

Sigmatism in Chuvash Reviewed

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It is now common knowledge that to C(ommon) T(urkic) /ʃ/ there corresponds in Chuvash two different sounds, i.e. /l/ and /s/, e.g. CT *taş* 'outside, exterior' = Ch. *tul* id., CT *baş* 'head; beginning' = Ch. *puş* id., CT *ürüş-* 'to fight' = Ch. *vârs-* id., CT *ēniş* 'descent; slope' = Chuv. *anăş* 'sunset, west' etc. On this double correspondence in Chuvash the following hypotheses have so far been put forward:

1. Proto-Turkic /ʃ/ is primary and it generally developed into /l/ in Chuvash in a relatively small group of words; the same sound, however, changed into /s/ in Chuvash in a great number of cases (Budenz, Gombocz, Benzing, Ligeti and others);

2. Proto-Turkic /ʃ/ is secondary and it comes from a palatalized /l/ occurring before /i/ (Ramstedt, Doerfer) or a voiceless fricative /l/ similar to Ostyak /λ/ (Poppe, Serebrennikov, Tekin). Proto-Turkic /ʃ/ corresponding to Chuvash /s/, on the other hand, comes from Altaic /ç/ and /j/ (Ramstedt, Poppe, Tekin) and also from /ç/ (Ramstedt, Tekin). This second sound change in Chuvash may well be called 'sigmatism'.

The first hypothesis has many weaknesses. An important weakness of this hypothesis is that it is based on the representation of one and the same original sound by two different sounds in a modern language. It would indeed be difficult to explain why Proto-Turkic /ʃ/ changed into /l/ in a group of words in Chuvash but it developed into /s/ in another group of words and suffixes in the same language. It is for this reason that Benzing is rather inclined to regard the Chuv. words *ěs* 'work' and *síměs* 'fruit' as borrowings from Tatar (1959:711). Ligeti, the eminent Hungarian scholar, who took the subject in hand in 1980, seemed to favor the

view of Budenz and Gombocz on the sound correspondence CT /ʃ/ = Chuv. /ś/, although he did not categorically stated that Chuv. words having /ś/ versus CT /ʃ/ were borrowings from Tatar (1980: 248-250). In this article, Ligeti also gave a list of such Chuvash words with their Tatar counterparts. The counterparts of one of these word pairs, however, do not match each other semantically: Ligeti equated Chuv. *uśla-* 'baratter', i.e. 'to churn', with Tat. *aşla-*, but the latter means 'to dung, manure, fertilize' and not 'to churn'. (Tatar verbs meaning 'to churn' are *atla-* and *yaz-*: *may atla-*, *may yaz-* 'to make butter in a churn'.) In my opinion, Chuv. *uśla-* 'to churn' goes back to an older **açla-*, and this, in its turn, to a still earlier **ançla-*, a form which seems to be cognate with MK *yanç-* 'to crush, press, trample on' surviving in Kirg. *janç-*, *jançta-*, *jançkıla-*, Nog. *yanşı-*, Tat. *yänç-*, Kzk. *şanış-*, *şanışkıla-*, Tuv. *çaş-*, Khak. *nas-*, Yak. *sis-*. The element *-la-* in Chuv. *uśla-* is a frequentative suffix which is also seen in Kirg. *jançta-* < **yanç-la-*. The lack of an initial /ś/ in *uśla-* is hard to explain, but the examples for the loss of an initial *y-* before /a/ can be found elsewhere in Turkic, e.g. *yaman* 'bad' > Krç. *aman*, *yakşı* 'good' > Blk. *aşxi*, *aşxi*, etc. (Räsänen 1949:190).

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Ramstedt's examples for the change /lç, lj/ > CT /ʃ/, Ch. /ś/ are not numerous. They consist of the following etymologies:

Ch. *puś* < **balç* 'kopf, Anfang' (1957:109) = Goldi *balça*, *balja* 'Kopf, Gesicht'

Trk. *aşäk*, Middle Turkic *aşyäk* 'Esel' = Mo. *eljige*, Ma. *eyiçe* id. (1957:177).

