Turkic *kümüš* 'silver' and the lambdacism vs sigmatism debate*

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Abstract: The goal of this article is to contribute to the debate on lambdacism vs sigmatism by re-examining the etymology of the Turkic word for 'silver'. We propose that the PT etymon reflected in CT *kümüš* and Chuvash *kĕmĕl* is a Wanderwort also found in various ST and AA languages. Although the source and direction of borrowing remain uncertain, all languages except CT have either a final lateral or a segment which originates from a lateral in the proto-language(s). Therefore, the data presented in this article support the idea that the correspondence -š: -l between CT and Chuvash should be reconstructed in PT as a lateral *ɬ rather than as a palato-alveolar fricative *š.

1 Introduction

The goal of this article is to revisit the etymology of the word for 'silver' in Turkic. As there is no obvious internal etymology for this word, researchers have tended to look for an external one and seem to have found it in Chinese. We intend to show that this etymology raises a number of problems which

we will discuss in some detail before suggesting a new way of tackling the data in a broader perspective.

The purpose of our paper is threefold.

First, it rejects the current etymology deriving the word from Chinese which we find untenable. This etymology while possibly not universally accepted among Turkologists seems to be the only one cited in reference works on Turkic etymology.

Second, it proposes a new source for the Turkic word by taking into account data from several other language families, including Sino-Tibetan and Austro-Asiatic which turn out to share the word for 'silver' despite superficially similar names which could imply accidental lookalikes. In doing so, several scenarios are presented as we do not think it possible to be categorical in this matter.

Third, our hypothesis contributes in a non-trivial way to the debate on lambdacism vs sigmatism.

2   Lambdacism, rhotacism and the Altaic debate

There are mainly two sets of correspondences between Turkic languages as far as medial and final -*l* and -*r* are concerned. For the purpose of the present study, only the first one of these will be presented in some detail as it has a direct bearing on the etymology of the Turkic word for 'silver'.

In the case of -*l*, there are words where both Chuvash and Common Turkic (CT, all Turkic languages except Chuvash) have an -*l* and then there are those where Chuvash mostly has -*l* (sometimes -*ś*)[1] while CT has (virtually) only -*š*. The -*l* :: -*š* correspondence was first noticed by Schott [1841:14], then Budenz [1864:243-244] and Ašmarin [1898:92].

The term lambdacism refers to the hypothesis that Proto-Turkic */š/ evolved into Chuvash /l/ Radloff [1882:§ 288], Gombocz [1913], and the term sigmatism to the opposite hypothesis: namely, that Chuvash (as well as Mongolian and Tungusic in certain (loanword) cases) has in a way preserved the PT state of affairs, whereas CT has innovated by changing some of its laterals into palato-alveolar fricatives (Ramstedt). Now since we know that

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[1]And sometimes /-š-/ in what are most probably CT loanwords.

sometimes Chuvash *l* corresponds to CT *l*, the latter hypothesis claims the existence of two types of *l* in PT, usually termed l_1 and l_2, the second one being the one on whose reflexes Chuvash and CT disagree. Hypotheses on the exact nature of the distinction between these two types of *l* in PT vary, but it is usually assumed that l_2 (written *ĺ*, *ľ* or *ł*) was a palatal lateral *[ʎ], a lateral fricative *[ɬ] or even a lateral affricate *[tl~tɬ] or *[tʃl] (cf. Poppe 1925a:33, 1925b:27).[2]

2.1 Correspondences between CT, Chuvash, Mongolic and Tungusic

Here are first some examples of the correspondence CT -*l*/-*š* :: Chuvash -*l*.[3]

	CT	Chuvash	PT (lambdacism)	PT (sigmatism)
road	*yol*	*śul*	*yōl	*yōl$_1$
heart	*köŋül*	*kămăl*	*köŋül	*köŋül$_1$
tongue	*til*	*čĕlxe*	*til	*til$_1$
winter	*qïš*	*xel*	*qïš	*qïl$_2$
stone	*tāš*	*čul*	*tāš	*t(i)āl$_2$
outside	*taš*	*tul*	*taš	*tal$_2$
opposite side	*tuš*	*tĕl*	*tuš	*tül$_2$
silver	*kümüš*	*kĕmĕl*	*kümüš	*kümül$_2$

Table 1: CT -l/-š :: Chuvash -l

These examples show that Chuvash -*l* corresponds sometimes to CT -*l*, and sometimes to CT -*š*. As mentioned in the previous section, this has

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[2]The same is true, mutatis mutandis, of *r* (cf. JOHANSON [1998b:104-5]): sometimes Chuvash *r* corresponds to CT *r*, and sometimes to CT *z*. The hypothesis of rhotacism then says that Chuvash has changed PT *z* into *r* while CT has preserved it, whereas the hypothesis of zetacism claims that it is CT which has changed an earlier *r* into *z*. Under this last hypothesis, we need to posit the existence of two types of *r*, usually termed r_1 and r_2, the second one being the one on whose reflexes Chuvash and CT disagree. Hypotheses on the exact nature of the distinction between these two types of *r* in PT vary, but it is often assumed that r_2 was a palatalized *r* [rʲ] (often written *ŕ*).

[3]The following presentation is based on POPPE [1925a,b], JOHANSON [1998a:104-5], RÓNA-TAS [1998:71-72] and MUDRAK [2002]. Reconstructions of P(roto-)T(urkic) with lambdacism, resp. sigmatism, are given for the sake of illustrating the two choices we face when reconstructing PT.

