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✓ TURKIC LOANWORDS IN MONGOL, I: THE TREATMENT OF NON-INITIAL S, Z, Š, Č

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Turkic loanwords in Mongol constitute the largest foreign component in the Mongol lexicon, at once testifying to the intensity of Turkic-Mongol contacts and to the importance of the linguistic study of these contacts. Contributions to the subject are found throughout the Altaistic literature, and range from lists of loanwords to the presentation of principled means for their discovery.¹ It is a marker of the complexity of the problem that it is not always certain which Turkic words are obviously borrowed into Mongol, and which Turkic words might be said to belong to that part of the shared vocabulary considered by some scholars to be inherited from Proto-Altaic. This uncertainty may be attributed to the fact that both the inherited and the borrowed words common to any group of languages will display regular sound correspondences.

As a preliminary step toward the clarification of this problem, it may be useful to distinguish within the shared Turkic-Mongol vocabulary two kinds of correspondence:

¹ B. Ja. Vladimircov, *Turetskie elementy v mongol'skom jazyke*, *Zapiski vostočnago otdelenija Imperatorskago russkago arkheologičeskago obščestva* XX, 1910, pp. 153-184; N. Poppe, *The Turkic Loan Words in Middle Mongolian*, *CAJ* I, 1955, pp. 36-42; G. Clauson, *The Earliest Turkish Loan Words in Mongolian*, *CAJ* IV, 1958, pp. 174-187; id., *The Turkish Elements in 14th Century Mongolian*, *CAJ* V, 1960, pp. 301-316; id., *Turkish and Mongolian Studies*, London 1962, pp. 222-247; V. I. Rassadin, *O tjurkizmakh v burjatskom jazyke*, *K izučeniju burjatskogo jazyka*, Ulan-Ude 1969, pp. 129-134; T. Gülensoy, *Moğolların Gizli Tarihi'ndeki Türkçe Kelimeler Üzerine Bir Deneme*, *Türkoloji Dergisi* V, 1975, pp. 93-135; also: N. Poppe, *Einige Lautgesetze und ihre Bedeutung zur Frage der mongolisch-türkischen Sprachbeziehungen*, *UJ* XXX, 1958, pp. 93-97; G. Kara, *Le dictionnaire étymologique et la langue mongole*, *AOH* XVIII, 1965, pp. 11-16; A. Róna-Tas, *Obščee nasledie ili zaimstvovanija ? (K probleme rodstva altajskikh jazykov)*, *Voprosy jazykoznanija* 1974, 2, pp. 31-45; G. Doerfer, *TMEN I-IV passim*, but especially IV 325-336.

primary correspondences, or those which are said to obtain between reflexes of Proto-Altaic etyma in the Ramstedt-Poppe reconstruction;²

secondary correspondences, or those which do not conform to the rules of primary correspondences and so must be otherwise accounted for, most commonly as borrowings.

As an illustration, the Ramstedt-Poppe reconstruction of PA includes the following set of primary correspondences:³

PA TŪ MO

*d- y- d- *yel* ~ *del* "mane", *yul-* "to take back, ransom" ~ *doli-* "to exchange"

*ʃ- y- ʃ- *yaz-* ~ *ʃiru-* "to write", *yul-* ~ *ʃoli-* "to ransom", *yāš* "green, fresh" ~ *ʃalayun* "young"

*n- y- ni- *yāz* "spring" ~ *nirai* "newborn, fresh, young (of plants)", *yāš* ~ *niḡa* "infant, tender"

Rigorously, as a consequence of these rules, at least one member of the Mo doublets *doli-/ʃoli-* and *niḡa/ʃalayun* is necessarily a borrowing from Tū *yul-* and *yāš*, because there can be only one primary correspondence.

The present paper deals with the assimilation of Turkic non-initial *s*, *z*, *š*, *č*, to the Mongol sound system. For the most part, the determination of which Mongol words are borrowed from Turkic is straightforward, because they deviate from the following set of primary correspondences in the Ramstedt-Poppe reconstruction of PA:⁴

PA TŪ MO

*s s s *qarsaq* ~ *kirsa* "steppe fox", *qis-* "to squeeze, press" ~ *kisa-* "to hamper, impede"

² By this is meant that phonological reconstruction formulated by Ramstedt, but refined and presented by Poppe in VGAS.

³ VGAS 22-23, 27-28, 36-39. Usually included in this tableau is PA *y- → Tū *y-* ~ Mo *y-*, but the examples given for this correspondence in VGAS 31-32 are not convincing: Mo *yada-* "to be unable" ≠ Tū *yaday* "on foot" (cf. TMEN I 551); Mo *imayan* "goat" ~ Tū *ımya* "wild mountain goat" (but there are no forms with *y-*, cf. ED 158); Mo *ırıua*, Khal *yoro* "omen" ≠ Turkish *yorum* "interpretation of an omen or dream" (Khal *yo-* < *i-*, cf. IMCS 38-40; Tū *yorum/yorma* < *yor-/yör-* "to explain, interpret dreams", cf. ED 955; G. Doorfer, Zur Schreibung des auslautenden o der mongolischen Schriftsprache, OAJ X, 1965, pp. 55-60); Mo *yayara-* "to hurry" < **yapara-* ≠ Tū *yapraq* "quick" (the latter is a ghost word, misread by Radloff in *Qutadyu Biliḡ* 4693 for *tabraq/tavraq* "quick", cf. ED 443). Valid Turkic-Mongol comparisons with *y-* are all loanwords from one language to the other; e.g., Mo *yosun* "custom" → MTū *yosun* id., Tū *yértinčü* "the universe, world" → Mo *yirtinčü* id., etc.

⁴ VGAS 64-65, 80-82, 76-78, 62-63.

*r ₁	z	r	azy "large tooth" ~ araya "molar", bōz ~ boro "grey"
*l ₁	δ	l	kōlek "young animal" ~ gōlige "puppy", tād ~ tōlayun "stone"
*č	č	č	qōč ~ quča "ram", bōč ~ bōčū(n) "strength", sač ~ saču-/čaču- "to scatter," *suč- (cf. sučul- "to strip off, take off") ~ čuča- "to undo, untwine", sč- ~ čiči- "to defecate" ¹ [further on *č, see below]

It is not my purpose here to argue whether these primary correspondences may also reflect (Bulghar) Turkic borrowings into Mongol, but rather to confirm that deviations from these correspondences are manifestly borrowings and to provide a register of such borrowings. To forestall the observation that much of this ground has already been covered, it should be pointed out that the pedestrian collection of this data has revealed a problem with the Mongol correspondences to Turkic *č* whose solution reverberates beyond the immediate issue of phonetic assimilation into the realm of the standard reconstruction of Proto-Mongol. Indeed, the solution partially rests upon a consideration of the material dealing with the assimilation of *s*, *z*, *ž*, *č*, which justifies its rehearsal here.

The Treatment of Turkic s

The voiceless fricative *s* is an integral part of the phonological systems of both Turkic and Mongol. However, Turkic syllabic structure permits the consonant cluster *rs*, which is found in *arslan* "lion", *bars* "leopard", *borsmuq* "badger", *kers* "rhinoceros", *qars*

¹ MA čiči- "to defecate, have diarrhea", WM čičaya "diarrhea"; VGAS 63 čiči- < *čiči- is false (based on Tū tūyan "mouse", a taboo form of stūyan "mouse (i.e., shitter)" < sč-), rather it is here a case of Mo s-č > č-č, as saču- > čaču-, soči- > čōči-, selen > čelen. From the group of examples which attest this correspondence, we must exclude: VGAS 62 Mo buča- "to return, go back" ≠ Tū bučyaq "angle, corner", since the latter is a late form of bučyaq < bič- "to cut" (ED 294); VGAS 63 Mo ača "fork, bifurcation" (nominal) ≠ Tū aç- "to open" (verbal); VGAS 63 učiḡ "piece or end of thread, pieces of hay or grass left by feeding animals" ≠ Tū tč "extremity, end, tip", since Mo učiḡ means "piece or remains of something" not "end, tip" (TMEN II 135-136); unclear on semantic grounds are: Mo quči- "to cover, cover oneself with a blanket" ? ≠ Tū quč- "to embrace, take in one's arms", Mo ččine "secret, private, out of sight" ? ≠ Tū tč "inside, interior".

"a kind of garment",⁸ *ters* "false", but which is unknown in purely Mongol words.⁹ Consequently, the Mongol counterparts to these words are clearly borrowings, and are either adopted without change (literary loans) or undergo epenthesis: *arslan/arsalan* "lion", *bars/barus* "tiger", *kers/kiris* "rhinoceros, unicorn", *ters* "heretical".