Although few in number, these etymologies are sound and satisfactory. The word *baç* 'beginning' in *baçne* (< **baç-i-n-e*) 'at the beginning' which is attested in one of the Volga Bulgarian inscriptions dating from the year 1318 (see Tekin 1979: 131) confirms Ramstedt's reconstruction of Chuv. *puś* (and Common Turkic *baş*). The phases of development of *baş* and *puś* may then be formulated as follows: CT *baş* < **balş* < **balç* > Volg. Bulg. *baç* >

Chuv. *pus*. As for the second etymology, it is as sound as the first one. Mo. *eljige(n)* cannot be a Turkic loanword in that language, for a single sound would not have been substituted by two sounds in Mongolian. Trk. *äşäk/äşgäk/äşyäk*, on the other hand, would not have had these shapes if it were a borrowing from Mongolian (it would have had the shape **eljik* or **elçik*). In this connection, it should be reminded that *äşgä*, the Khalaj word for 'donkey', corresponds perfectly to Mo. *eljige(n)* and perhaps makes it clear that the final /k/ in *äşgäk* is a diminutive suffix.

According to Ramstedt, the Common Turkic $\{- (X)ş\}$ of the reciprocal-cooperative stems, too, goes back to $\{- (çA)\}$ and the suffix of deverbal nouns $\{- (X)ş\}$ to $\{- (çA)\}$, for their genuine Chuvash equivalents are $\{- (Ä)ś\}$ and $\{- (Ä)ś\}$, respectively. Thus, CT *ürüş-* 'to fight, quarrel' = Chuv. *värs-* id., CT *beriş* 'die Gabe; das Gegebene' = Chu. *paräs* id., CT *äniş* 'descent, slope' = Chu. *anäs* 'sun set', etc. (1903:98; 1952:126, 127, 169; 1957:94).

In his comparative grammar of the Altaic languages, Poppe gives two more examples for the correspondence Mo. $-l^2j-$ / $-l^2ç-$ = Trk. $-ş-$, i.e. Mo. *qaljan* 'Blesse, Fleck auf der Stirn eines Tieres' = Middle Turkic *qaşqa* 'Blesse', Mo. *alçu* 'eine seite des Spielknochens' = Chag. *aşuq* < **alçuq* id., Kirg. *aşık* id. (1960:86).

I myself have suggested elsewhere the following additional etymologies:

CT *käş* 'eyebrow; edge, brink, front' = Mo. *qalja* 'directly in front or ahead; frontal band or stripe for decoration'

CT *kaşı-* 'to scratch' = Chuv. *χis-* id. < **kaç-* < **kalçi-* = Mo. *qalçi-* 'to scrape off' (first suggested by Gombocz, KSz XIII, 14)

CT *kişänä-* 'to neigh', Az., etc. *kişnä-*, Trkm. *kişne-* id., Kirg. *kişene-* id. = Chuv. *kěšen-* id. < **kilçänä-* = Mo. *ingçayä-* id., Muk. *inqilçaqa-* id.

CT *korgaşın* 'lead' (MK *korogsın* < **korgošın*, CC, Tuhf., Kum. *korgaşın*, Kirg. *korgošun*, Kzk. *korgasın*, Tat., Bşk. *korgaş*) = Mo. *qorjalji(n)* id. < **qorjalji(n)*

CT *üş-* 'to crowd, throng, come together' = Mo. *üyilje-* id. < **übilje-*

CT *yaşı-* 'to shine, flash, lighten' = Chuv. *śis-* id. < **yilç-* < **yalçı-* (cf. QB *yalçık* 'moon' < **yalçı-k* = Mo. *gilayi-* 'to shine, be (come) shiny, glitter', Muk. *qilçayi-* 'to shine, flash' < **gilçayi-*

CT *yaşın* 'lightning' < *yaşı-n* = Chuv. *śisēm* id. < **yalçı-m*

MK (Oghuz) *aşak* 'foot of a mountain', Trkm. *aşāk* 'the lower part, bottom; down, downward, below' < **alşāk* < **alçāk* ~ Uig. *alçak* 'humble, modest', MK *alçak* 'mild, gentle', Chag. *alçak* 'vile, base, abject', Osm. *alçak* 'humble, modest; mild, gentle', *alşax* id., etc. < **alçāk* = PB **alçag* > Hung. *olcsó* [olçö] 'cheap'.