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prompted two different types of reconstruction, here called PT (lambdacism) and PT (sigmatism), respectively.

Now, in certain (loan)words, Mongolian and Hungarian show a similar correspondence of *-l* to CT *-š* and *-l-* :: *-š-*.

	CT	Mongolian	Hungarian
fall	*tüš*	*döl* 'slope'	*dől* 'to slant; to fall'
noon	*tüš*	(*edyr*) *düli* 'mid[day]'	*dél* 'south; noon'
whelp	*köšek*	*gölige*	*kölyök*

Table 2: CT -š/-š- :: Mongolian -l/-l- :: Hungarian -l/-l-

One particularly controversial but often cited correspondence is the word for 'stone', in which Tungusic seems to pattern in a way similar to Chuvash and Mongolian:[4]

	CT	Chuvash	Mongolian	Evenki
stone	*tāš*	*čul*	*čila(xun)*	*ǰolo*

Table 3: CT -š :: Chuvash -l :: Mongolian -l- :: Evenki -l-

Further examples with Tungusic include the following.

	CT	Chuvash	Manchu
outside	*taš*	*tul*	*tule*
dream	*tül/š*	*tĕlĕk*	*tolgin*

Table 4: CT -l/-š :: Chuvash -l :: Manchu -l-

Furthermore, sometimes Chuvash has *-ś* (instead of *-l*) where CT has *-š* and some old Turkic loanwords in Hungarian have *-lcs*(-) [ltʃ] (cf. Johanson [1998b:105]).

Mongolian shows a similar picture in some words which may reflect old borrowings with *-lǰ-* :: CT *-š-*.

Now, this last word could be analyzed as a (non-attested) Turkic compound involving the word for 'head' (Róna-Tas [1998:72]), which is attested in the Volga Bulgar inscriptions of the 13th–14th centuries as *balǰ~baǰ.

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[4]cf. Kempf [2010], the most recent contribution on this topic, and the references therein.

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	CT	Chuvash	Hungarian
cradle	*bēšek*		*bölcső*
fruit	*yemiš*	*śiměś*	*gyümölcs*

Table 5: CT -š/-š- :: Chuvash -ś :: Hungarian -lcs(-)

	CT	Chuvash	Mongolian
donkey	*ešgek*	*ašak* (<Tat. ?)[5]	*elǰigen*
sparrow hawk	*taz bašı ('bald-headed')		*tarbalǰi(n)*

Table 6: CT -š/-š- :: Chuvash (-ś-) :: Mongolian *-lǰ-*

Given the absence of the sound and corresponding character for /č/ in the Arabic alphabet which these inscriptions use, this could point to the existence of a form *ba(l)č* in the language of the Volga Bulgars (Erdal 1993:107-109, 121-122). Since it is known that Chuvash changed its *č into ś sometimes after that period, the Mongolian and Hungarian data have prompted Altaicists to reconstruct such words with a */lč/ cluster as, for instance, in the above-mentioned word for 'head', whereas anti-Altaicists would see in such cases either a later borrowing from another Turkic language (usually Tatar), or an internal derivation by means of some kind of suffix (possessive in the case of the word for 'head') (Fedotov [1996:452-3]).

	CT	Chuvash	PT (lambdacism)	PT (sigmatism)
head	*baš*	*puś* (not *pul)	*baš	*bal$_2$č
sword	*qïlïč*	*xěś* (not *xěl)	*qïlïč	*qïlïč

Table 7: CT -š/-š- :: Chuvash -ś

Interestingly, the word for 'sword' seems to preserve this cluster thanks to the insertion of an anaptyctic vowel.

Altaicists would thus claim that the various Mongolian, Tungusic and Hungarian correspondences, when they seem to agree with the Chuvash ones, are proof of a genetic relationship between the Turkic, Mongolic and Tungusic languages, whereas Anti-Altaicists would say that all these words are either loanwords from a Bulgar(Chuvash)-type Turkic language or else are loanwords in Chuvash or have an independent internal explanation in

that language.

The *l* vs. *š* controversy is further complicated by the existence in CT of *l*-forms alongside *š*-forms in words such as *tül* 'dream' (attested in Old Uighur and preserved in Yakut, cf. RÓNA-TAS [2007:1]), which has a more common variant *tüš*, and the corresponding verb *tüšä-* 'to dream', attested in OT in the collocation *tül tüšä-* 'to have a dream'. Some researchers (cf. RÓNA-TAS [1998:72], RÓNA-TAS [2007:8], following Ligeti) take this to mean that the change from l_2 (=/š/) to l had started already in the ancestor of CT and Chuvash, but shortly after the ancestors of the Chuvash moved out, and so it came to a halt in CT but went to completion in Chuvash.

Judging from the data, and following Poppe (1924:43-44, 1925a:32-34, 41-42), it seems plausible to us to reconstruct two types of laterals, an ordinary one */l/ (with front and back variants, as denoted by the runiform script, L1 and L²) and a fricative one */ɫ/, both of which could combine with */č/ in two types of clusters */lč/ vs. */ɫč/. Ordinary /l/ was preserved in all varieties of Turkic, whereas the fricative lateral merged with */l/ in Chuvash, but with */ɫč/ in Common Turkic where it further developed into */š/. The */lč/ cluster was preserved in Common Turkic by means of an anaptyctic vowel but merged with */ɫč/ in Chuvash to give */ś/, after possibly losing its lateral component.