One may also establish, on other grounds, that Turkic loans with *s* are adopted as such in Mongol:

basa "again, also, too" ← Tü *basa* id. < *bas*- "to press, oppress"

(ED 371; note primary *basu*- "to condemn" ~ *bas*-)

esen "healthy" ← Tü *esen* id. ? ← Persian *āsān* (TMEN II 58)

keseg "part, piece" ← Tü *kesek* id. < *kes*- "to cut"

osal/osol "mishap (due to negligence)" ← Tü *osal* "negligent" <

**osa*-, cf. Tü *osan*- "to be negligent"

suvsar "marten" ← Tü *suvsar* id. (TMEN III 297-298)

tayus/toyus "peacock" ← Tü *taus* id. ← Pers-Arab *ṭāūs*

The Treatment of Turkic z

The voiced fricative *z* is known only in Turkic, where it occurs in all but initial positions. Therefore, Turkic loans with *z* must be assimilated to Mongol sound structure through sound substitution. In final position, *z* is substituted by Mongol *s*:⁶

HI *arbus* "watermelon" ← Tü *qarbus* id.⁷

boyos "embryo; pregnant" ← Tü *boyuz* "throat; pregnant"

bös "cotton" ← Tü *böz* id.

ikes "caul, amnion; placenta" ← Tü *ékiz* "twins"

jes/fed "copper" ← Tü *yez* "copper, brass"

kebis "rug, carpet" ← Tü *kebiz/keviz* id.

odos "wild yak, buffalo" ← Tü *gotuz* "yak"¹⁰

tenggis "lake, sea" ← Tü *tengiz* id.

toos "birch bark" ← Tü *töz* id.

There is one exception to this treatment that defies explanation: Mo *semefi* "fat around the intestines" ← Tü *semiz* "fat" (as VGAS 29).

⁶ See: J. Hamilton-N. Beldiceanu, Recherches autour de *qars*, nom d'une étoffe de poil, *Bulletin of the School of Oriental and African Studies* XXXI, 1968, pp. 330-346.

⁷ Cf. Kara, Le dictionnaire étymologique, p. 14, n. 39.

⁸ Cf. Poppe, Einige Lautgesetze, p. 94; Kara, *Op.cit.*, p. 12.

⁹ See: L. V. Clark, Mongol Elements in Old Turkic?, *JStO* LXXV, 1977, Nr. 64.

¹⁰ *Ibid.*

In intervocalic position, Turkic *z* is regularly assimilated in Mongol to both *s* and *ʃ*:¹¹

dasi/taʃi "skewbald, motley" ← Tü *tazi* "greyhound"¹²

sezi/seʃi "doubt, suspicion" ← Tü *etzi* id.

süsü/süʃü "religious worship, faith; piety, reverence" ← Tü *süzük* "pure" (cf. *süzük kirtgün* "pure belief", and the analogy of Mo *qılınca* "sin" ← Tü *qılınč* "deed", but *ayy qılınč* "evil deed, sin")

šasin/šaʃin "religion, teaching" ← Tü *šazin* "discipline" ← Skt *śāsana* (ATG 365; DTS 520, 521)

üzüm/üʃüm "raisin, grape" ← Tü *üzüm* id.

This dual substitution has functioned in a most interesting case to maintain a semantic distinction in the originally Turkic word:

kesig "turn" ← Tü *kezi* "turn; fever"

keʃig/kiʃig "epidemic, pestilence" ← Tü *kezi* "fever; turn"

In a few cases, Mongol sources attest only the *s* or only the *ʃ* substitution:

ašaman "monorchid, castrated" ← Tü *azman* "castrated animal"¹³

boʃo "dregs" ← Tü *boza* "a kind of beer" (TMEN II 337-341)

Mongol has also borrowed a few cultural words which contained in Old Turkic the foreign sound *ž*, indicative of a Sogdian origin. In these cases, Mongol assimilates Turkic *ž* as though it were *z*:

küʃi "incense" ← Tü *küzi* id. (ED 695)

üzüg/üʃüg "letter, writing" ← Tü *üzük/üzek* "written character, letter, syllable" (ED 24; TMEN IV 419-420)¹⁴

¹¹ Cf. L. Ligeti, Sur quelques transcriptions sino-ouigoures des Yuan, *UJF* XXXIII, 1961, p. 243; id., Transcriptions chinoises de trois noms propres dans l'Histoire Secrète des Mongols, *Collectanea Mongolica. Festschrift für Prof. Dr. Rintchen*, ed. W. Heissig, Wiesbaden 1966, p. 130; Kara, Le dictionnaire étymologique, p. 13; also note the older treatment of Vladimirtsov, *SGMPJ* 398-399.

¹² For the Mongol, cf. SH *dasi torqan* "gold-embroidered silk cloth", WM *taʃi torya* "a kind of two-colored damask or silk"; cf. Kara, Le dictionnaire étymologique, p. 13, n. 37; id., Les mots mongols dans une liste de marchandises chez Gmelin (1738), *AOH* XIII, 1961, pp. 181-182, n. 16. For the Turkic, cf. VEW 467; P. Pelliot, *Notes on Marco Polo*, I, Paris 1959, p. 45: "As a matter of fact, *tazi*, with the specific meaning of 'Arab', still occurs in Turkish literature as late as the beginning of the 14th cent. (Radloff III 930). As *tazi* or *tazi*, it survives now in Turkish only as the name of the 'greyhound', literally 'the Arabian [dog]'."

¹³ Cf. Clark, *Mongol Elements in Old Turkic*?, Nr. 12.

¹⁴ See: A. Róna-Tas, Some Notes on the Terminology of Mongolian Writing, *AOH* XVIII, 1966, pp. 133-134.

Finally, three Turkic loanwords do not, at first sight, conform to these rules of assimilation:

ačuy "tooth (in Uyghur script)" ← *Tü ačuy* "large tooth"

bilüčüg/bilisug/bilüfug (many variants) "finger ring" ← *Tü bilezük*
id. (ED 345; TMEN II 313-315)¹⁵

SH *kičilbaš/kičilbaš* "name of lake" ← *Tü qızıl* "red" + *baš*
"head"

As already pointed out by Ligeti, such spellings with -č- are based on the polyphony of the letter č: ʃ in the Pre-Classical Uyghur script.¹⁶ Thus, we should read *ačuy* = *aʃuy*, *bilüčüg* = *bilüʃüg*, *kičilbaš* = *kiʃilbaš*, and attach these cases, too, to the normal assimilation of -z- to -s-/ʃ-.

The Treatment of Turkic š

Turkic permits š in all but initial positions, whereas in Mongol š is of secondary origin from si (> šī/šV). Thus, Turkic loanwords with final š are assimilated to Mongol s:¹⁷

arbiš "knowledge" ← *Tü arbiš/arviš* "magic charm, spell"

ʃemis/ʃimis "fruit" ← *Tü yemiš* id.

qas "jasper, jade" ← *Tü qaš* id.

qos/qoos/qođ "pair" ← *Tü qoš* id.

los "to receive, encounter" ← *Tü tuš* "to meet"

ulus "people, nation" ← *Tü uluš* id.

Within the word, Mongol regularly adopts Turkic š, particularly in the case of šī, which is conventionally transcribed as Mongol si, or in exclusively literary loans:

eši qatun "principal or first wife of a khan" ← *Tü eši* "lady"

körsi "neighbor" ← *Tü körši* id.

kösige "curtain, blind, canopy" ← *Tü köšik* "screen, covering"

qarši "opposed; obstacle" ← *Tü qarşı* "opposite"

qarši "palace" ← *Tü qarşı* id. ← Tokh (ED 664)

yasil "buckthorn" ← *Tü yašıl* "green (plant)"

bošuy "decree of heaven, fate, command, instruction, permission"

← *Tü bošuy* "permission"

¹⁵ See: L. Ligeti, Noms turcs pour 'fers; bracelet; bague' dans les langues slaves et dans le hongrois, *Studia Slavica* XII, 1966, pp. 249-258.

¹⁶ Cf. Ligeti, Transcriptions chinoises de trois noms propres, pp. 128-130.

¹⁷ Cf. Poppe, Einige Lautgesetze, p. 95; Kara, Le dictionnaire étymologique, p. 12.

In the case of Turkic *ša*, Mongol either adopts this sequence or assimilates it as *si* (= *ši*):

SH *alaša* "a kind of horse" ← Tü *alaša* id.¹⁸

qašang/qašing "slow, lazy" ← Tü *qašang* id.

tuša-/tusi- "to hobble" ← Tü *tuša-* id.

yangsi- "to prattle" ← Tü *yangša-* id.

Indeed, Turkic syllable final *š* may also undergo this assimilation to Mongol *si* (= *ši*), especially in HI:

bašilay "a kind of cheese" ← Tü *bašlay* id.¹⁹

qošiliy "tent" ← Tü *qoš* "hut, camp" + DNN + *lq*²⁰

HI *šemiši* "fruit" ← Tü *yémiš* id.

HI *qaši* "jade" ← Tü *qaš* id.

HI *qoši* "pair" ← Tü *qoš* id.

There are two Turkic loanwords with *š* which have been assimilated to Mongol *s*:

asara- "to take care of, raise" ← Tü *aša-* "to eat"²¹

asuru "very, extremely" ← Tü *ašru* id.

The first example is particularly instructive, inasmuch as it has been subjected to a derivational process that is peculiarly Mongol (*-ra-*), which indicates that it was borrowed at an older stage of the Turkic-Mongol contacts, before the secondary development of Mongol *š* from the sequence *si*. Thus, one may conclude that the regular Mongol assimilation of Turkic *š* is *s*, that *ši* entered Mongol as *si* and subsequently developed to *ši*, and that *š* was also retained as Mongol *š* (indicated as *si* = *ši*) in recent literary loans.

The Treatment of Turkic š

Turkic has the affricate *č* in all positions of the word, whereas Mongol does not permit this sound in syllable or word final position.

¹⁸ Cf. Poppe, *Turkic Loan Words in Middle Mongolian*, p. 38; *contra* Doerfer, TMEN IV 262-263, where the word is viewed as originally Mongol; also cf. his remarks in *Orientalistische Literaturzeitung* LXVI, 1971, c. 442.

