I. The š ~ l alternation

One of the most intriguing puzzles in the Kor. historical phonology is that MNKor. words whose PA etyma had a *l show š whereas their older, i.e. OKor. counterparts have, in the same position, a Chin. phonogram being "an orthographic device for writing s or š" (Miller 1991, p. 181; since the š pronunciation scarcely seems to be possible, we write š alone in what follows). If we were actually dealing with a phonetic change here, its notation would look somewhat surprising: PA *l₁ > OKor. š > MNKor. l. It is quite clear that such a zigzag development arouses astonishment and interest.

R. A. Miller tried to solve the problem by assuming a Tung. influence and a subsequent "re-Altaicization" of the OKor. pronunciation: "(...) the Old Korean sibilant s or š became l, reverting to a form similar in manner of articulation to the original Altaic *l₁ whence it derived. This postulated re-Altaicization must have been the result of contact with Tungusic languages to the north" (Miller 1991, p. 182). The solution does not, however, appear fully convincing and this is why we would like to present another interpretation of the data.

The starting point for us is the observation that we also have some confused notations in OTkc., e.g. the use of the <š> and <š> runes with the phonetic value of l. At the same time, everything indicates that the <š> rune was a late Tkc. innovation, as well as that it was created by adding a special diacritical mark to the <l>
It was the same mark which, some time earlier, had been used to create a new
<s> rune, based on <n>, i.e. <n> + diacritical mark = <s>. Hence it is fully legitimate
to say that the mark used in OTkc. was a palatalization mark, and thus <s> in
reality = l̥ = [l']. In other words: what we today read (in accordance with all the
non-Chuv. Tkc. languages) as s, was in actual fact read [l'] in the OTkc. time (for
further details see Stachowski 1999, passim), but see § 4, too.

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Now, our thesis is that the existence of OKor. ʃ in opposition to MNKor. l is in
reality more a graphic problem than a phonetic one, as well as that the problem can
be (successfully, as we hope) solved on the analogy of the situation in OTkc., as
sketched above.

An interesting fact that makes the analogy all the more possible is that the
OTkc. and the OKor. periods cover approximately the same space of time, viz. the
period from the 7th till the 10th century (neither Turkologists nor Koreanists are
fully agreed about dating the end of the period in question; for OTkc. cf. Poppe
1965, p. 67, § 1.344 [10th c.] vs. Róna-Tas 1991, p. 29, 30 [13th c.]; for OKor. see
Lee 1977, p. 65sq. [10th c.] vs. R. Kono, cited in Poppe 1965, p. 75 [the middle of
the 15th c.]; anyway, since nobody denies that the period of the 7th-10th c. belongs
to the OTkc. resp. OKor. epoch, the problem need concern us no further).

4

In the history of Altaistics two different phonetic values were supposed to be
represented by the letter *l which nowadays is the most usual transcriptional
symbol of the consonant out of which the non-Chuv. Tkc. ʃ developed. Whereas
G. J. Ramstedt reconstructed it as a palatal [l'], N. Poppe believed instead that it
rather was "ein spirantisches, stimmloses l (ähnlich dem ostjäkischen ʃ)"; spelled
also l' (Ramstedt 1957, p. 103; Poppe 1927, p. 110; VGAS 76). The analysis of the
OTkc. runic and phonological systems (ʃ [l'] written as <l'> + palatalization
mark) indicated toward Ramstedt's [l'] as the actual phonetic value of *l.

Now, the situation becomes somewhat more complex (however, for a moment
only) if we try to maintain that it was exactly the same sound which, in OKor.,
was written as ʃ. Really, it cannot readily be accepted that a nation decided to use <ʃ>
in order to write [l'].

But another proposal of phonetic sounding the PA l was Poppe's voiceless spirant [ʃ]. It occurs in Ost., strictly speaking in some Ost. dialects, whereas other
dialects have a usual l (or r) at this position (1onti 1988, p. 172).