2.2   Borrowing vs. Inheritance

The debate on lambdacism vs sigmatism together with the one on rhotacism vs zetacism is one of the most vexed issues in the field of Turkology as it seems to be almost invariably associated with the Altaic debate, i.e. the claim that the Turkic, Mongolic, Tungusic, and according to STAROSTIN [2003] and ROBBEETS [2005] (to cite but the most recent literature on the subject), Korean and Japanese languages, are part of a larger language family called Altaic.

Altaicists generally are also sigmatists (and zetacists), that is they claim that the above-mentioned correspondences show that Chuvash (and the Mongolian and Hungarian 'cognates' and loanwords, respectively) has merged the PT two types of *l* (and *r*), whereas the rest of Turkic has innovated by changing one type of *l* (and *r*) into *š* (and *z*, respectively).

We think that the two questions should be kept separate since even if it were proved that it is sigmatism and zetacism that really took place and thus Chuvash is really conservative in a way, 'cognates' in Mongolic languages could very well be old loanwords from Proto-Turkic and thus positing a genetic relationship does not seem to us to be the only logical consequence of this (hypothetical) fact.

We now turn to the Turkic word for 'silver' which we believe can contribute to this debate.

3 The history of the word 'silver' in Turkic

3.1 Ancient attestations

The word *kümüš* is attested since the 8th century. It occurs nine times in the following runiform inscriptions: Kül Tegin (3 examples) (1st side, line 11, 3rd side lines 5 and 14), Bilge Kagan (3 examples: 1st side, line 12, 2nd side lines 3 and 11), Begre (1 example), Tonyukuk (1 example: line 48), Golden vessel (1 example).[6]

The coda consonant is written with the runiform letter for Š[7] in seven out of nine instances, the remaining two using the runiform letter for S (Bilge Kagan and Tonyukuk).

It is noteworthy that there are six instances (1 in Kizil-çira II, E-44; 4 in Köjeelik-Hovu E-45 and one in El-Bazhy E-68) of what appears to be an ethnonym of the form *Kümül* (often preceded by *yüz* 'a hundred') which might be an earlier variant form of *kümüš* (cf. also Róna-Tas [2007:9]).

3.2 Attestations in modern Turkic languages

The word is attested in all modern Turkic languages, and it is possible to reconstruct a proto-form of the type *kümüš, or alternatively *kümül$_2$.[8]

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[6]Quoted after the electronic version of the texts available on Türik bitig, the website of the Language Committee of the Ministry of Culture and Information of the Republic of Kazakhstan at http://irq.kaznpu.kz, last accessed in June 2011. Often in the collocation *altun kümüš*.

[7]This letter seems to be derived from the one used for the palatal variant of /l/, cf. Stachowski [1998]

[8]For a detailed list of Turkic forms see Rybatzki [1994:211].

Language	Form
Turkish, Azeri, Gagauz, Kumyk	*gümüš*
Turkmen	*kümüš*
Karachay-balkar, Kirghiz	*kümüš*
Kazakh	*kümis*
Khakas	*kümüs*
Tatar	*kömeš*
Bashkir	*kömöš*
Yakut	*kömüs*
Chuvash	*kĕmĕl*

Table 8: Modern Turkic reflexes

Initial voicing in Oghuz languages is regular, though not universal (cf. Turkmen), as is lowering of *ü* in Tatar and Bashkir, but not in Yakut (!), where earlier *ü* and *ö* are usually preserved.

Nevertheless, the Chuvash form has *ĕ* and so points to an earlier *ü*, as *ö* would have given *ă* as in the word for 'heart; mind' *köŋül > kămăl* (see Table 1).

3.3 Borrowings into Non-Turkic languages

The Turkic word for 'silver' has been borrowed in some of the Yenisseian languages (Kot, Arin, Assan, Pumpokol), where it generally means 'silver', except in Pumpokol where it is used to refer to 'gold' (*kümüč*), the word used for 'silver' in this language being probably cognate with the Yenisseian word for 'leaf' (cf. WERNER [2005:241; 267]).

It has also been borrowed in some Caucasian languages, usually through Azerbaijani.

On the other hand, Mongolic languages have not borrowed it as they have another (unrelated) word of similarly debatable origin (cf. RYBATZKI [1994]), *mönggün*, which has itself been borrowed by Tungusic languages and even some Turkic languages which have been heavily influenced by Mongolic and/or Tungusic and which now have two words for 'silver' (cf. Tuvan).

This is an important fact since Mongolic and/or Tungusic forms are often cited in an effort to prove a cognate relationship between them and their Turkic counterparts, and further press on the point of the primacy of *l*-forms, for instance, but this is simply not possible in the case of the word for 'silver'.

4 Proposed etymologies

4.1 Internal etymologies

Rybatzki [1994] is the first attempt at an internal etymology as far as we can tell.

In view of the difficulty to explain the Turkic form by the often-cited Chinese donor form, Rybatzki [1994:212] notes that, methodologically speaking, it could be a better idea to look for an internal etymology before trying to explain the Turkic word by a foreign one. He then goes on to suggest a possible internal derivation of the word from a(n apparently) nominal root *küm- and the noun-forming denominal suffix *-üš*, for which he gives two examples: *bağïš* 'rope' < *bağ* 'tie; joint' and *bügüš* 'wisdom' < *bügü* '(a) wise (person)'. Concerning the nominal root he reconstructs, he suggests it might be a variant form of *kün* 'sun' given that, according to him, terms denoting 'silver' often have astral associations to them. However, since there seems to be no such variant of the word for 'sun' in any of the Turkic languages he is forced to reconsider the Chinese source as a possibility, although in a slightly modified form.