¹⁹ The Mongol forms are cited by L. Ligeti, *Les voyelles longues en Moghol*, AOH XVII, 1964, p. 21; also cf. Clauson, *Turkish and Mongolian Studies*, p. 226; VEWT 74.

²⁰ Cf. Poppe, *Turkic Loan Words in Middle Mongolian*, p. 41; E. Hovdhagen, *The Mongolian Suffix -lig and its Turkic Origin*, *Researches in Altaic Languages*, ed. L. Ligeti, Budapest 1975, p. 72.

²¹ See: A. Róna-Tas, *The Altaic Theory and the History of a Middle Mongolian Loan Word in Chuvash*, *Researches in Altaic Languages*, ed. L. Ligeti, Budapest 1975, pp. 201-211.

Thus, in intervocalic position, Turkic *ɛ* is adopted directly by Mongol:

baɕay/maɕay "fast" ← Tü *baɕay* id. < *baɕa*- "to fast" ← Sogdian (ATG 326; DTS 76)

beɕin/meɕin "ape" ← Tü *béin* id. ← Indo-European (ED 295; TMEN II 382-383)

HI *güčük* "puppy" ← Tü *kütük* id.

kiči/kiši "mustard" ← Tü *qıçı* id. (cultural word)

laɕin/naɕin "falcon" ← Tü *laɕin* id. (TMEN IV 11-14)

vaɕır/otır "thunderbolt, diamond" ← Tü *vaɕır* id. ← Skt *vajra* (ATG 380; DTS 631)²²

At the beginning of non-root syllables, following a consonant, Turkic *ɛ* has a dual reflection in Mongol: it remains after a sonant (*m*, *n*, *l*, *r*), but becomes *ɛ* (*si*) after other consonants:

burɕay/buyurɕay "beans, peas" ← Tü *burɕaq* id. (cultural word)

elči "messenger, ambassador" ← Tü *élči* id. < *él* "realm"

emči "physician" ← Tü *emči* id. < *em* "remedy"

yirtinčü "the universe, world" ← Tü *yértinčü* id. (ED 961)

ebši "female of a big bear" ← Tü *ebči* "housewife, wife, woman" < *eb* "house" + AGENT + *či*

ebšigis "female sable" ← Tü *ebči* "woman" + *kiš* "sable" (cf. *erkiš* "male sable" ← Tü *er* "man" + *kiš*)

kögsin "old, old man, old woman" ← Tü *köktin* "bluish, grey-beard" < *kölk* "blue"

Turkic final *ɛ* may be assimilated by Mongol in several ways. The consonant cluster *nɛ* is assimilated as *nɛV* to conform to Mongol syllabic structure:

kilince/PC qilinea "sin" ← Tü *qiline* "deed" (cf. *ayıy qiline* "evil deed, sin") < *qıl*- "to do"

simnanča/simnaba/sibayanča/čibayanča "nun" ← Tü *šimnanč* id. ← Sogdian *šmn'nč* ← Skt *śramaneri* (ATG 365; DTS 524)

ubasanča "lay woman" ← Tü *upasanč* id. ← Sogdian *'wp's'nč* ← Skt *upāsikā* (ATG 378; DTS 613)

kenje "child born to old parents, weak child" ← Tü *kenč* "young"²³

²² We can probably attach to this group, despite the absence of sure criteria, the following: Mo *soči-/čöči*- "to start in alarm" ← Tü *suči*- "to move to one side, to shy" (ED 795); *uyuča* "sacrum, rump" ← Tü *uča* "back, rump" (TMEN II 136-138); SH *alačuq* "tent, hut" ← Tü *alačuq* id. (ED 129; TMEN II 97-102; Poppe, Turkic Loan Words in Middle Mongolian, p. 38).

²³ There are two examples which exhibit both the primary (*-č ~ -čV*) and the secondary (*-Čč ~ -ČčV*) correspondences: Mo *qurča* "sharp, acute" ? ~

Apart from these rather transparent cases of assimilation of Turkic *č*, there exists a body of examples that have received special attention in Mongolistics, to the extent that they merit a separate treatment here.

*Proto-Mongol *č?*

We have seen that Turkic final *č* may correspond to Mongol *čV* on both the primary (as *quča* "ram") and the secondary (as *qilinča* "sin") levels. But then, how are we to account for cases as *Tü öč* ~ *Mo ös* "revenge"? In the standard Mongolistic and Altaistic works of Ramstedt, Vladimirtsov and Poppe, this and connected examples are said to reflect a primary correspondence, in the sense that Mongol final *s* can develop from Proto-Mongol **č* which itself reflects PA **č*. Ramstedt, as we would expect, was the first to state the problem:²⁴

„Hier ist die Entwicklung etwas dunkel, aber es sieht aus, als hätte sich das Klusilelement im *č(tš)* sehr früh (in vormongolischer Zeit?) geschwächt. Im Wortinneren findet sich, wenigstens in der ersten Silbe, *č*, im Auslaut *s* in einsilbigen Wörtern und *s* od. *d* (*D*) in mehrsilbigen. Z.B. *tü. öč* 'Feindschaft, Rache', *jak. ös* ~ *mo. ös* id., *ösiŋ* id. (kalm. *ös, öšön, burjNU. öt, öhē* < *ös, ös(ü)ge* / *tü. köč-* 'übersiedeln' ~ *mo. kösiŋ* 'Lastkarawane, Baggage und Lasttiere', wo wahrsch. **köčŋ* > *köšŋ* vorliegt, woraus kh. *xüššaga*, kalm. *köšk*²⁵; vgl. r. *koševat* / *tü. alt. äčkä* 'Ziege', ög. krm. kar. *äčki*, kir. *ečki* ~ *mo. esiŋ* 'Zicklein' (o: *ešge*), kh. *eššga*, kalm. *iška* / uig. (Turfan MSS.) *mogoč* 'die Magier' = (mo.) kh. *mäs*, kalm. *mäs* 'Riesen (in den Märchen)' / *tü. ökčä* 'Ferse, Absatz, Hacken' ~? *mo. ösgei, öskei*, kh. *üsGä*, kalm. *öskē* id. [Richtiger ist vielleicht *ökčä* von *ök* 'Zusatz, Vermehrung' abzuleiten und *mo. ösgei* mit dem V. *ös-* 'wachsen' zu verbinden] / AΦM. *gički-* 'treten, gegen die Erde stemmen, gehen' ~ kh. *Giš-Gi-* id. (kalm. *iški-* id.) könnte ein **gič-*, **gič-* voraussetzen,

? ← *Tü qurč* "tough, hard", *Mo kegürfigene* "pigeon, dove" ? ~ ? ← *Tü kögürčgün* id. The latter is especially problematic, because of *-j/-č-*, but probably *kegürfigene* is contaminated with Oirat *kögölfigene*, Kalm *kögldžigene*, and the original form was closer to HI *kökörčigen*; for the Mongol forms, cf. L. Ligeti, *Le lexique mongol de Kirakos de Gandzak*, *AOH* XVIII, 1965, pp. 285-286.

²⁴ G. J. Ramstedt, *Zur mongolisch-türkischen Lautgeschichte* (I), *Keleti Szemle* XV, 1914-1915, p. 139.

ist aber in vieler Hinsicht unklar (vgl. kh. *GüŋGal*- neben *üŋkal*-, burj. *itkel*-, *itxel*-, kalm. *ışkel*- 'einen Fußtritt geben' und ma. *feskel*-id.) / mo. *möči*- 'untersuchen' (< **mörči*- zu *mör* 'Spur') kh. *müŋki*-, kalm. *möŋk*-id.²⁵

In his comparative grammar, Vladimirtsov writes (SGMPJa 376-377):

"Very early, probably still in the Common Mongol era, in a small number of words, *s* ~ *š* developed from **č*, which stood at the end of a word. In Written Mongol, the following is observed: *s* < **č* at the end of a word, but Written Mongol *š* ~ *s* < **č* within the word, e.g.:

WM *ša*, *šaiyen*, Bait *šš* 'hatred, vengeance' < **šš*; cf. Tü: Uygh, Chagh, Alt *šš*, Osm *šš*, Kir *šš* id.;

WM *köske* > Khal *xosxö* 'luggage, baggage' < **köŋke*; cf. Tü: Uygh, Chagh, Alt *köč*- 'to nomadize, to migrate'; cf. Southern Mongol: Jastu, Üjüm *xosxö* 'cart, wagon, caravan';

WM *iššiq*, Bait *iškē* 'kid goat' < **išge* < **ičge*; cf. Tü: Alt *eŋke*, Krym *eški*, Uygh *ečkü* 'goat';

WM *giški*- > Khal *gišxi*- 'to step on, trample' < **gički*-, cf. Arab Phil. *gičkt*-id.; in WM the form *gički*-id. is sporadically encountered;

Old WM *kalbaravró(a)* (< < Skt *kalpavṛkṣa*) > Old WM, WM *kalbaravaras* ~ *kalbaravars* 'a tree that satisfies all one's desires', cf. PP *gal-ba-va-raš* id.;

Khal *mūs* 'giant, monster (in stories)', Derbet-Astrakhan *mūs* id. < **muyus* < **muyuč*; cf. Tü: Uygh *moyuč* 'Magi';

Khal *yagšis* < WM *yayšas/yayčis* < < Skt *yakṣa* 'mythological being connected with Kuvera, the god of wealth, a family of gnomes in Indian mythology'."