Furthermore, in connection with the correspondence Chuv. /ś/ = CT /ş/ = Mo. /ç/ I have given some examples displaying the alternation /ç/ ~ /ş/ within Turkic (1989: 341-345).

Orkh. *kikşür-* 'to incite' ~ MK *kikçür-* 'to make to things strike one another, incite' < **kik-iç-ür-*

MK *yapşun-* 'to adhere, stick to' ~ *yapçun-*, *yaβçun-*, *yapçın-* id. < **yap-iç-in-* = Chuv. *śipsän-* id. < **yapçın-*

MK *yapşur-* 'to stick, paste, glue' ~ *yapçur-*, *yaβçur-* < **yap-iç-ur-*

MK *yapuş-*, *yapış-* 'to stick, cling' ~ QB 401, 1409 *yapçur* 'it clings' < **yap-iç-ur* = Chuv. *śipās-* 'to adhere, stick to' < **yapıç-*

Uig. *tapşur-* 'to hand over, entrust something to someone' ~ MK *tapçur-* id. < **tap-iç-ur-*

Orkh. *kabiş-*, Uig. *kaviş-* 'to come together, assemble', MK *kafuş-* id. ~ *kapçak* 'the place at which the waters from the branches of a river flow into one another' < **kabçak* < **kab-iç-*

CT *kurşa-* 'to gird; to surround, encircle' ~ Alt., Kirg. *kurça-* id., Khak. *xurça-* id.

CT *yumşa-* 'to become soft' ~ Tuv. *çımça-* id., Yak. *simnā-* id. < **yımça-* = Chuv. *śemśe* id. < **yemçe-*

Orkh. *yemşak*, *yimşak* 'soft', MK, etc. *yumşak* id. ~ Tuhf. *yümçak* id. = Chuv. *śemśe* id. < **yemçek*

To these word pairs displaying the alternation /ç/ ~ /ş/ within Turkic we may also add the following examples: Uig. *kırşal-* 'to be wounded' ~ MK *kırçal-* 'to be fractured' (Erdal 1991:664), MK *kökşin* 'grayish' ~ QB *kökçin* id. (Erdal 1991:103).

Erdal holds the view that such examples display the sound change /ş/ > /ç/, and not /ç/ > /ş/ (op.cit.). I see no reason why a medial cluster like /rş/, for example, should change to /rç/ in Old

and Middle Turkic. As Chuv. *χirēs* 'opposite, against' < **χirsē* < **karçı* (= CT *karşı* id. < MK *karış-* 'to stand against each other, be opposite, quarrel; to meet, encounter' < 'to come across, come face to face, join, meet' = Mo. *qarılça-* 'to be connected or related to each other; to establish connection') clearly shows, the phoneme /*ş*/ in this word is only secondary going back to an original /*ç*/. So is the /*ş*/ in MK *kökşin* (cf. Mo. *kökegçin* 'bluish-gray' < *köke* 'blue', *siraljin* 'sage-brush, *Artemisia vulgaris*' < *sira* 'yellow', *çagalji* 'lake-salmon with white flesh' < *çagan* 'white', etc).