First, even if it is problematic, as he himself points out, Rybatzki's try at an internal etymology for *kümüš* is a welcome change and is the first attempt at finding an internal explanation for this word as far as we can see. We do agree with him that looking for an internal explanation must always precede the search for an external one.

The main problem with this etymology according to Rybatzki himself is the absence in Turkic of a form *küm which would be the missing link between the word for 'sun' *kün* and the word for 'silver' *kümüš*, under the assumption that such a link exists.

This, however, is not entirely true since we do find in the Kızıl dialect of

Khakas the form *kum* in the expression *кум харағы* (*kum xarağı*) instead of standard *кӱн харағы* (*kün xarağı*) 'sunny spot' (Subrakova [2006:211; 214]). Nevertheless, this form seems to be a hapax legomenon, since descriptions of this dialect do not mention a change ü > u and that the word for 'sun' in this dialect has a dental and not a bilabial nasal according to all extant historical attestations, which nevertheless seem to confirm the non-front character of the vowel[9]. A possible, though maybe not too probable, explanation for the form *kum* might be the following: In an 18th century dictionary giving Khakas dialect equivalents to Russian words the Kızıl dialect word for 'sun' (солнце) appears as *кун карағы* (*kun karagı*, lit. 'sun/day eye') (Borgojakov [1973:125]). Now, given that the /-n/ of *kün* could easily assimilate to /-ŋ/ in front of the initial velar sound /k-/ of *karagı*, we could assume a further development along the lines of an Old Uyghur change of /-ŋ/ into /-m/, exemplified in the expression *yürüŋ karak* > *yürüm karak* 'white eye' (cf. Erdal [2004]). All of this is of course highly hypothetical and does not come close to rescuing the internal etymology of Rybatzki.

A second problem with this etymology is the link between the word for 'silver' and the word for 'sun'. The word for 'silver' in those languages where we do know its etymology is usually derived from a root meaning 'white ; shiny ; luminous'. This is the case of one of the two names of this metal[10] in the Indo-European languages: PIE *$h_2$erĝ-n̥t-om~*$h_2$reĝ-n̥t-om (e.g. OIr argat, Lat argentum, Arm *arcatʿ*, Av *ərəzatəm*, Skt *rajatám*, Toch B ñkante [with *r. . . n assimilated to *n . . . n]), which is possibly derived from an adjective *$h_2$erĝ-n̥t (genitive *$h_2$erĝ-n̥t-ós), meaning 'white' (cf. Mallory [2006:242]).

Now, even if it is true that all of those could easily be used to speak of the sun as well, the name of the sun is usually derived in these same languages from a root with the meaning 'to burn'.

Indeed, since the Turkic word *kün* can also mean 'day' (and it is in this meaning that it is used in Modern Turkish, for instance, although not in the majority of Turkic languages where it can mean both 'sun' and 'day') we could compare it to the English word 'day' which comes from Proto-

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[9]And all of them do distinguish back /u/ from front /ü/.

[10]The other one, present in Germanic, Baltic and Slavic is best viewed as a non-Indo-European *Wanderwort*.

Germanic *dagaz <*dʰógʷʰ-os, a noun of the type τόμος derived from the Indo-European root 'to burn' *dʰegʷʰ- (Rɪx [2001:133-4]), which seems to be the most common IE verb for 'burn').

Therefore, we find it quite reasonable to connect the Turkic word for 'sun' with the verb *köń-/köj-/küj-* 'to burn' (cf. Sevortjan (1997)), but would be more reluctant to do so in the case of the word for 'silver'.

4.2 External etymologies

The attempts at finding an external etymology for the Turkic word 'silver' have always, as far as we know, invoked a Chinese source. Despite certain minor variants, all of the external etymologies see the Chinese word 金 jīn (today usually 'gold', but it can also be, and certainly was, used as a generic term for 'metal').

Rᴀᴍsᴛᴇᴅᴛ [1949:116] suggests that *kümüš* is related to Sino-Korean *kim* 'gold; metal'. Taking into account the Chuvash form of the word, *kĕmĕl*, he reconstructs a proto-form *kümül which he in turn derives from *küm+li, implying that after vowel harmony has taken care of rounding the suffix vowel a metathesis occurred. Jᴏᴋɪ [1952:210], Räsänen [1969:308b], Cɪɴ-cɪᴜs [1979:25-6] and Dʏʙᴏ [2007:67] all derive the Turkic word from a non-attested Chinese compound *金鐐 jīnliào[liáo] (MC kimlew OC *kəm *k(r)[ə]m-*rˤew *[r]ˤew[11]).

Joki and Räsänen translate this compound literally 'gold; metal' and 'argent'. Cɪɴcɪᴜs [1979] translate it as 'pure silver'. Menges (1983: 120) says it means '(pure, precious) metal'.

Rʏʙᴀᴛᴢᴋɪ [1994:212] notes that if such a compound had ever existed in Chinese its meaning would have been 'wealth', the true meaning, according to him, of the oft-encountered Turkic compound *altun kümüš* which is usually translated as 'gold and silver'. He thinks that this compound could well be a calque of Chinese 金銀 *jīnyín.*

Since he is unable to find a satisfactory internal etymology, Rybatzki accepts the Chinese origin of the word, but rather than looking for it in a non-attested compound, he proposes that it is derived from the Chinese word

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[11]The MC and OC forms are cited after Bᴀxᴛᴇʀ [1992] and Bᴀxᴛᴇʀ [2011].