Before we continue, it must be said that the fifth and seventh examples cannot serve as evidence for Mo **č*, since the Sanskrit forms have *š* (= *ś*) and not *č* and, in any case, there can be no question of Sanskrit borrowings into an early stage of Mongol such that they would undergo later sound changes peculiar to Mongol. The sixth etymology, also proposed by Ramstedt,²⁶ is manifestly

²⁵ Some of the forms and reconstructions of Ramstedt cannot be retained: *šš(ü)ge* and *kösigen* are, so far as I can determine, ghost words; *ššgei* cannot be connected to *ša*-; *möči*- < **mörči*- is unnecessary, since the forms *möči*-, *mör*-, *möŋki*- indicate a root **mō*-.

²⁶ Above, and *Kalmückisches Wörterbuch*, Helsinki 1935, p. 269: *mūs* "a kind of ogre with supernatural powers; the Magi" [*muyus*; Uygh *mogoč*, Old Iranian *moghū*, *mōghu* "Magi", Arabic, Osman *māfus*].

false. The cited Uyghur word *moyot* "Magi", which occurs in Manichean and Nestorian texts, is a borrowing from Iranian.²⁷ Under no circumstances could *moyot* in these religious texts have a monstrous or a supernatural connotation, nor can one easily imagine that *moyot* "Magi", used as a technical term in a translation literature of the IX-X cc., somehow went underground only to emerge as *mūs* "monster" in a few Mongol dialects a millenium later. In fact, the history of *mūs* may be accounted for in a different manner. The original form of *mūs* is not *moyot* but *Mo mayus* "evil ones", which is a plural formation in *+s* from *mayu* "bad, evil", and first occurs in the 1312 Commentary to the *Bodhicāryavatāra*, 158a5 *dakinis mayus terigūten nigūlesküi sedkilten boltuyai* "Let the [demons] such as the *dakinis* (Skt *dākinī*) and *mayus* ("evil ones") be ones having thoughts which are compassionate".²⁸ Later on in its history, *mayus* underwent semantic contamination with the fabulous *mangrus* "many-headed monster" of Mongol folklore.²⁹

Therefore, the last three examples of Vladimirtsov must be discarded and, indeed, were omitted by Poppe from his treatment of this problem in his comparative grammar:

"The final **d* of a syllable or word alternated with **s* in Ancient Mongolian. This alternation reflects the final **č*:

Mo. *ded* ~ *des* 'the following, the next', Urd. *ded*, Kh. *ded* ~ *des*, Kalm. *ded* id.

Mo. *nayad-* ~ *nayas-* 'to play', MMo. (Mu.) *nādu-*, Dag. *nāda-*, Mong. *nādi-*, Urd. *nād-*, Kh. *nād-* ~ *nās-*, Bur. *nāda-*, Kalm. *nād-id*.

Mo. *eske-* < **ečke-* 'to cut', MMo. (SH) *edke-* id. ~ (Mu.) *hečke-*, Mong. *dige-*, Urd. *eske-*, Kh. *esxə-* id., Mog. *etqānā* 'he cuts'." (IMCS 109)

"The final **č* of a syllable or a word long ago developed into *d(t)* ~ *s*, but there are traces of **č* in Middle Mongolian:

Mo. *eske-* < **ečke-* 'to cut', MMo. (SH, H) *edke-* ~ (Mu.) *hečke-* id., Mog. *etqānā* 'he cuts', Mong. *dige-*, Urd. *eske-*, Kh. *esxə-* 'to cut'.

²⁷ *Uigurica* I 5-10 (T II B 29) is a Nestorian text that deals with the "Adoration of the Magi"; *Manichaica* III 22v4 *arty turuy moyot nomin urd*: "he established the pure doctrine of the Magi". For the Iranian word, cf. H. W. Bailey, Madu, A Contribution to the History of Wine, *Silver Jubilee Volume*, Kyoto 1954, p. 5; DTS 346.

²⁸ F. W. Cleaves, The Bodistw a čari-a awatur-un tayilbur by Čosgi Odsir, *Harvard Journal of Asiatic Studies* XVII, 1954, pp. 45, 75, 99 (n. 102).

²⁹ See: L. Lörincz, Die Mangus-Schilderung in der mongolischen Volksliteratur, *Mongolian Studies*, ed. L. Ligeti, Budapest 1970, pp. 309-340.

Mo. *ös* 'hatred' = Turk. *öš* id." (IMCS 113)

"The consonant *s before the syllable *ki: Mo. *š*, MMo. *š* (in cases of *s < *č Mu. has č), Dag. *r*, Mong. *š*, Urd., Kh., Bur., Kalm. *š*.

Mo. *ayuski* < *ayusqi 'lungs', MMo. (SH) *a'usigi* ~ (Mu.) *a'uski*, Dag. *ayrki*, Mong. *öggi*, Urd. *üšigi* ~ *üšxi*, Khar. *öš'xi*, Kh. *üšig*, BB *üšix*, Al. B *üšxa*, Kalm. *öšk'* id.

Mo. *giški* < *giški- < *gički- 'to step, to trample', MMo. (SH) *gelki* ~ (Mu.) *gički*-, Mong. *gišgi*-, Urd. *giški*-, Kh. *gišga* ~ *gišxa*-, Al. B *gešxe*-, Kalm. *gišk'* id." (IMCS 125)

Finally, in his comparative Altaic phonology, Poppe writes the following (VGAS 62-63):

„Das auslautende *č hat sich im Spätmittelmongolischen zu š entwickelt:

mo. *ös* ‚Haß, Feindschaft, Rache‘, mmo. *öš* id. < umo. **öč* = AT, čag, *öč* ‚Haß, Feindschaft‘.

mo. *giški*-/giški-, mmo. *gički*- 'auftreten, mit den Füßen treten'.

mo. *köske* ‚Reisegüter, Gepäck, Troß‘ = AT, čag. *köčč*-, 'umsiedeln, umziehen, nomadisieren'.

mo. *išige*/ešige ‚Zicklein‘, mmo. *ešige* < **eške* < umo. **ečke* = uig. *äčkü* ‚Ziege‘, alt. *äčkä* id."

Each of these statements by Ramstedt, Vladimirtsov and Poppe is interlinked to the others through the examples cited (*ös*, *eske*-, *giški*-). Taken together, they lead us to suppose that certain combinations of *s*, *d(t)*, *š*, *č*, in syllable or word final position are reflexes of Proto-Mongol *-č. However, among the examples cited one may distinguish the following cases:

- (1) the co-occurrence within Mongol of *s* and *d(t)* (*des/ded*, *naγas-/naγad*-);
- (2) the co-occurrence within Mongol of *s*, *š*, *d(t)*, *č*, before *ke* or *ki* (*eske*-, *giški*-, *möški*-);
- (3) the correspondence of Mongol *s* with Turkic *č* (*ös*, *köske*, *ešige*, *öšgei*).

Mongol *s* ~ *d*

The existence of numerous pairs of Mongol words with syllable or word final *s* ~ *d* is broadly recognized in Mongolistics.⁸⁰ Elsewhere,

⁸⁰ G. Ramstedt, Das Schriftmongolische und die Urgamundart, Phonetisch Vergleichen, JSFOu XXI/2, 1903, p. 19; Vladimirtsov, SGMPJa 397; Poppe,

I have pointed out that the evidence of Turkic loanwords in Mongol indicates that the direction of change is $s > d$; cf. Mo *ṣed* < *ṣes* "copper" ← Tū *yez* id.: Mo *qod* < *qoos/qos* "pair" ← Tū *qōš* id.²¹ There is very little internal Mongol evidence for this direction; cf. *tedbūri* < *tesbūri* "patience" < *tes-* "to bear" (never *ted-*). One or two apparent exceptions to this rule may be found in Stralenberg's Kalmyk Vocabulary, and occasionally a hypercorrect $s < d$ occurs in Buryat.²² Nonetheless, these are outweighed by the clear evidence of the loanwords, so that we should posit original **s* with a secondary development to *d*.

But there is an even stronger argument against Poppe's view (IMCS 109) that final $s \sim d$ reflects an original **č*: namely, that none of the words with $s \sim d$ ever has a *č* reflex in the *Muqaddimat al-Adab* which, according to Poppe (IMCS 125), regularly retains this reflex, at least before *k*; cf. WM *beleske-/beledke-*, but MA *beletke-* "to prepare"; also: WM *nayas-/nayad-*, but MA *nāi-* "to play"; WM *ebes-/ebed-*, but MA *ebet-* "to be sick". Consequently, case (2) examples as *eske-/eš(e) etke-*, but MA *heške-* "to cut", and *giški-/gički-/eš(e) getki-*, but MA *gički-* "to step on", are essentially distinct from those in case (1). Although such examples reflect the sound change $s > d(t)$ of case (1), we must separate them from the reflexes *sk/šk/čk* of case (2). Otherwise, according to Poppe, we should expect MA **belečke-* "to prepare"! In brief, there is no evidence which connects case (1) with case (2), such that $s \sim d$ might be said to reflect *-*č*.²³

IMCS 109; id., *Grammatika burjat – mongol'skogo jazyka*, Leningrad 1938, pp. 51–52; A. Róna-Tas, A Study on the Dariganga Phonology, *AOH* X, 1960, p. 25; G. Kara, Sur le dialecte ūjūmūčin, *AOH* XIV, 1962, p. 166.