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The Chuvash and Common Turkic data for the second correspondence, i.e. CT /*ş*/ = Chuv. /*ś*/, have recently been collected by Ane H. Nauta (1985:123-144). They consist of the following words: *kisen-* 'to neigh' (MK *kişnä-*, Trkm. *kişne-*), *semēs-* 'to become soft' (MK *yumşa-*), *semše* 'soft' (MK *yumşak*), *śis-* 'to shine, flash. lighten' (Uig., MK *yaşu-*), *śisēm* 'lightning' (MK *yaşın*), *χis-* 'to scratch' (MK *kaşı-*), *ēs* 'work' (MK, Trkm. *ış*, Yak. *īs* 'needlework'), *pis-* 'to cook' (Uig., MK *bış-*, Trkm. *bış-*, Yak. *bus-*), *pus* 'head' (OT *baş*, Trkm. *baş*, Yak. *bas*), *şıs-* 'to swell' (MK *sış-*, Trkm. *çış-*, Yak. *is-*), *śimēs* 'fruit' (Uig., MK *yemiş*, Trkm. *îmiş*), *śipās-* 'to stick' (Uig. MK, Trkm. *yapış-*), *χirēs* 'opposite' (Uig., MK *karşı*, Trkm. *garşı*), *χirēs-* 'to quarrel' (Uig. *karış-*, Yak. *çarıs-*), *-ś-* reciprocal suffix (OT, Trkm. *-ş-*, Yak. *-s-*).

To these, the following derivatives of *pus* < *baç* may also be added:

puśar- 'to start, initiate' < **baçgar-* < **balç+gar-*
puśan- 'to begin' < **baçın-* < **balç+ı-n-*

In the same article, Nauta also gives a list of 18 reciprocal/cooperative stems formed with the now unproductive suffix {-*ś*-}. The list is as follows:

1. *avr-ăs-* 'to become distorted; to warp (of wood)' = OT *ävr-iş-*
2. *än-ăs-* 'to be(come) successfull' < **uη-us-* = Trkm. *oη-uş-* id.
3. *kala-ś-* 'to speak' = MK *kälä-çü* 'talk, conversation'

4. *kan-ăs-* 'to be consoled, pacified' < **kän-iś-* = ? Tat. *kinän-* 'to be delighted'.
5. *këv-ës-* 'to envy, be jealous' < **küy-üş-* = OT, MT *küy-*, *kün-* 'to catch fire, burn'
6. *kurän-ăs-* 'to meet with' = OT *körüş-* id., *körün-* 'to be seen'
7. *pët-ës-* 'to join, meet' = Trkm. *bit-iş-* id.
8. *şap-ăs-* 'to fight' < *şap-* 'to beat'
9. *şirt-ăs-* 'to bite' < *şirt-* 'to bite' = CT *ısr-* 'to bite' or *yirt-* 'to tear'
10. *şuraś-* 'to become reconciled; to agree with one another' < **yara-ś-* = OT *yara-ş-* id.
11. *şänăs-* 'to hide oneself, be concealed' < **şinj-iś-* = Trkm. *şinj-iş-* id.
12. *şu-ś-* 'to slip, slide, glide' < **şuv-uś-* ? = Tat. *şuw-iş-*, Bşk, *şuw-iş-* id., Tuv. *soy-*, Kirg. *soylo-* id., Trkm. *süyş-* 'to move quickly, shift' (< **soy-uş-/soy-uş-*)
13. *tap-ăs-* 'to kick one another' < **täp-iś-*) = MT *täp-iş-* id.
14. *tat-ăs-* 'to agree together, come to a mutual understanding, decide together' < *tat-* 'to decide (on a matter), solve (a problem)'
15. *tităs-* 'to seize one another' < **tut-uś-* = OT, MT *tut-uş-* id.
16. *tiv-ës-* 'to fall to someone's share; to be obliged or compelled' < **tig-iś-* = CT *täg-iş-* 'to reach; to attack'
17. *vales-* 'to distribute, share' < **ölä-ś-* = OT, MT *ülä-ş-* id.
18. *vär-ś-* 'to make war, fight' = OT, MT *ür-uş-* id.

To these, the following stems should also be added, for they, too, are reciprocal/cooperative stems historically, although their bases are not found in present-day Chuvash: *virnaś-* 'to settle down' < **orna-ç-* = CT *orna-ş-* id., *şipăs-* 'to stick, adhere' < **yap-iç-* = CT *yap-iş-* id. (mentioned by Nauta as a base), *şirës-* 'to oppose, stand against' < **kar-iç-* = CT *kar-iş-* id. (mentioned by Nauta as a base). Finally, I believe that we have one more such rec./coop. stem to add those mentioned above: *şänăs-* 'to have enough space; to settle down; to take refuge, hide oneself' < **sig(i)n-iç-* = CT **sig(i)n-iş-*. Thus, we have 22 verbal stems formed with the genuine Chuvash rec./coop. suffix {-*(Ă)ś-*}.