金 *jīn* meaning 'gold' but also, originally, any kind of 'metal', to which a rare noun-forming denominal Turkic suffix *-üš* was added (cf. previous section). This means that the word originally meant '(precious) metal', as this is the meaning in which Turkic borrowed it from Chinese. Rybatzki cites as proof of this original meaning of the word data from Yakut where the meaning of this word varies according to the preceding adjective: with 'white' it does mean 'silver', but in the case of 'red' it means 'gold'. The Yakut data is also used by Levitskaja's article on *kümüš* in Levitskaja [1997] to hint at the same possibility with no reference to Rybatzki [1994].

Apart from the fact that the Chinese compound *金鐐 jīnliào is not attested, this etymology is also problematic from a semantic and a phonetic point of view.

First, syntactically the only possibility for a N1N2 compound in Chinese is that N1 modifies N2, which in this case would be completely meaningless. The only other possibility is that it was a kind of binomial (or paired) as is the case of Chinese 金銀 jīnyín.

Even more importantly, phonetically the hypothetic Chinese compound should show up in Turkic as *kimle or *kimli, and even maybe *kümlü but the following metathesis one has to posit in order for this etymology to work is completely unwarranted.

What complicates matters a little bit more for this etymology is that the reverse order in this binomial pair, i. e. 鐐金 *liào jīn*, is attested, in 11th century Chinese with the meaning 'refined silver' (精美的银子, cf. Luo [1986-1993]) in the New Book of the Tang (新唐书·宣宗十一女传) (1060) where we read the following:

> 舊制：車輿以鐐金扣飾。帝曰：我以儉率天下，宜自近始，易以銅。
> According to the old system, (a imperial princess's) chariot has to be adorned with silver. The Emperor said: 'In order to set the example of frugality to the whole world, it is better to start with my close relatives: we will use bronze instead.'

This is of course quite late, and is really (another) hapax legomenon but we find it important to mention its existence.

It is important to note that except for Rybatzki, all the other researchers adhere to the Altaic hypothesis which forces them to consider the Chuvash

form more conservative in a way, at least as far as its /l/ is concerned, and so to look for external sources which would have an /l/ sound.

As we mentioned earlier, the problem of whether l_1 and l_2 were really two laterals or number one was a lateral and number two a palatal sibilant is almost invariably associated with the debate on the existence of an Altaic language family.

This means that an anti-Altaicist would never resort to a foreign form which has an /l/ and claim that it is the source of a word which in Turkic participates in the CT :: Chuvash /l/, /š/:: /l/ correspondence. Indeed, in this case CT /š/ would have to reflect PT l_2 and the logical consequence of this is assumed to be that the Altaic languages must hark back to a common ancestor.

To sum up, none of the etymologies we have found in the literature, internal or external, seem convincing to us. In the next section, we are going to propose another one which we think is better as it not only takes into account data from Turkic but also from several other language families where the word for 'silver' seems to be derived from the same root.

5   Turkic 'silver' in a broader context

Trombetti [1923:452], Róna-Tas [1970:507-8] and Sagart [1999:203], among others, have pointed out that a series of forms reminiscent of Old Turkic *kümüš* and Chuvash *kĕmĕl* are found in various languages of the Sino-Tibetan and Austro-Asiatic families.

5.1   Austroastic (Palaungic *kmuul)

In Austroasiatic, we find two groups of languages where the word for 'silver' is strikingly similar to the Turkic form: Palaungic and Khmuic. These two branches are not believed to be particulary close in the Stammbaum of the Austroasiatic family.

Palaungic is a very diverse branch, comprising over thirty languages spoken in Yunnan and Burma. Fortunately, the historical phonology of these languages is relatively well known thanks to the work of Diffloth

[1980] and Sɪᴅᴡᴇʟʟ [2010]. Dɪꜰꜰʟᴏᴛʜ [1980:#19-1] reconstructs *kmɨl 'silver, money' for proto-Waic, a subbranch of Palaungic, and Sɪᴅᴡᴇʟʟ [2010:#537] proposes proto Palaungic *kmuul 'silver'.

The Khmuic languages, spoken in northern Laos and neighbouring Thailand and Vietnam, are relatively well described, though no complete reconstruction has been published yet. Sᴜᴡɪʟᴀɪ [2002:#106] reports the form *kmuːl* 'silver' in Khmu.

In both branches, the noun 'silver' goes back to a form *kmuul which looks like the Turkic word with syncope of the first vowel.

5.2 Sino-Tibetan

5.2.1 Western Tibetan ṣmul / χmul

In Sino-Tibetan, lookalikes to the Turkic and Austroasiatic forms are found in five distinct branches: Western Tibetan, Tamang, Western Himalayish, Tani and Burmish. As Khmuic and Palaungic in Austroasiatic, these branches do not form a coherent cluster within Sino-Tibetan. Tibetan and Tamang are relatively close to one another, and some authors believe that Western Himalayish and Tibetan form a 'Tibeto-Kinnauri' node, but Tani is not considered to be close to either Tibetan or Burmish by any author (see Sᴜɴ [1993] for a detailed discussion).

We do not present here an exhaustive review of all the primary data on these languages, as not all references are readily available. Whenever possible, we have chosen the most reliable sources.

Western Tibetan dialects, spoken in Ladakh (North-west India) and Baltistan (Northern Pakistan), have forms such as *ṣ, x, χmul* for 'silver' instead of common Tibetan *dŋul* :: Balti *xmul* 'silver' (Bɪᴇʟᴍᴇɪᴇʀ [1985:232]) or Purik *ṣmul* 'rupee' (Zᴇᴍᴘ [2006:79-80]).