²¹ Cf. *Mongolian Studies [Journal]* III, 1976, pp. 123–125.

²² E.g., Mo *sedki-* "to think" ~ Buryat along the Lona *heski-*, cited by Ramstedt, *Das Schriftmongolische und die Urgamundart*, p. 19; also cf. Ts. B. Tsyrendambaev, *Burjatskie istoričeskie khroniki i rodoslovnye*, Ulan-Ude 1972, pp. 327–328.

²³ Recently, I. de Rachewiltz, Some Remarks on the Stele of Yisūngge, *Tractata Altaica. Denis Sinor sexagenario optime de rebus altaicis merito dedicata*, Wiesbaden 1976, pp. 490, 500–501 (n. 26), has proposed an etymology that appears to contradict this statement. He connects the verb *ontud-* (Yisūngge, lines 4, 5) with WM *ontus-* "to discharge an arrow in the air; to shoot into the air or over the target", these with SH *hontuša-* "to shoot an arrow a great distance", and concludes (with a reference to IMCS 109, 113): "The form *hontuša-* of the *Secret History* is the primitive one from which *ontud-* ~ *ontus-* have developed." However, Poppe does not imply in IMCS that final $s \sim d \sim ča < *č$, nor are there any other examples for this. Moreover, although the three verb forms are connected, they should be derived

Mongol *sk* ~ *šk* ~ *šk*

The various reflexes of the words *eske*- "to cut", *giški*- "to step on", *mōški*- "to trail", to which may be added *muski*- "to twist", in Mongol sources and dialects are shown in the following tableau:

	<i>eski</i> - ³⁴	<i>giški</i> -	<i>mōški</i> -	<i>muski</i> -
SH:	<i>etke</i> -	<i>getki</i> -	<i>mōčgi</i> - ³⁵	
HI:	<i>etke</i> -	<i>gečgi</i> - ³⁷		
IM:	<i>hitke</i> -	<i>gičke</i> -		<i>mučki</i> - ⁴¹
MA:	<i>hečke</i> -/ <i>eske</i> - ³⁶	<i>gički</i> -		
PC:	<i>edke</i> -	<i>gički</i> -		
WM:	<i>eske</i> -	<i>giški</i> -/ <i>gički</i> -	<i>mōški</i> -	<i>muski</i> -/ <i>mučki</i> -
Mogh:	<i>etqā</i> -	<i>giški</i> -/ <i>gičke</i> -		
Mngr:	<i>DiGe</i> -	<i>GičGi</i> -		<i>mučGi</i> -
Dagh:	<i>hereke</i> -			<i>moriki</i> -
Dial:	<i>eske</i> - ³⁸	<i>giški</i> - ³⁹	<i>mōški</i> - ⁴⁰	<i>mučki</i> - ⁴²

It is impossible to formulate a rule that will account for the reflexes in such data. Poppe contends that regularity is evidenced just in MA, where *hečke*- and *gički*- occur, such that MA retains the original **č*. However, the following points should be observed:

from the root **hontu*-/*ontu*- (< **pontu*-), with the DVV -*ča*- (as *mörgüče*- "to butt" < *mörgü*- id., *orkiča*- "to toss to and fro" < *orki*- "to throw", *siqata*- "to crowd" < *siqa*- "to press", etc.), and the DVV -*s*- (as *nayas*-/*nayad*-, etc.). This root, furthermore, is found in the otherwise isolated form recorded in Golstunskij (cited by de Rachewiltz) *ontuyis*- id.; thus: **pontu*- > *hontu*-*ča*-, *ontu*-*s*- (> *ontud*-), *ontu*-*yi*-*s*-.

³⁴ Because of *h*- in MA, IM, but *θ*- in SH, HI, Poppe vacillates in his reconstruction between **ečke*- (IMCS 109) and **gečke*- (113); in my view, *h*- is here non-etymological, see below.

³⁵ MA *eseki*'*ēr* [= Chagh *qisquči bürle*] "with snips" < *eske*-.

³⁶ Khal *eage*-, Ord *esäze*-, Bur *esze*- [*saic*!], Kalm *išk*'-/ *išk*'-.

³⁷ HI *gečgi*'*ür* "stairs" < *gečgi*-, cf. IM *gičtür*, WM *gečigigür*/*gičigigür* id.; Clauson, *Turkish and Mongolian Studies*, p. 239, incorrectly derives the latter from Tü *keč*- "to cross, pass over".

³⁸ Khal *gičge*-, Ord *Gečzi*-/*Gičzi*-, Bur *gečze*-, Kalm *gišk*'- beside *išk*'-, the latter contaminated with *iškül*- "to kick, trample".

³⁹ SH § 88 *mōčgi*-, 101 *mōčgi*-, was so read by Mostaert, *Dictionnaire ordois*, Peking 1941-1944, p. 471, and followed by Ligeti and de Rachewiltz, whereas Haenisch (*Wörterbuch* 111) hesitates between the readings *morgi*-, *mōčgi*-, *muski*-.

⁴⁰ Khal *mōčgö*-, Ord *mōčzö*-, Bur *müčze*-, Kalm *mōčki*-.

⁴¹ IM *mučki*- "to squeeze", which Poppe corrected to "to twist", but note that Dagh *moriki*- means "to squeeze, to twist".

⁴² Khal *mučgi*-, Ord *mučzi*-, Bur *mučze*-, Kalm *mōčki*-/*mučki*-.

(1) IM, SH, HI, etc., fail the test of regularity. If SH *möđgi-* is "regular", or retains original *-č, why are SH *etke-* and *getki-* subjected to change? Or, if HI *geđgi-/IM gičke-* slip through the net of other sound processes, why do not HI *etke-/IM hütke-*? The concept of regularity appears to be illusory when applied to čk.

(2) Beside MA *hečke-* exists MA *eske-*. One might dismiss *eske-* as belonging to some progressive layer of this dictionary, but it is also possible to argue for the secondary status of *hečke-*. Initial *h-*, ordinarily an archaic marker, is frequently non-etymological in MA and other Arab sources,⁴⁴ and even although Daghur *hereke-* might be expected to support *h-*, there are several other cases of an apparently non-etymological *h-* in Daghur: *hundere* "high", but SH, HI, PP, MA *ündür*; *hufure* "tip, point", but SH, HI, PP *üfü'ür*, MA *üfü'r*.⁴⁵ If *h-* is secondary in *hečke-*, might not č be secondary, too?

(3) There is minimal justification for regarding MA as a text that exhibits regularity in the present or any other case. With as much cause, we could regard SH *etke-* < **eske-* and *getki-* < **giski-* as the regular developments, and SH *möđgi-* as irregular.

Rather than extend this list of objections, I should state my view that forms as *eske-/hečke-*, *giski-/gički-/gički-*, *möski-/möčki-/möđgi-*, and *muski-/mučki-/mučki-*, reflect an irregular development of *s* before *k*. And I find my justification in the statement of Poppe (IMCS 125) that *sk* may become *čk*, as in SH *a'uđgi*, MA *a'učki*, IM *askin*, WM *ayudgi*, Khal *uđgi/üđig*, Ord *uđ*xi/üđgi*, Bur *uđxa(γ)*, Kalm *öčk** "lungs";⁴⁶ also cf. WM *iskül-/öskül-*, Khal *öđiglö-*, Ord *öč*xöl-*, Bur *üdxel-/Bokhan) üdxel-*, Kalm *ičk-/öčk-* "to kick, trample". Accordingly, I agree with Poppe that the cluster *sk* may develop to *čk*, but, in my view, it may also develop to *čk*, irregularly in a few Middle Mongol texts.

What is especially important in this question is the demonstration that forms with *d(t)* are unrelated to forms with *sk/čk/čk* (see above)

⁴⁴ Cf. L. Ligeti, Notes sur le vocabulaire mongol d'Istanbul, AOH XVI, 1963, pp. 142-145; Clark, Mongol Elements in Old Turkic I, Nr. 49.

⁴⁵ My student, Mr. Bill Rozycki, has dealt with the Daghur forms in his Masters Thesis: *A Comparative Phonology of Dagur and Written Mongol*, Indiana University, March 1978, pp. 39-41.

⁴⁶ Mngr has *öčgi* not *öđgi* in A. de Smedt-A. Mostaert, *Dictionnaire mongol-français*, Peiping 1933, p. 298, but this must be a typographical error, as the form *öđgi* is recorded by B. Kh. Todaeva, *Mongorskij jazyk*, Moskva 1973, p. 354. Daghur *auruše* is defined as "big fish (probably sturgeon)" (S.E. Martin, *Dagur Mongolian Grammar*, Bloomington 1961, p. 116), which might be emended to "lung fish".

- that is, *d(t)* may or may not develop from *s*. In that case, MA *a'ulki* "lungs" from **ayusqi* assumes a new significance. It will be recalled that in the series of reflexes *sk/šk/čk*, the latter was supposed to be regular in MA as the retention of **čk*. Now, it is seen that in the presence of *sk/šk* reflexes, MA has *šk* not **čk*. Therewith, the last vestige of seeming regularity in MA is dissipated. In conclusion, the development of the cluster *sk* is unpredictable in all sources: it may become *dk/tk* (case (1)), or it may become *šk/čk* (case (2)).⁴⁶

Mongol s ~ Turkic č

The examples in case (3) are, therefore, crucial to the postulated reconstruction of Mongol **-č*, since it is only in such words that **-č* might be posited on the basis of external evidence, namely, the Turkic correspondences. Each example must be examined on its individual merits.