Nauta argues that the bases of the 18 stems in his list are of different origins. According to him, two of these, i.e. **şän-* and *şu-*, are genuine Chuvash verbs, three are Tatar loanwords (*än-*, *tiv-*, *tit-*), five are of unknown or problematic origins (*kala-*, *kan-*, *şap-*,

śirt-, *tat-*), the remaining eight could be either genuine verbs or Tatar loanwords (*avār-*, *kěv-*, *kur-*, *pět-*. *śura-*, *tap-*, **vale-*, *vār-*). I do not agree with Nauta on this view of his. *kala-* 'to speak' is a genuine Chuv. verb going back to an older and original **kälä-*. It is true that this verb does not occur elsewhere within Turkic, but its derivative *käläçü* 'talk, conversation' does occur in MK, as mentioned by Nauta. It also occurs as *käläji* in Old Anatolian Turkish.

Chuv. *kan-* 'to rest, come down' is certainly cognate to Kzk. *kene-* 'to be content, be satisfied', Nog., Kar.H. *kenen-* id., Tat. *kinän-* 'to be happy, delighted', Kum. *genen-* id., Trkm. and Trk. *gönen-* id. The base is not attested in Old and Middle Turkic, but this does not mean that such a verbal base did not exist in Turkic. The alternation *ä ~ ö* observed here, reminds one the alternation *i ~ ü* seen in Az *dib* 'bottom' ~ Trkm. *düyp* < **tüp*, Az. *did-* 'to pick into fibres' ~ Trkm. *tüyt-* < **tüt-*, CT *yit-* 'to get lost' ~ Yak. *süt-*, etc.

Chuv. *śap-* 'to hit, beat, strike' may come from an early palatalized form of CT *çap-* the original back-vocalic form of which survives in Chuvash as *śup-* 'to slap, clap; to applaud' (cf. Trk. *yeşer-* 'to become green' alongside *yaşar-* 'to become wet (of eyes)', both coming from **yāşar-*).

Chuv. *śirt-* 'to bite' cannot be a borrowing from Tatar because of its initial /ś/ and cannot go back to **ıśir-* for the same reason (**ıśir-* would have had the shape **āşār-* in Chuvash). It probably comes from **yirt-* (for the retention of /i/, cf. Chuv. *śir-* 'to write' < **yır-* = CT *yaz-*).

The base of Chuv. *tatāś-* 'to agree, agree together, come to an agreement' may go back to an older **tet-*, i.e. the base of MK's *tet-il-* 'to be quick-witted, be intelligent' and *tetik* 'quick-witted, intelligent'.

Finally, Chuv. *ān-*, *tiv-* and *tıt-* do not have to be borrowings from Tatar, because there are examples for the vowel correspondences /o-/ = /a-/ , /ä/ = /i/ and /u/ = /ı/ between Common Turkic and Chuvash, e.g. CT **omur* 'breast of a horse' = Chuv. *āmār* id., *kārāk* 'is necessary' = Chuv. *kırle* id., CT *suw* 'water' = Chuv. *śıv* id., etc.

To sum up, it may be claimed that the bases of the 22 reciprocal/coordinative stems in {-*(Ā)ś-*} are all genuine Chuvash verbs.

Since the genuine Chuv. suffix $\{-\check{A}\check{s}-\}$ has long become unproductive, it would only be natural for it to be found in genuine Chuvash verbs. To say it reversely, an unproductive suffix would not have been added to recent borrowings. In fact, this is all what we now find in Chuvash.