Tamangic, spoken in Nepal, is a group universally considered to be close to Tibetan. We find ⁴*mui* in Risiangku Tamang and similar forms in other varieties (Mᴀᴢᴀᴜᴅᴏɴ [1994]). Note that in these languages, final *–l generally changes to –i, and all initial clusters other than C{r, l, j, w} have been lost.

West Himalayish is a group of languages spoken in Himachal Pradesh

and Uttarakhand (North-Western India), comprising Pattani/Manchad, Byangsi, Darma, Chaudangsi and Kinnauri. We find *mul* in Darma (Willis [2007:581]), and the STEDT online database cites the forms Pattani *mul* and Kinnauri *mölh* (from notoriously unreliable sources). The only complex onsets in Darma (Willis [2007:61-2]) and other West Himalayish languages are of the C{w,j} type; a complex cluster such as /km/ is not permitted by the phonotactics of these languages, as in Tamang.

The Tani languages, spoken in Arunachal Pradesh (North-Eastern India) and neighbouring Tibet, are better known than many branches of Sino-Tibetan thanks to the comparative work of Sun [1993] and the grammar of Galo (citetPost08).

Although some Tani languages have borrowed their word from 'silver' from Indic or Tibetan (Sun [1993:60,352]), we also find `murkoo 'silver' in Galo (Rwbaa et al. [2009]) and Bengni According to Sun [1993:213]'s sound laws, the syllable *mur-* in Galo and *mɯr-* in Bengni can come from proto-Tani *mul. Note the synonym *mul 'amiss (verbal particule)', Galo 'mur 'mistakenly'. We can therefore propose a proto-Tani *mul 'silver' based on Galo and Bengni. Only clusters of the type C{r, l, j, w} can be reconstructed for proto-Tani (Sun [1993:55-7]) and even these have been simplified in most languages.[12]

Lolo-Burmese is perhaps the best documented of all the branches of Sino-Tibetan, spoken from Eastern Bangladesh to Vietnam, with the greatest diversity in Yunnan (China). The word usually reconstructed for 'silver' in proto-Lolo-Burmese is *C-ŋwe[1] (Bradley [1979] #401b), but in several Loloish languages this etymon has become the autonym (Bradley [1979]) and it was replaced by the word *plu[1] 'white' (#501) in the meaning 'silver'.

However some Burmish languages such as Hpun (Henderson [1986]), have forms that could go back to proto-Lolo-Burmese *mwe and pre-proto-Lolo-Burmese *mul by regular sound laws. The actual Hpun form for 'silver' is *myáiŋ*. The rhyme Hpun *−aiŋ* has many distinct origins in proto-LB (quoted from Bradley [1979]):

Given the correspondence of 'hair, feather', a proto-form *mul[1] is there-

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[12] We find a similar form also in Sulong, a language of unclear affiliation which is probably unrelated to Sino-Tibetan: *lə³¹mɯɯŋ⁵⁵* 'silver'. This may be a borrowing from some Tani language.

	PLB	PNC	Tibetan	meaning
myàiŋ	*ʔ-mwe³ #83	*ʰmʊl² #68		hair, feather
	*m-rwe¹ #60	*rul¹ #69	*sbrul*	snake
aíŋ	*yim¹ #341	*ʔɪn²	*khyim*	house
ăʃaìŋ	* (ʃ)-sin² #143	*tʰɪn³ #85	*mǎhin-pa*	liver
ămaíŋ	*ʔ-m(y)iŋ¹ #419	*ʰmɪŋ¹ #72	*miŋ*	name

Table 9: Proto-Lolo-Burmese origins of Hpun −*aiŋ*

fore a possible reconstruction for *myáiŋ* 'silver'. Incidentally, Hpun is spoken between Myitkyina and Bhamo on the Irrawady river in Burma, not far from the Wa-speaking area (see the preceding section).

In all five branches of Sino-Tibetan, the word for 'silver' can go back to a form such as #C-mUl (provisional reconstruction), where #C represents an undetermined consonant and #U a high back rounded vowel. This form again is very similar to Proto-Palaungic *kmuul and Turkic *kümüš*.

5.2.2   Tibetan *dŋul*

The Sino-Tibetan etymon for 'silver' presented in the previous section however is not independent from the most widespread form found across Sino-Tibetan (MATISOFF [2003:415-6]). The following (non-exhaustive) data illustrate attestations of this etymon:

Language	form	Reference
Tibetan	*dŋul*	attested in the Zhol inscription (AD 763)
proto-Lolo-Burmese	*C-ŋwe¹	#401b, BRADLEY [1979]
Tangut	*ŋwo²*	#3572, LI [1997]
Old Chinese	銀 *ŋrən	

Table 10: Words related to Tibetan *dŋul* across the Sino-Tibetan family.

This word spread from Chinese to various Kra-Dai and Hmong-Mien languages, and through Thai to some varieties of Austro-Asiatic. The correspondence between Chinese *-ən or *-un (which cannot always be clearly distinguished in the reconstruction due to phonotactic constraints) and Ti-

betan *–ul* might seem counterintuitive, but many examples of this correspondence have been brought to light (Gong 1995 [2002:103]):[13]

Chinese	Meaning	Tibetan	Meaning
分 *pən	share	*'phul*	offer
貧 *brən	poor	*dbul-po*	poor
塵 *drən	dust	*rdul*	dust
鈍 *dˤun-s	blunt, dull (knife)	*rtul-po*	blunt

Table 11: Examples of the correspondence between OC *-ən/-un and Tibetan *-ul*

Although no reconstruction of Sino-Tibetan is possible at the present moment, the Tibetan form can come from a pre-Tibetan *C-ŋul, where C represents a dental or a velar stop: the contrast between prefixal *k/g- and *t/d- is neutralized even in Old Tibetan (Lɪ [1933]).