Mo *ös* ~ Tü *čč* "revenge".

The Turkic word *čč* is well-documented in Manichean and Buddhist Uyghur literature in the meaning "malice, hatred", and in an Islamic context in the meaning "vengeance". Maḥmūd al-Kāšyārī defines the word with Arabic *al-ḥiqd* "malice" and *al-ḥar* "vengeance". From this root, there are many derived forms: *ččlög* "malicious, hateful, vengeful", *ččsüz* "without malice, vengeance", *čče* "to be malicious, to desire vengeance", *ččeš* "to feel hateful to or desire vengeance on one another", *ččeš* "feud, quarrel", *ččük* "to feud, take vengeance on", *ččüt* "malice, vengeance", etc. (ED 18, 21, 26, 31, 32; TMEN II 134-135, 139-140).

In Mongol, the basic form is *ös*, first attested in the phrase *ös ab* "to take vengeance" in the Sino-Mongolian Inscription of 1335,⁴⁷ and also in WM, Khal, Ord, Kalm *ös*. The *Secret History*, which draws heavily upon a legendary history of the feuds between Mongol clans and tribes, attests the root in several derived forms:

⁴⁶ A small and not entirely relevant body of evidence may be mustered to support the existence of a Mongol change *s > č*: SH *müčilje*, but WM *mčsiye-/misiye-/misiye* "to smile, laugh"; WM *boyorčoy/boyoroyoy* "bread, pastry", cf. Khal *börtsog*, Kalm *börtsog* ← Tü *boyurčaq* "small pieces of dough fried in oil" (TMEN II 346-347); WM *kečege-/kešege* "to correct" < *kene* "to be corrected".

⁴⁷ F. W. Cleaves, The Sino-Mongolian Inscription of 1335 in Memory of Chang Ying-Jui, *Harvard Journal of Asiatic Studies* XIII, 1950, lines 23, 53; cf. line 44 *ös aburafuyu* "requited his hatred".

§ 267 *ōōiyen ab-* "to take vengeance" < *ōōi-* + DVN *-ye(n)* (as *qaniyan* "hedge, fence" < *qasi-* "to fence", *jabaiyan* "opportunity, luck" < *jabai-* "to take advantage"); cf. WM *ōōiye*, Khal, Ord *ōōō*, Bur *ūhō(γ)*,⁴⁶ Kalm *ōōē/ōōēn*;

149, 210 *ōōitū* "vengeful, hostile" < *ōōe* + DNN + *tū*; here, *ō* is either abstracted from *ōōiyen* or secondary before *t*;

33, 136, 199, 214 *ōōien* id., plural of preceding; cf. Khal *ōōōn*;

58, 102, 105, 111, 154, 214, 254 *ōōō-* "to hate, to desire vengeance", for the derivation of which see below; cf. WM *ōōi-*, Khal *ōōi-*, Ord *ōōō-*, Kalm *ōō-*;

58, 102, 105, 154, 214, 254 *ōōōl* "vengeance" < *ōōō-* + DVN *-l*;

204 *ōōōlē-* "to take vengeance together" < *ōōō-* + COOPER *-lē-*.

Other derivatives of *ōōe* in Mongol include:

WM *ōōiyele-* "to hate" < *ōōiye* + DNV + *le-*;

WM *ōōēle-*, Khal, Ord *ōōōlō-*, Kalm *ōōēl-* "to hate, take revenge" < *ōōe* + DNV + *le-*;

Khal *ōōōrxō-* "to feel malice toward someone, to hate" < *ōōe* + DNV + *rke-*;

Khal *ōōōrō-* "to come to hate" < *ōōi-* + DVV *-re-*.

In the *Muqaddimat al-Adab*, the following occur:

ōōēn ab- [= Chagh *ōō al-*] "to take vengeance" < *ōō* + REFLEX + *ēn*;

ōōēldūbe tūnlē [= Chagh *ōōēliti aning birle*] "they hated each other" < *ōōē-* + RECIP *-ldū-*;

ōōi'ēn ab- [= Chagh *ōōni al-*] "to take vengeance" < *ōō* + ACC/REFLEX + *i'ēn*;

ōōtū bol- [= Chagh *ōōliq bol-*] "to become hostile, hateful, vengeful" < *ōō* + DNN + *tū*.

Here, the forms *ōō* and *ōōē-* are borrowed directly from Chaghatay, as are hundreds of other Mongol words, suffixes, and phrases in this dictionary. Note the following relevant examples: MA *hič bol-* = Chagh *hič bol-* "to become nothing" [← Persian *hič*], *kirbič kikič* = Chagh *kirpičči* "brick maker", *taš omūsbe hekindēn* = Chagh *taš*

⁴⁶ The Bur form is unexpected, since *ōōiye* ought to result in **ūōō(γ)*; cf. the Tunka dialect forms cited by I. A. Podgorbunskij, *Russko-Mongoloburjatskij slovar'*, Irkutsk 1909, p. 45 *ūōōle* [err. for *ūōōle*] "enemy", 174 *ūōō* "to hate". Therefore, *ūhō(γ)* is best explained as < **ōōe(ge(n))* < **ōōe-*, that is, with the same verbal base as SH *ōōō* < **ōōe-*. Another case in which SH and Bur coincide was noted by L. Bese, Preverbs in the Language of the Secret History of the Mongols, AOH XXII, 1969, p. 132.

kıyđı bakiya "he wore a crown on his head" [\leftarrow Pers *tāš*], *tuč* = Chagh *tuč* "bronze", *učmayın dunda* = Chagh *učmaq ortası* "in the middle of paradise", *umunč* = Chagh *umunč* "hope", etc.

Thus, the basic nominal in Mongol is *ös* and the basic verbal forms are *ösi-* and SH *öšö-* < **öse-*. Inasmuch as *ösi-/öse-* cannot correspond to Tü *öč-* on either the primary or secondary levels, they must be derived from the nominal form. But how? After all, Mongol does not have DNV suffixes of the form $+a-/+e-/+i-$.⁴⁹ In the first place, it is probable that SH *öšö-* < **öse-* is a secondary form of *ösi-*, for which analogies may perhaps be found in SH *büle-*, but WM *büle-/büli-* "to stick"; SH, WM *tüle-/tüli-* "to kindle a fire"; SH, WM *sere-/seri-* "to awaken". Second, the verb *ösi-* is best explained as a derivation from *ös* + DNV $+si-$, a suffix that is exceptionally productive in Mongol. The fusion of the geminate *-ss-* to *-s-* is found in several other verbs of this type; cf. *tasi-* "to fall obliquely" < **tas+si-* < *tas*, as in *tas yařar* "steep declivity"; *nisi-* "to strike, hit" < **nis+si-* < *nis*, as in *nis tes* "sound of crackling", *nisla-/nisal-* "to hit, snap with fingers". The fusion of such geminates occurs with other combinations as well; cf. *nayira-* "to be in harmony" < **nayir+ra-* < *nayir* "harmony"; *ayuri-* "to wrinkle one's forehead (esp. from anger)" < **ayur+ri-* < *ayur* "anger"; *tuyula-/tuyulla-* "to calve" < *tuyul* "calf"; *jüyile-/jüyille-* "to sort out" < *jüyil* "sort", etc.⁵⁰

On the basis of this discussion, it appears certain that all derived forms in Mongol are composed of native lexical elements, so that only *ös* has a Turkic counterpart. It may be postulated that *ös* is a direct loanword from Turkic *öč*,⁵¹ assimilated to Mongol phono-

⁴⁹ Contra Clauson, *Turkish and Mongolian Studies*, p. 203, who cites *delger* "extensive, vast" > *delgere-* "to unfold, grow, expand"; however, *delgere-* < *delge-re*, cf. *delge-* "to spread, display, expand".

⁵⁰ Cf. G. Ramstedt, *Einführung in die altaische Sprachwissenschaft*, I, *Mémoires de la Société Finno-Ougrienne* CIV/1, 1957, p. 121.

⁵¹ This was already recognized by G. D. Sanžeev, *Sravnitel'naja grammatika mongol'skikh jazykov*, I, Moskva 1953, p. 91: "At the end of the syllable, the affricate č (as well as ts, ʃ, dz) does not occur, so that borrowings from Turkic with č at the end of the syllable are reflected in Mongol with the spirants s or š: WM *ös*, Bait *öš* = Uygh, Kirgh *öč* 'revenge'; WM *köške*, Khal *xöšög* ~ *xöšöč* 'cart; baggage' = Alt *köč* 'to nomadize'; Khal *ışığ*, Bait *ışkış* 'kid goat' = Uygh *ečkü* 'goat'. Borrowing was also accepted by Kara, *Le dictionnaire étymologique*, p. 13, n. 37. Poppe's views regarding this word have changed. In his *Altaiisch und Urtürkisch*, *Ungarische Jahrbücher* VI, 1926, p. 118, he compares Tü *öč* = Mo *öci-* < **öči-*, *öčiye* < **öči-ge* = Manchu *juče-* "to get angry, get mad"; however: (1) Manchu *f-* ~ Middle Mongol *h-*, but SH *öšö-*;

logical structure which permits only final *s*, in the same way as *tayus* ← *taus*, *bös* ← *böz*, *ulus* ← *ulus*. Furthermore, it is pertinent that beside *ös* there existed a native Mongol word for "vengeance", which appeared in its original meaning in SH § 53, 75, 77ff. *hači* "retaliation, reprisal, reward, vengeance". As I have pointed out elsewhere, the essential mechanism of feud relationships consists of "debt" and the "redemption of debt", that is, the return in kind of insult or injury.⁵² Thus, it is not surprising to observe the following semantic development of *hači*: HI *hači qari'ul* "to pay back in kind; to show oneself grateful for an act of kindness received", Sino-Mongolian Inscription of 1335, 39 *ači üre* "retribution and fruits", 44, 50 *ači qari'ul* "to show gratitude, to cause his kindness to return", PP *hači* "merit", WM *ači* "favor, grace, merit; requital, reward; benefit; consequence, result". In summary, it is my view that the native *hači* was displaced in its meaning "vengeance" by the Turkic loanword *ös*.