Moreover, the Ost. [ʃ] has also a palatal variant: [ʃ'], which, to the best of
my knowledge, never mentionet by Poppe. And it is exactly this consonant that
seems to be the best solution to the problem. The phonetic scenario could thus be
as follows:

[4a] The Altaic proto-language had two l-type consonants: a l and a l', the
difference being of a double nature: spirantic and palatal pronunciation of l'.
II. The S ~ t alternation

A well-known fact is that the CTkc. s sometimes corresponds to Yak. t. A few scholars tried to formulate a rule explaining the phenomenon or at least rendering it predictable. The newest study of the problem is Tekin 1976 where also a survey of older statements is offered. However, Tekin’s solution cannot be accepted as final, either. The entire problem seems to be rather manifold and complex. Tekin’s model is in principle correct and it probably covers a large number of involved examples. Nevertheless, some formations require further inspection. The rule in question can be summarized as follows (Tckin 1976, p. 113):

1] PTkc. *-s(-) > Yak. -t(-)
2] PTkc. *-č, *-š, *-ž > Yak. -s

Some words and affixes, however, depart from the rule, in that they have final *ž or *š corresponding not to Yak. -s, but to Yak. -t instead. According to Tekin 1976, p. 113sq., “[t]hese exceptions can be explained easily and satisfactorily.” For instance, it is assumed that *ž in some cases had become voiceless and was then treated as *ṣ, i.e. changed > -t (e.g. CTkc. otut ‘thirty’ = Yak. ọtut id.) At first sight, the solution appears quite reasonable. We are, however, somewhat sceptical about the fact that the unexpected early devoicing of ź established by Tekin can always be brought into play whenever a Yak. word deviates from his own [1.2] rule.

Also examples for the medial -t< -*s- are not all of the same character because Tekin’s list contains both -t< -*s- and -t< -*č,- -š- words. In case of Yak. iti-tar- ‘to warm’ < *įšgär-, Yak. ytyar- ‘to lift, raise’ < *asgar-, Yak. sātuk ‘thimble’ < *jūgsūt (Tekin 1976, p. 111sq.), one has to reckon with the *śg- and the *šg- as well as the *s- assimilation (i.e. *įšg- > *įšg- > Yak. iti-tar-; *asgar- > *asgar- > Yak. ytyar-; *jūgsūt > *jūgtuk > Yak. sātuk) which distinguishes these words very much from examples like Yak. kūtak ‘water-rate; mole’ > *kūšar (ibid. 112). The conjecture about the influence of assimilatory tendencies is additionally supported by the Yak. verbal stem yttā- ‘to put pillows’ < *jastā- in which the consonant next to the *s- did not disappear in modern Yak.; see also [2.11] and § 3.

The more one deals with the problem, the more one is convinced that a few different rules have to be established in order to explain all of the S ~ t alternation (the symbolic S standing for s, z, š, č). Also in the present study no synthetic solution can be offered. Our only aim is to present a somewhat unusual model which can be applied first of all in case of the S ~ t alternation.

* In the meantime, an article by G. D. S. Anderson (On Proto-Yakut *č, “Ural-Altaische Jahrbücher”, Neue Folge 15 [1997/1998], p. 170-172) was also published, but it offers no deeper insight into the problem.

From what has been said so far it can be inferred that of all the Trkc. languages Yak. is the only one of which the S ~ t alternation is typical. In reality, however, quite the opposite is true. Since we are not going to analyse all aspects of the problem, we would like to confine ourselves to giving only some examples involving also languages other than Yak. Most examples concern the auslaut:

[2.1] Uyg. kāt ~ kād ‘end’ vs. Uyg. kas-rā ‘jenseits’ (Bang 1917, p. 7sq., fn. 3: Lewicki 1938, p. 5). – According to Bang (ibid.) the root was *kā ~ *ki, and thus: kāsār < *kā-sī-rā [possessive Directive] ‘zu seiner Rückseite’), kāt < *kā + nominal suffix -t (cf. Tk. al-t ‘lower part’, üs-t ‘upper part’), ar-t ‘hinder part, back’ and the deverbal Yak. bult ‘bag; Jagdbeute’ < bul-to find, gain, obtain), Practically, it would be possible to include this word under the rule we are going to propose for the S ~ t alternation (with the assumption of an early syncope: *kāsār > kāsrā, before *s > s), see § 4 below, but this would then leave CTkc. kūra ‘rückü’ unexplained, so that Bang’s etymology appears more reliable to us. – It would be very interesting to examine whether the root *kā ~ *ki ‘rear’ (see also Miller 1991, p. 197sq.) can be put together with *kō in PTkc. *kōt > Ott. got ‘bottom, backside; Hinten [vulg. ‘t’]; cf. Üzb. kät ‘end’; tail’) > *kētā > OYak. *kōdī > NYak. kōdō ‘dick (bäuchig)’ (in GJV 66, § 8.6b, *kōt was viewed as a PTkc. root; it would, however, be equally imaginable that *kōt is an old derivative [a plural formation?] < *kō). The vocative distinction between kāt ~ *ki on the one hand and *kō on the other still requires an explanation.

[2.2] Oyr. kimāt ‘hot weather, heat’ (Baskakov 1985, p. 172) = CTkc. kimās ‘sun; heat’. – According to Berta 1997, p. 27: < *kūm ‘sun’ + *ja’si’ta’s *shine, flash (?); heat (?), so that the correspondence with our rule appears quite possible; see § 5.


[2.5] Lobnor-Uyg. bot ‘grey’ = CTkc. box id. (ESTJa II 172).

Examples for an- and inlaut are less numerous:

[2.6] CTkc. ton ‘dress, article of clothing, pair of drawers’ = Yak. son ‘outer garment, coat’.


[2.8] CTkc. uši- ~ uši- ‘to freeze, be cold’ vs. Anat. utuuk ~ utūk ‘sensitive to cold’ (ESTJa I 644).

[2.9] Ott. -msy ~ -nty-rak, inferior intensification suffixes, as in kyzyλ-λmsy ~ kyzyλ-nty-rak ‘reddish’ (with the old Comparative suffix -ra).
In quite a few examples, the Yak. and the Dolg. possess both s and t variants (or else exclusively the s variant) which go back either to a s or to a t etymon:

**[2.10]** The Yak. intensifying reduplication suffix is -bys (not -ys [against GJa 159, § 250], e.g. Yak. tynny 'cold' > ty-bys-tynny 'very cold', kuranax 'dry' > ku-bus-kuranax 'quite dry'). – The same holds true for Dolg., but here, there are also -by variants: čů-bis-čáčkh 'perfectly white, snow-white' (Artem'ev 1992, p. 122) ~ čů-bi-čáčkh id. (DW 73) < čáčkh ~ čáčkh 'white'.

**[2.11]** Dolg. kurnapšę 'partsridge' (FM) < Russ. kurnapša id. – If our earlier conjecture about the -ik < -*sk- [< *-skg-] (as in Yak. iittir-, yyyar-, šītak in § 1; cf. also öskır- in § 3) is right, we may then think of a hypercorrect change of Russ. -ik-, perceived as resulting from the * -sk- > -*tk- assimilation, into the "original" (and hence "correct") -sk-. Uncertain, cf. Russ. dial. kurnapška id.