In Western Tibetan dialects, thanks to the work of Marius Zemp (2006: 79-80), it is clear that the forms with *m-* presented in the previous section are secondary. /ŋ/ generally changes to /m/ before a rounded vowel:

Kargil	Etymology	Meaning
ṣmul	*dŋul*	rupee
ṣŋo ~ ṣmo	*rŋo*	to fry
ṣmultʃhu ~ ṣŋultʃhu	*rŋul-chu*	sweat
ŋu	*ŋu*	to cry

Table 12: Examples of *ŋ > m* in Purik

This sound change does not apply to the simple onset *ŋ-*, and seem to be unstable to some extend in Tibetan, as both variants with *ŋ* and *m* are attested. This suggests a rather recent ongoing sound change across Western Tibetan.

However, no such evidence is available for the four other branches: there is no way to derive /m/ from /ŋ/ in either Tamangic, Tani or Hpun. For West

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[13] We cite here Baxter and Sagart's (2011) reconstruction rather than Gong's, but the comparisons are still valid.

Himalayish, it could be argued that the forms mul 'silver' are borrowed from Ladakhi. Willis [2007:72] reports that Darma speakers are in contact with Tibetan, though she does not specify whether it is Central Tibetan (a dialect with velar nasal in 'silver') or Western Tibetan.

6 Several historical scenarios for the spread of the Wanderwort 'silver'

We now have to explore all logical possibilities to account for the data reviewed so far.

Archaeologically 'silver' is not attested in China before the 6th century BC and techniques of cupellation of galena smelt would only have become practised during the late Zhou and Early Han periods. (Barnard & Sato 1975, Needham et al. 1980, Behr 2008:516-524).

In any case, the late appearance of silver in China and Southeast Asia (Li [1985:336-7]) excludes the possibility that 'silver' could be reconstructed to the proto-Sino-Tibetan or proto-Austro-Asiatic levels.

6.1 Accidental lookalike

Matisoff [2003:416] suggests than the #mul forms are loans from Austro-Asiatic. In this view, the resemblance between the #ŋul and the #mul forms would be a coincidence in languages other than Western Tibetan and West Himalayish. #mul-like forms in Tamangic, Tani and Hpun would be borrowings from Austro-Asiatic. Since Hpun and Palaungic are spoken in neighbouring areas, and since the Austro-Asiatic language Khasi is spoken in Meghâlaya, not far from Arunachal, this explanation could tentatively account for the Hpun and the Tani forms.

The form ⁴*mui* in Tamangic however would be more difficult to explain away as borrowing from a Mon-Khmer language since the hypothesis of direct contact between Tamangic and Mon-Khmer is highly implausible, and even indirect contact is not evidenced by any other term observed so far. The resemblance between Turkic and Austro-Asiatic would also have to be ruled

out as coincidence, since no direct contact can be assumed between Austro-Asiatic and Turkic speakers in pre-historic times. Most importantly, since silver technology (cupellation) seems to have originated in Anatolia a later spread to East Asia from the north is far more plausible.

6.2   ST > Turkic or Turkic > ST

The presence of both *ŋ*-forms and *m*-forms in Sino-Tibetan corresponding only to *m*-forms in Turkic and Austro-Asiatic can be accounted for by each of the following three hypotheses, all of which are compatible with both the ST > Turkic or Turkic > ST borrowing scenario.

1. Assimilation *ŋ* > *m* in Sino-Tibetan

2. Assimilation *ŋ* > *m* in Turkic

3. Dissimilation *m* > *ŋ* in Sino-Tibetan

6.2.1   Assimilation *ŋ* > *m* in ST

In view of the assimilatory change *ŋ* > *m* in Western Tibetan, we could either propose that this change occurred independently in Tani, Tamangic and Hpun or that it took place in another Sino-Tibetan languages and was subsequently borrowed by the three groups. In this view, both the Austro-Asiatic and Turkic forms would have to be borrowed from a Sino-Tibetan language that had undergone the assimilation.

Under the Tibetan > Turkic loanword scenario, the WT form *dŋul* either reflects an earlier *gŋul[14] which was borrowed in Turkic from a (para-) Tibetan language in which *ŋ* > *m*/C_V where C is {r, d} and V a rounded vowel as in Purik (cf. above): WT *dŋul* 'silver' > Purik *ʂmul*, or else the assimilatory change took place in Turkic (cf. 6.2.2).

The drawback of this hypothesis is that Western Tibetan cannot be the source for all of the AA, ST and Turkic forms, and that we have to hypothesize the existence of an unattested Sino-Tibetan language (presumably a

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[14]Since, according to Lɪ [1933] preinitial d- and g- are in complementary distribution in Tibetan, we can posit a phonetic rule of the form *g- > d-/_velar.

close parent of Tibetan) which gave this word to all of the neighbouring languages.