Mo *irbis* ~ Tü *irbič* "panther"

The Turkic word *irbič* is found in a single Uyghur text,⁵³ while the Mongol word is attested in WM *irbis*, Khal *irves*, Bur *erbed*, Kalm *irwş*, and also as a reverse loan in Middle Uyghur texts as *irbiž* = *irbis*,⁵⁴ and in Siberian dialects: Teleut, Lebed *irbis* "a kind of lynx, felis irbis", Tuva *irbič* "snow leopard". It appears that *irbič* largely disappeared in Turkic due to its contamination with Chagh, ETrki *yolbars* "leopard, panther";⁵⁵ cf. Chagh *ilbars*, Kirgh

(2) **öči* would remain as such; (3) *öčiye* does not occur (misprint for *ösiye*?). In IMCS and VGAS, Poppe considers Mo *ös* and Tü *öč* to be reflexes of PA **öč* through the rule Proto-Mongol **č* > Mo *-s*. Finally, following my paper on this subject at the XVIII Permanent International Altaistic Conference (Bloomington, July 1975), Professor Poppe expressed his view that Mo *ös* was indeed a borrowing from Tü *öč*.

⁵² L. V. Clark, The Theme of Revenge in the Secret History of the Mongols, *Proceedings of the XVIII PIAO* (in press).

⁵³ *Uigurica* IV D 6-7 *bir bičün ikinti quntuz ükünč irbič olar üčegü* "These three: first, the ape; second, the beaver; third, the panther" (also line 11).

⁵⁴ *Suvarṇaprabhāṣa* 326: 15, 331: 23, 599: 16, 610: 13 *irbiž* = *irbis* (cf. DTS 211; ED 199); *Türkische Turfantexte* VI 93 *irbiž qudruq* "panther-tail-ed", 116 *bars irbiž döri ulatı* "leopards, panthers, wolves, etc." (= *irbis segültü* and *bars čino-a terigüten* in the Mo version of this text; cf. L. Ligeti, *Autour du Sâkis Yükmäk Yaruq*, *Studia Turcica*, ed. L. Ligeti, Budapest 1971, pp. 302, 303).

⁵⁵ Cf. W. Bang, Über die türkischen Namen einiger Großkatzen, *Keleti Szemle* XVII, 1916-1917, pp. 116-125, esp. 119-120; M. Räsänen, Ural-

ibirs "leopard, tiger", ETrki *yülpis* "snow leopard", Tobol *ibis* "tiger" (VEWT 173). It may be assumed that Mo *irbis* is also a direct loanword from Tü *irbič*, assimilated as *ös* ← *öč*.

SH *načit* ~ Tü *našič* "gold brocade"

In the SH, two forms of the present word are known: § 238 *načit* and § 274 *načidut*, the latter a double plural of the former.⁵⁴ The form *načit* is a plural in *+t* of a word **načis*, which is easily recognizable as the *našič* cloth frequently mentioned by Medieval travelers (Rubruck *nasici*, Marco Polo *nascici*, Pegalotti *naccheti*),⁵⁷ and whose origin is Persian *nāšīč* "a kind of silken stuff embroidered with gold".⁵⁸ The only Turkic attestation of the word is in the *Codex Cumanicus*, where *našič* is defined "a kind of gold brocade with pearls [Latin *nasicius*]".⁵⁹ The word is, therefore, borrowed into Mongol by the following route: **načis* ← Tü *našič* ← Pers *nāšīč*. The form **načis* is probably best explained as an assimilation through metathesis from *našič*, motivated by the lack of final *č*.

altaische Wortforschungen, *Studia Orientalia* XVIII/3, 1955, p. 14; A. M. Ščerbak, *Nazvanija domašnikh i dikikh životnykh v tjurkskikh jazykakh. Istoričeskoe razvišie lekriki tjurkskikh jazykov*, Moskva 1961, p. 138; E. V. Sevortjan, *Etimologičeskij slovar' tjurkskikh jazykov*, Moskva 1974, p. 346.

⁵⁴ Cf. P. Pelliot, Une ville musulmane dans la Chine du Nord sous les Mongols, *Journal asiatique* 1927, II, pp. 269-271, n. 1; L. Ligeti, Mots de civilisation de Haute Asie en transcription chinoise, *AOH* I, 1950, p. 183, n. 44. Another example of a double plural is SH *gačidut laosasut* "mules" < *gačid* + *ut* (< *gačir*), *laosas* + *ut* (< *laosa*); cf. Clauson, *Turkish and Mongolian Studies*, p. 235.

⁵⁷ Cf. H. Yule, *Cathay and the Way Thither*, III, Hakluyt Society, Second Series, XXXVII, London 1914, pp. 155-156, n. 4; P. Pelliot, *Les mongols et la papauté*, Paris 1931, pp. 207-212; C. Dawson, *The Mongol Mission*, New York 1955, pp. 163, 203; L. Hambis, *Marco Polo. La Description du Monde*, Paris 1955, pp. 27, 358 n.; J. A. Boyle, *The History of the World Conqueror, by 'Ala-ad-Din 'Ata-Malik Juvaini*, I, Cambridge, Mass. 1958, pp. 218 n., 262 n.; P. Ratchnevsky, Über den mongolischen Kult am Hofe der Großkhane in China, *Mongolian Studies*, ed. L. Ligeti, Budapest 1970, p. 436; L. V. Clark, The Turkic and Mongol Words in William of Rubruck's Journey (1253-1255), *Journal of the American Oriental Society* XCIII, 1973, pp. 186-187.

⁵⁸ Cf. F. Steingass, *A Comprehensive Persian-English Dictionary*, London 1892 (Reprint: New Delhi 1973), p. 1401; B. Laufer, *Sino-Iranica*, Chicago 1919, pp. 494-496; also the works cited in the following note.

⁵⁹ Cf. K. Grønbech, *Komanisches Wörterbuch. Türkischer Wortindex zu Codex Cumanicus*, København 1942, p. 168; A. Bodrogligeti, *The Persian Vocabulary of the Codex Cumanicus*, Budapest 1971, p. 172.

Mo *köske* "baggage, etc." ~ Tü *köč*- "to migrate"

The Mongol word is found in WM *köske/kösge/kösög* "transportation, mount, conveyance, cart; provisions for travel; baggage of a person of rank", Khal *xösög* "transportation, means of conveyance", Ord *Gös⁺xö* "baggage of a person of rank", Kalm *kösk⁺* (Ölöt) "baggage caravan, baggage". However, the comparison with Turkic *köč*- "to nomadize, migrate" (ED 694) is not free from difficulties:

(1) Nowhere in Turkic does a derived form **köčke/*köčük*, or the like, occur. Consequently, we should have to presume a Mongol derivation of *köske* from an otherwise unattested root **kö-*, but a DVN suffix *-qa/-ke* is unknown in Mongol (nor can it be the imperfect participle *-ya/-ge*).

(2) The presumed Mongol root **kö-* does not conform to the primary correspondence of *-č ~ -čV*, as in *sač- ~ saču-* "to scatter", *sič- ~ siči-* "to defecate". That is, on the primary level, we should expect **köče- (*köčke)*, whereas, on the secondary level, we have seen that the derivation of *köske* cannot be accounted for.

(3) It is significant that not one of the derived forms of Turkic *köč*- has a meaning close to those of Mongol *köske*; thus, the semantic connection between the two is not entirely clear.

(4) Finally, *köske* must be considered in relation to the supposed development of *esige* (discussed next), since the reconstructed forms of the two words are of identical structure, **köčke* and **ečke*, but produce different reflexes! Now, if **ečke* becomes *esige*, then why does not **köčke* become **kösige*; or, if **köčke* becomes *köske*, then why does not **ečke* become **eske*? Clearly, the rules formulated by Ramstedt, Vladimirtsov and Poppe lead here to internal contradictions.

In short, the comparison of Mo *köske* with Tü *köč*- encounters too many serious objections to be acceptable.⁶⁶

⁶⁶ Cf. TMEN III 633. In attempting to otherwise account for Mo *köske/kösge/kösög*, I have considered the following etymologies: (1) *kösög* < **kösej* is the base form, derived from an unattested **köse-*, itself comparable to Tü **kö-* "to hobble" (cf. *kösür-* id., *kösürük* "hobble", *kösürgü* "leather bag (in sense of something of which the neck is tied with a string)", cf. ED 752); note Mo *küli-* "to bind" ~ Tü *küle-* "to hobble", Mo *tuša-* "to hobble" < Tü *tuša-* id.; thus, *kösög* "baggage" in the sense of something tied up, or "transportation" in the sense of an animal that is hobbled!; (2) *kösög* < Tü *köšek* "a young animal, especially a camel colt" (ED 753), but camel colts are too young to be beasts of burden!