**[2.12]** Yak. uruš ~ uruš 'mercury, quicksilver' (Slepčov 1967, p. 110, 114) < Russ. rtuš id.

**[2.13]** Yak. tynači ~ tynači 'candle' (Slepčov 1967, p. 110) < Russ. sveča id.

**[2.14]** Yak. šappas 'west wind' = Dolg. šappat 'West' < Russ. zapad 'West'. The phenomenon of the Russ. s > Tkc. t change is attested in other Tkc. languages, too, although far more scarcely:

**[2.15]** Tof. ovjot 'oats' (Rassadin/Sibkeev 1990, p. 74) < Russ. ovęs id.

Strange as it may seem, the problem of the origin and the real nature of the S ~ t alternation has never been investigated at large. However, it is worth mentioning that at the beginning of this century, W. Bang assumed the S ~ t alternation already for the PTKc. period, so e.g. in case of the root reconstruction of Azerb. öskır-, Ott. öksır- 'to cough' = Kipc. öttir- id. = STkc. jöktür- ~ jöktür- id. (Bang 1919, p. 4, § 1b: "Neben *os scheint ein gleichwertiges *ot gestanden zu haben, das durch y- Prothese zu *ot werden konnte"); just in these examples, however, a usual assimilation *-sk- > -*tk- seems to be a simpler solution) or else in the event of Yak. nominalis suffix *-cyt < *-cy + poss. -si (Bang 1921, p. 13, § 28). The topic has never been thoroughly discussed, but the phenomenon itself has been observed by different scholars. E. V. Severtzjan, for instance, accepted it likewise in his PTKc. reconstructions, e.g. in assuming * *gaz- ~ * *gær- as the original root of Tkc. az- 'to lose one's way, get lost' (ESTJa I 95). In Miller/Naumann 1994, p. 77-79 the phenomenon is backdated into the PA epoch (cf. also Poppe 1927, p. 100: Kipc. tatymal 'bejahrter, erfahrener Mann' = Mos. dasu- 'sich gewöhnen').

Interestingly enough, Kor. has developed a morphophonological pattern that can be used as an explanatory model for Tkc. languages. In NKor. there exist numerous words in *t ~ *sV whose Old and Early MKor. counterparts have had *t alone; but also words with the original *s undergo the same alternation model (e.g. NKor. put ~ pusV 'writing brush' < Chin. piět [Miller 1992, p. 233, 234; Miller/Naumann 1994, p. 76; cf. also Ramstedt 1939, p. 7f.]; NKor. kät ~ kasV 'hat' [Ramstedt 1939, p. 25, § 57]; NKor. set ~ sesV 'three' and tasyt ~ tasysV 'five' [ibid. 55]). Moreover, the model applies also to recent loanwords like NKor. aut ~ ausV < Engl. out (Miller 1992, p. 233).

Remarkably, the same rule can, as it seems, be also applied to the Yak. *t ~ CTkc. *s alternation:

**[4.1]** */-s/- = */-t/* Yak. *t

**[4.2]** */-s/- + poss. suffix */i/- > */-s/- = */-s/- = CTkc. *s (cf. also Chuv. and Mo. *s*/ > *s/, Ramstedt 1957, p. 69).

Examples:

**[4.3a]** the Past Participle suffix */-mys/* > */-myt/* Yak. -by: as to *m > b, also this problem deserves more attention and a synthetic study; for our purpose, it is enough to say that the suffix initial Tkc. m = Yak. b = STkc. b ~ v- correspondence is regular and well-attested.

**[4.3b]** */-mys/* + 3.sg. possessive suffix */i/- > */-mys/- = */-mys/* = CTkc. *-myš/*.

**[4.4a]** */ulus/* > */ülut/* Yak. ulut 'people, nation'.

**[4.4b]** */ulus/* + 3.sg. possessive suffix */i/- > */ulus/- = */ulus/* = CTkc. uluš */id.; settlement, town'.

In both examples the added -i can be reasonably interpreted as the 3.sg. possessive suffix. This would at the same time explain, why Yak. *t often corresponds to Tkc. *s (not -s), viz. for the evolving of */-s/- = */-s/-, the lexicalization of the 3.sg. possessive formation of the given substantive was absolutely necessary which is, as everybody knows, a sporadic and irregular phenomenon.