6.2.2 Assimilation *ŋ > m* in Turkic

Alternatively, we could propose a similar assimilatory change for Turkic. Indeed, the form *kümüš* could be derived from an earlier **küŋül with labialisation of the velar between back vowels, a change attested in 10th century Khotanese Turkic (cf. Hamilton [1977:511]) or in Chuvash, for that matter (cf. the word for 'heart' in Table 1). According to Erdal [2004:117])

> "In some words in some varieties of Old Turkic, *ŋ > m* beside rounded vowels: Hamilton [1977] discusses a.o. *kömül < köŋül* 'heart'. OTWF [=*Old Turkic Word Formation*, Erdal [1991]] 99 and 104 document the lexemes *boymul < boyun+* and *kömüldürük < köŋül+* (which is also the source of Turkish *gömlek* 'shirt'). Another instance is *yürüm karak < yürüŋ karak* 'the white of the eye' in the Turkic-Khotanese hippological glossary (Wordlist 40)."

This would mean that either the ST (and AA) word were borrowed from a Turkic language which had undergone this change, or else the word was borrowed from ST in Turkic and then underwent a parallel change independently from the donor language (cf. 6.2.1).

6.2.3 Dissimilation *m > ŋ* in ST

Finally, we could propose that the X-mul forms are original and that the *X-ŋul* forms found across Sino-Tibetan are due to a dissimilation of *m > ŋ*. This dissimilation does not need to have occurred independently in Chinese, Tibetan and LB. Rather, it could have taken place in one (non-specified) language and have then been borrowed into most of Sino-Tibetan.

Ironically, the Western Tibetan dialect would have reversed this change. The direction of borrowing could have been either from ST to both Turkic and AA, or from Turkic to ST to AA. The major weakness of this hypothesis is that this dissimilatory change is not attested anywhere in Sino-Tibetan.

As far as the coda consonant is concerned, if the Turkic form is borrowed from ST we can explain why Turkic has $*l_2$ $*[ɬ]$ corresponding to −l in other languages rather than $*-l_1$.

Indeed, in many ST languages such as Japhug Rgyalrong, final sonorants are devoiced in coda position (thus Japhug *tamar* 'butter' is realized as [r̥]). Under the hypothesis that the borrowing of 'silver' occurred from ST to Turkic, the presence of $*-l_2$ rather than $*-l$ in coda could be explained by supposing that the donor language had a devoicing rule similar to Japhug, and that the hypothetical form $*kmul$ was realized with a devoiced lateral $*kmuɬ$. This devoiced lateral was phonetically closer to Turkic $*-l_2$ (perhaps $*[ɬ]$ rather than a palatalized l) than to the normal $*-l_1$ (both in its velar and palatal variants).

In the alternative hypothesis (i.e. Turkic > ST), the correspondence of Turkic $*-l_2$ to Tibetan -l is straightforward since Sino-Tibetan languages only have at most one /l/ sound in coda position.

6.2.4 Summary

We have no way to determine which of these three hypotheses is the correct one, though the first one seems considerably less likely. The etymon for 'silver' is not derivable in a straightforward manner from any known verbal or nominal root in either Turkic, Sino-Tibetan or Austroasiatic. We have already seen this for Turkic. In Tibetan, *dŋul* could be a deverbal noun derived by the non-productive d-/g- nominalizing prefix,[15] but no independent root *ŋul is attested either in Tibetan or in any other Sino-Tibetan language.

Since no internal etymology for the word 'silver' is available in either ST, AA or Turkic, both the ST > Turkic and the Turkic > ST borrowing scenarios are equally possible, as is the possibility of both ST and Turkic having borrowed the word from an unknown language.

Indeed, independently of the fact whether the original form had a velar or a labial nasal, and of the direction of borrowing (from Turkic to ST or the reverse), the similarity between the Turkic, ST and AA words for a technical

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[15] As in *ɴkhyil* 'to flow together, to whirl' > *dkyil* 'center', *nag(-po)* 'black' > *gnag* 'black ox'. This prefix is probably related to the velar nominalizing prefix found in Rgyalrongic, Kiranti, Kuki-Chin and other languages (Japhug Rgyalrong *kɯ-*, Limbu *kɛ-* etc).

concept such as 'silver', which has no obvious etymology in any of these languages, strongly supports the hypothesis that all of these forms are related Wanderwörter.

This is actually a not too uncommon situation as we have a very similar one in part of the IE family, since the word for 'silver' in Germanic and Balto-Slavic is most probably a Wanderwort.

7 Conclusion

Independently of the direction of borrowing, the relatedness of Proto-Palaungic *kmuul, Tibetan *dŋul* and Turkic *kümüš* has an important implication for the reconstruction of the correspondence −š to −l between common Turkic and Chuvash. As explained above, this correspondence is generally reconstructed as *−š by non-Altaicists and as *−l₂ by proponents of the Altaic theory.

The reconstruction of *−š in this word is clearly invalidated by the comparative ST and AA evidence. One would have to suppose a borrowing from Bolgar Turkic to ST and AA, but the change *−š > −*l* hypothesized for the Bolgarian branch of Turkic is too recent to explain the presence of −*l* in all ST and AA languages, especially given the fact that the Chinese attestation of 銀 *yín* goes back to the Han period. Besides, the words for 'silver' in LB, inasmuch as they fit in the correspondence sets with final *-ul as illustrated above, must have been borrowed before the proto-LB unity since final *-l was already lost in proto-LB.

This detail of reconstruction however has little incidence on the Altaic debate: It does not support in any way the hypothesis of a genetic relationship between Turkic and Mongolic. It disproves, however, the idea that the *−l₂ to −l correspondence between Turkic and Mongolic should necessarily be interpreted as a feature of words borrowed from Bolgar Turkic into Mongolic.

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