Mo *esige* "kid goat" ~ Tü *ečkü* "goat"

In Turkic, *ečkü* is the generic term for "goat".⁵¹ As early as Middle Kipchak we find forms as *ečki* (*Codex Cumanicus*, *Anonymous Leiden*, etc.), *ečki* (*Qavānīn*), *eške* (*Al-tuhfatu'l-zakiya*). In Mongol, the following forms are noted: SH *ešige*, WM *esige/isige*, Khal *išig*, Ord *ešige*, Bur *ešige* (γ), Kalm *išk'*. The phonetic difficulty in this otherwise valid comparison is not easily resolved. Consider the following possible explanations:

(1) Mo *esige* < **eške* ~ Tü *ečkü*? However, Mo *č* between vowels always remains.

(2) Mo *esige* < **eške* < **eske* < **ečke* ~ Tü *ečkü* (as Poppe)? But, note that *eske-/etke-/hečke* "to cut" is similarly reconstructed by Poppe as **ečke*-, so that we ought to expect **ečke* "goat" to be similarly reflected; however, SH has *etke*- but *ešige*!

(3) Bazin has proposed an ingenious explanation on native Mongol grounds.⁵² According to him, there existed in Proto-Mongol two words: **etige* "father" and **ečige* "goat", the latter cognate to Tü *ečkü*. At a later stage of development, **etige* underwent the sound change **i* > *š*, and thus converged with **ečige* "goat". Subsequently, to avoid this unacceptable convergence, **ečige* "goat" was consciously converted to *esige*. This explanation is feasible, but necessarily not subject to proof or disproof.

(4) Mo *esige* may also be explained as a borrowing from Tü, either directly from *ečkü/ečke* with assimilation to **eske* and subsequent changes to **ečke* (cf. above *sk/šk/čk*) and *esige* (cf. above *si* = *š*), or from a secondary Kipchak *eške* with subsequent development to *esige*.⁵³

Unless Bazin's solution is accepted, *esige* cannot be accounted for on native Mongol grounds, nor through the rules proposed in standard Mongolistic works which lead to internal contradictions. The proposal that *esige* is a borrowing is further discussed in the following section.

⁵¹ Cf. Ščerbak, *Nazvanija domašnikh i dikikh životnykh*, pp. 117-118; VEW 35; ED 24.

⁵² L. Bazin, *Noms de la "Chèvre" en Turc et en Mongol*, *Studia Altaica. Festschrift für Nikolaus Poppe*, Wiesbaden 1957, pp. 31-32.

⁵³ In passing, it may be noted that *esige* "kid goat" appears to have exerted some influence on the phonetic structure of the Mo word for "felt": SH *sišigei/išigei*, HI *sišigei*, MA *sišigei*, WM *esigei/isigei*, Khal *eagī*, Ord *esegī*, Bur *ehēgi/hegi* [< **esigei* < **išigei*?, or **esegēi*?], Kalm *iškē*; cf. IMCS 92; L. Ligeti, *Un vocabulaire mongol d'Istanbul*, *AOH* XIV, 1962, p. 64.

Mo *ösögei/ögei* ~ Tü *ökke* "heel (of foot, shoe)"

The Turkic forms of this word include Chagh, Osm, ETrki *ökke*, Kirgh *ököb*, Tat *ükke*, etc., but the connection of Tuva, Kacha, Koyb *ējek*, Kyzyl *ēlek*, Tofalar *ē* (nasalized), to *ökke* is unclear (metathesis?, **eg*+*ček* ≠ *ök*+*če*?).⁴⁴ The Mongol word is found in SH *ösöge*, HI *ösögö*, MA *ösekei*, WM *ösögei/ögei*, Khal *ögei*, Bur *hüyi* [*< *ösgei < *ögei*, cf. above *heyi < *segei < *iägei*], Kalm *öskē*. The phonetic relationship between *ösögei/ögei* and *ökke* is one of metathesis. If Räsänen is correct in deriving *ökke* from Chagh, Sart *ök* "prop, support, pillar" (VEWT 370), then *ökke* must be original and *ösögei/ögei* must be secondary. In that case, the Mongol word is not only a borrowing from an unattested metathetic Turkic **öcke < ökke*, but it is also a development of **öske*. Thus, if the development *ösögei < ögei < *öske < *öcke* is correct, then Mo *esige* might also have evolved in a similar manner: *esige* (? *< *eske*) *< *eske < ečkü/ečke*. As the argument depends on teleological forms and unknown factors, I present it only as a hypothesis.

Conclusions

I have examined three sets of examples said by Ramstedt, Vladimirtsov and Poppe to provide evidence for the reconstruction of Proto-Mongol **č*, and have concluded the following:

- (1) Mo *s* ~ *d(t)* *< *s* (*ded < des*, *nayad- < nayas-*, *etke- < eske-*, *getki- < giski-*);
- (2) Mo *sk* ~ *šk* ~ *čk* *< *sk* (*hečke- < eske-*, *giški-/gički- < giski-*, *möški-/möčgi- < möski-*, *muški-/mučki- < muski-*);
- (3) Mo *s* *< Tü č* (*ös < čč*, *irbis < irbič*, *?ösögei/ögei < *öske < *öcke < ökke*, *esige* (? *< *eske*) *< *eske < ečkü*, but *köske ≠ köč*).

Accordingly, there is no evidence for Proto-Mongol **č*. Far from disrupting the system of Proto-Mongol, this conclusion leaves a balanced system in which the affricates **č* and **ʃ* occur only in initial and medial positions.⁴⁵ Moreover, this conclusion clarifies the set of primary correspondences in the sense that to Turkic *-s*, *-z*, *-š*, *-č*, correspond Mongol *-sV*, *-r(V)*, *-l(V)*, *-čV*, that is, are character-

⁴⁴ Cf. VEWT 370; Sevortjan, *Etimologičeskij slovar' tjurkskikh jazykov*, pp. 520-521.

⁴⁵ This is also the presentation of N. Poppe, *The Mongolian Affricates *č and *ʃ*, CAJ II, 1956, pp. 204-215.

ized by $\theta \sim -V$, usually regarded as an archaic marker.⁶⁶ From the viewpoint of the secondary correspondences, Mongol provides the following treatment of Turkic non-initial s , z , δ , ξ :

TÜ	MO	TÜ	MO
$-s \rightarrow -s$		$-\delta \rightarrow -s/-\delta/(-si-)$	
$-s \rightarrow -s$		$-\xi \rightarrow -s$	
$-z \rightarrow -s/-\xi$		$-\xi \rightarrow -\xi/-C\xi/-C\xi/(-Csi-)$	
$-z \rightarrow -s$		$-\xi \rightarrow -s/C\xi V$	

ABBREVIATIONS

- Tü = Turkic; Mo = Mongol; PC = Pre-Classical Written Mongol, WM = Written Mongol, Khal = Khalkha, Ord = Ordos, Bur = Buryat, Mogh = Moghol, Kalin = Kalmyk, Dagb = Dagbur, Mngv = Monguor
- AOH *Acta Orientalia Academia Scientiarum Hungaricae.*
- ATG A. von Gabain, *Altürkische Grammatik*, Wiesbaden 1976².
- CAJ *Central Asiatic Journal.*
- DTS *Dremetjurskij slovar'*, Leningrad 1969.
- ED G. Clauson, *An Etymological Dictionary of Pre-Thirteenth Century Turkish*, Oxford 1972.
- HI M. Lewicki, *La langue mongole des transcriptions chinoises du XIV^e siècle. Le Houa-yi-yi-yu de 1389, II. Vocabulaire-Index*, Warsaw 1959.
- IM Ibn Muhannā, cf. MA.
- IMCS N. Poppe, *Introduction to Mongolian Comparative Studies, Mémoires de la Société Finno-Ougrienne CX*, Helsinki 1955.
- JSFOu *Journal de la Société Finno-Ougrienne.*
- MA N. Poppe, *Mongol'skij slovar' Mukaldimat al-Adab*, I-III, Moskva-Leningrad 1938-1939.
- PI N. Poppe, *The Mongolian Monuments in hP'ags-pa Script*, Second edition translated and edited by John R. Krueger, Wiesbaden 1957.
- SGMPJa B. Ja. Vladimirtsov, *Sravnitel'naja grammatika mongol'skogo pis'mennogo jazyka i khalkhaskogo narečija. Vvedenie i fonetika*, Leningrad 1929.
- SH E. Haenisch, *Wörterbuch zu Manḡol un niuca tobca'an (Yüan-ch'ao pi-shi)*, Leipzig 1939.
- TMEN G. Doerfer, *Türkische und mongolische Elemente im Neupersischen*, I-IV, Wiesbaden 1963-1975.
- UAI *Ural-Altaische Jahrbücher.*
- VEWT M. Räsänen, *Versuch eines etymologischen Wörterbuchs der Türk-sprachen*, Helsinki 1969.
- VGAS N. Poppe, *Vergleichende Grammatik der altaischen Sprachen, I. Vergleichende Lautlehre*, Wiesbaden 1960.

⁶⁶ For this correspondence, one of the most perplexing in Altaistics, see G. Doerfer, Zwei wichtige Probleme der Altaistik, *JSFOu* LXIX/4, 1968, 14 pp.