Probably, the pronunciation */-mys/* was not yet totally obsolete in the OTkc. period. This seems to be suggested by records with the */-mys/* runic sequence. I myself thought until now that they should be read as */-mys/* or simply */-myš/*; in the latter case, the writing */-mys/* could be interpreted as historical spelling, invented originally for the pronunciation like */-mys/* or even */-mys/* (for this latter, the spelling */-mys/* seems, however, more realistic) and left without modifications after the real pronunciation had changed into */-mys/*. In the present situation I can only quote my earlier positive opinion of R. Giraud's conception: "Giraud IFT [= Giraud 1961] 47f. hat vermutlich denkbar genau, wenn er in bezug auf die Schreibung */-mys/* von einer 'graphic traditionellen sprich't (Stachowski 1998, § 4). One cannot help admiring Giraud's knowledge and intuition.

In the light of what has been said until now it becomes still more understandable why it was precisely the */s/* rune that was used to write this suffix and that, against the general opinion, its use has in reality 'nichts mit der Qualität des vorangehenden Vokals zu tun' (ibid.).
Now, let us return to the [2.2] example: Oyr. *künät 'hot weather' < *kün jaś(y).
The use of lack of the 3.sg. possessive suffix *-i ~ *-y seems to have been subject to
different rules in different periods. Be that as it may, its use was in any case
the PA reconstruct of the word for 'shine, flash').

Another problem is of phonetic nature. The comparison of *jāmīš with its Hung.
reflex gyumöölcs points to a proto-form like *jāmīš (with *'J' > Hung. lő; for older
so that we have to distinguish between:

- [8.1] the participle suffix *-myš (Yak. -byt) ~ *-mys-i (CTke. -myš)

Above, two parallels between Kor. and Tke. were presented. However, both
languages seem to show some other similarities, as well. An example which still
needs further investigation is the NKor. initial affricate *'d- (or *'l-?, see Ramstedt
1939, p. 12, § 28) which can perhaps be compared with CTke. word pairs like CTke.
ač 'what?' ~ *to (in *to + intensifier *ok > *tök > Yak. tux id.; for another expla-
nation for ná and *to see Ramstedt 1922-23, p. 34, repeated in Ramstedt 1952,
p. 77, but omitted in VGAS 32 s.v. jayun) that suggest a PA *'t- or *'d- (this would
thus be a good parallel to *'b- > CTke. m- ~ b-, see Ramstedt 1957, p. 74). To
investigate all Kor.-Tke. parallels of this sort (of course, under consideration of their
varying importance because e.g. the resemblance of the s ~ h alternation in Kor.
and in Yak. appears to be a mere coincidence) seems to be one of the most
interesting tasks in Altastic researches nowadays.

Abbreviations
Anat. = Anatolian; Azerb. = Azerbaijani; Bulg. = Bulgar-Turkic; Chin. = Chinese;
Chuv. = Chuvash; CTke. = Common Turkic [= non-Chuvash Turkic]; dial. = dia-
lectal; Dolg. = Dolgan; Eng. = English; Hung. = Hungarian; Khaz. = Khazar;
Kipč. = Kipchak; Kor. = Korean; MKor. = Middle Korean; MNKor. = Middle
and New Korean; Mo. = Mongolian; MTke. = Middle Turkic; NKor. = New Kor-
ian; NYak. = New Yakut; OKor. = Old Korean; Ost. = Ostyak; OTke. = Old
Turkic; Ott. = Ottoman - Turkish; OYak. = Old Yakut; Oyr. = Oyrort; PA = Proto-
Altaic; PTKc. = Proto-Turkish; Russ. = Russian; STke. = Siberian Turkic; Tke. =
Turkic; Tof. = Tofalar; Tung. = Tungusic; Uzb. = Uzbek; Uyg. = Uyghur; Yak. =
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