’
n.	<i>yeŋil-maq</i>	‘to mistake’	o.	<i>eyt-maq</i>	‘to tell’

Conclusions

Most of the stem deviations appear when the stems combine with a vowel-initial suffix. It is therefore no exaggeration to say that the use of vowel-initial suffixes/allomorphs reveals the irregularities. A significant number of the irregularities are related to loan words from Arabic, Persian and Russian. Some

⁶⁰ See them in NECİP, E. N. *Yeni Uyghur Türkçesi Sözlüğü* [Dictionary of New Uyghur Turkic].

⁶¹ NECİP, E. N. *Yeni Uyghur Türkçesi Sözlüğü* [Dictionary of New Uyghur Turkic], pp. 465, 467.

of them imply the resistance of the old/original pronunciation in Arabic (and partly in Persian), whereas some others (the inflection and productive derivation of Arabic and Persian loanwords in Chagatay, the plural forms of some Russian loan nouns in Tatar and Khakas) can be explained in the framework of sociolinguistics, namely hypercorrection in a contact-induced environment. This shows that those languages have separate agglutinative strata for non-native words for which speakers apply NPUPA.⁶² Pleonasm in the 3rd person possessive declension is one of the reasons for post-pleonasm situations, i.e. NPUPA. As a semi-vowel, the palatal approximant /y/ leads to NPUPA in the possessive declension in some Turkic languages. The irregular declensions of *yâr* ‘beloved’ in Turkish also have a sociolinguistic basis, the emulation of Arabic poetic rhythm. The general deviations in Uyghur and Altay are the consequences of historical phonetic changes. Analogy appears to be another reason for some cases, e.g. the resistance of demonstrative pronoun in Chuvash and intervocalic /š/ in Tofa, lengthening in Turkish *umut* ‘hope’, the plural of *teg* ‘that’ in Chulyum, and the future form of *ayt-* ‘tell’ in Karachay-Balkar. Although there is a prominent tendency towards the regularization of paradigms, the inherited old forms in some Turkic languages (the Old Turkic dative in Tatar singular personal pronouns, the remnants of Old Turkic lexical allomorphy in the use of the aorist) still exist.

Abbreviations

1 – first person, 2 – second person, 3 – third person, ABL – ablative, ATTR – attributive, CONV – converb, DAT – dative, FUT – future, LOC – locative, NOM – nominative, P – person, PART – participle, PL – plural, POL – polite, POSS – possessive, PRESUM – presumptive, PST – past, SG – singular

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⁶² Cf. HENRY, C. An Optimality Theoretic Analysis of Vowel Harmony in Kazan Tatar. In *Proceedings of the LSA* No. 3/4, p. 8.

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