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In addition to the Mongolian, Chuvash (and Volga Bulgarian) data we also have the Hungarian data, i.e. the Old Chuvash or Proto-Bulgarian loanwords, supporting the sigmatism in Chuvash, i.e. the development $/\check{c}/ > /s/$. According to Ligeti (1980:222-250), the relevant Hungarian data consist of the following:

gyümölcs [jümölç] 'fruit' < **jimelç* > Chuv. *sîměš* = CT *yemiş* id.
gyümölcsény [jümölçēn] 'hawthorn' < **jimelçen* = CT *yemişän*
 (MK *yemšan*, Chag. *yemişän*, Osm.dial. *yemişän*, Az.dial. *yemšan*,
 Trkm.dial. *yemšan*)

bölcső [bölçö] 'cradle' < **belçeg* = CT *beşik*

bocsán-ik [boçän] 'to become free' = CT *bošan*-

bocsát- [boçät] 'to free' = CT *bošat-*

búcsú [būçü] 'departing, farewell; indulgence' < **boçug* = CT
boşug

In his article, Ligeti also gives all the attested forms of these words in old Hungarian sources and dialects: for *búcsú* [būçü] he cites *bolczo-* (1448) and *buçu* (1495) from the historical sources, and *bulcu* [bultsu], *bulszu* [bulsu], *bulcs* [bulç] and *búcsú* [būçü] from dialects; for *bocsát-* he mentions *bulscassa* ~ *bulsassa* (1195) and *boczáta* (1448). However, he holds the view that the liquid $/l/$ occurring before $/ç/$ and $/ş/$ in these Hungarian words is an inorganic consonant and it appears especially after a long vowel. He then concludes that the consonant cluster *lcs* [lç] in such Old Chuvash or Proto-Bulgarian loanwords is purely Hungarian and it cannot be used as evidence to confirm the Altaic hypothesis $*lç > ş$. Furthermore, Ligeti accepts Bárczi's view to the effect that alongside the change $ç > ş$ which occurred in the ninth century, there was also a change in an exactly opposite direction, i.e. the change $ş > ç$, in Hungarian in the same period (1980:246).

Ligeti's view to the meaning that the liquid /l/ in *gyümölcs*, *gymölcvény* and *bölcső* is inorganic does not seem to be convincing. Because, in all the examples he gives for the /l/ epenthesis (*agaççı* 'carpenter' > *ács* > *álcs* 'carpenter', *böğüçi* 'sorcerer' > *bőcs* > *bölcs*, *šivçi* 'furrier' > *scűcs* > *sölcs*), the liquid /l/ appears after a long vowel preceding /ç/ as he also remarks, whereas in the first three words it occurs after short vowels, not long ones.

His (actually Bárczi's) view to the effect that in the same period, i.e. about the ninth century, there occurred also a change $\varsigma > \zeta$ alongside the change $\zeta > \varsigma$ in Hungarian is not convincing either. First of all, it would indeed be difficult to explain the occurrence of two sound changes in exactly opposite directions at the same time. Secondly, it should be emphasized that the examples given by Bárczi for the change $\varsigma > \zeta$ are limited only to Old Chuvash or Proto-Bulgarian loanwords under discussion, an odd case which did not escape from Nauta's eyes either (1985:128). It seems that Bárczi was unable to find genuine Hungarian examples to confirm this hypothetical sound change of his. Therefore, I conclude that the liquid /l/ in the first three words mentioned above is etymological and not inorganic.

As for *bocsán-*, *bocsát-* and *bűcsű*, these words seem to have lost their /l/ in the course of time as understood from their shapes in the old texts and dialects. In other words, it is reasonable to think that the historical forms *bolczo-*, *bulscassa* and *bulsassa* are older than their later forms without /l/. The lengthening of the first /e/ in the dialectal forms *bēcse* [bēçe], *běcsé* [bēčē], and that of the first /u/ in modern *bűcsű* [bűčű] must be due to the loss of the original /l/ occurring after these vowels. All this suggests that the original form of CT *boš* 'free' could actually be **bolç*.

In short, I maintain that the Hungarian data under discussion may well be used as evidence confirming the Altaic hypothesis /**lç*/ = Chuv. /š/ = CT /š/.

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