Issues of comparative Uralic and Altaic studies (1): The case of Proto-Mongolic **x*

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With this paper, dedicated to Professor Toshiro Tsumagari, my esteemed colleague in Altaic and Tungusic linguistics and a fellow student of mine under the late Professor Jiro Ikegami at Hokkaido University, I wish to start a series of papers dealing with selected unsolved or disputed issues of comparative Uralic and Altaic Studies. My general premises concerning the concept of Altaic correspond to the anti-Altaicist line of argumentation, according to which the Altaic Hypothesis, that is, the idea concerning the mutual relationship of the so-called Altaic languages, is not valid. Instead of forming a single divergent language family with a common protolanguage, the Altaic languages form a chain of five distinct language families, which, from west to east, are: Turkic, Mongolic, Tungusic, Koreanic and Japonic. Even so, it cannot be denied that these language families do share a large number of both material and structural properties. These properties are best explained as convergent developments in the context of a complex network of prolonged and recurrent areal contacts in the Trans-Eurasian realm, which comprises not only the so-called Altaic languages, but also those classified as Uralic. Unlike Altaic, Uralic is a relevant genetic node and constitutes a solid and well-established language family with several major branches. There are, however, many unsolved issues concerning the internal chronology and division of the Uralic languages.

In some respects, the crucial point upon which the conventional Altaic Hypothesis lies concerns the Turko-Mongolic relations. There exists a relatively large corpus of lexical elements that are shared by Turkic and Mongolic. These elements exhibit regular phonological correspondences which occasionally take us beyond the Proto-Turkic and Proto-Mongolic stages, a situation that used to mislead early scholars to postulate a genetic relationship between the two families. We now know that we are dealing with loans, mainly from Turkic to Mongolic. Some of these loans were transmitted further to Tungusic, which gives us a third point of material comparison and completes the so-called Micro-Altaic cycle, which was the basis of the original Altaic Hypothesis. By contrast, in spite of claims occasionally still made to the contrary, the "Altaicness" of Koreanic and Japonic is not based on regular material correspondences, but only on general areal-typological similarities, which are of a much more diffuse character.

The sources of Proto-Mongolic **x*

In this paper I will briefly discuss the origin and representation of the velar obstruents in Mongolic, as viewed against the evidence of the neighbouring language families. The Proto-Mongolic system of velar obstruents comprised three segments: a strong stop **k*, a weak stop **g*, and a continuant **x*. In a larger context, the velar obstruents formed a part of the obstruent system, which also comprised corresponding segments in the labial, dental and palatal sets (Table 1). There were some gaps in the system, however, especially as the slot of the strong labial stop was empty, but also since there were no labial and palatal continuants of the obstruent type.

Table1: The Proto-Mongolic obstruent system.

	*t	*c	*k
*b	*d	*j	*g
	*s		*x

We have no precise information concerning the phonetic realization of these segments, which may also have varied dialectally. The modern Mongolic languages also show variation, which is why precise phonetic reconstruction is impossible. In any case, the strong obstruents were voiceless and possibly aspirated, while the weak obstruents were unaspirated and possibly voiced. In other words, the distinction may have been based on aspiration, e.g. [t^h] vs. [t], on voice, e.g. [t] vs. [d], or on both, e.g. [t^h] vs. [d]. The dental continuant, which is pronounced with sibilant noise, may also have been aspirated, i.e. [s^h], as it is in many forms of modern Mongolic. The palatal stops were quite certainly pronounced with sibilant noise, i.e. [$tɕ^h$] vs. [tɕ] or [tɕ] vs. [dʑ]. Finally, the velar continuant may have involved velar frication, i.e. [x], or it may have been pronounced as a laryngeal spirant, i.e. [h], two realizations that alternate in many languages.

The lack of a labial stop in the system was later amended by the introduction of a corresponding sound, i.e. [p^h] or [p], in loanwords and descriptive vocabulary, or also, in some Mongolic languages, by positional developments from **b*. It is, however, well known from external evidence that there had also been an original **p*, which had been lost from the system by its development to **x*. This is confirmed by lexicon shared with the neighbouring languages, in which the segment corresponding to Mongolic **x* is often represented as **p*. In initial position, **p* is well attested in the Nanai branch of Tungusic (Nanai-Ulcha-Orok), while in Jurchenic (Jurchen-Manchu) it is represented as [f] and in Ewenic (Ewenki-Ewen) as [x/h] or zero depending on the dialect, as in Mongolic **xesi* 'handle' < **pesi* = Tungusic **pesi(-n)* > Nanai *pesi-n*, Manchu *fesi*, Ewenki *xesi-n* (Poppe 1960: 11). In intervocalic position, **p* is present in Turkic, as in Mongolic **koxur* < **kopur* 'musical instrument' = Bulghar Turkic **kopur* < Pre-Proto-Turkic **kopus* > Old Turkic *kopuz* (ibid. 48).

It may be noted that the opposition between strong and weak stops in Mongolic was valid only in syllable-initial (prevocalic) position, while in syllable-final position only one set of stops was present. Moreover, the palatal stops were also excluded from the syllable-final position. For several reasons, including the fact that the strong set had no segment in the labial column in Proto-Mongolic, the syllable-final stops may be identified with the weak segments **b *d *g*, a situation still valid for many modern Mongolic languages. In Middle Mongol, however, the syllable-final weak velar stop **g* alternated with a hiatus (ʼ), deriving from **x*, if the segment came to stand in syllable-initial position, as in Middle Mongol †*cerig* 'soldier' : plural †*ceriʼ.ü-d* (Rybatzki 2003: 64). Occasional traces of this alternation are present also in Classical Written Mongol, as in **vasaq-** for †*asag-* (consonant stem) : **vasaqhu-** for †*asaxu-* (vowel stem) 'to ask'. This suggests that **x* could also represent an earlier **g*, though only in intervocalic position, a conclusion confirmed by comparisons with Turkic, such as Mongolic *kaxan* 'emperor' < **kagan* = Turkic **kagan* > *kagan* (*qaɣan*).

The velar continuant **x* had, consequently, two sources. In initial position it repre-

sented an original **p*, while in intervocalic position it could represent both **p* and **g*. The dual origins of Proto-Mongolic intervocalic **x* can be illustrated by (sub)minimal pairs such as Mongolic **taxa-* 'to guess' < **tapa-* ← Pre-Proto-Turkic **tapa-* > *tap-* 'to find' vs. Mongolic **saxa-* 'to milk' < **saga-* ← Pre-Proto-Turkic **saga-* > *sag- (say-)* (Poppe 1960: 13, 29). At this point it may be recalled that **x* and **g* were two distinct phonemes in Proto-Mongolic (Janhunen 1999), and Proto-Mongolic also had an intervocalic **g*, which could contrast with **x*, as in **baga* 'small'. The distinction is easy to verify, since the non-continuant **g* is segmentally preserved in modern Mongolic, while the continuant **x* is lost, yielding contracted long (or double) vowels. Occasionally, **x* can also derive from the velar nasal **ng* [ŋ], as in Turkic **yung* 'wool' < **ñunga* = Mongolic **nunga-su/n* 'wool', which yields both **ungasun* > **unggasun* and **nuxasun* > **noosun* (Janhunen 2015: 160–162).

A special group of items is formed by those in which an intervocalic **x* is reflected in Written Mongol as **b**, as in the postvocalic variants of the instrumental and reflexive suffixes, **bar** and **bav**, respectively. In such cases, the original segment must have been **p*, which was weakened to **b* in the early dialect that underlies the Written Mongol orthographical norm, while in the other dialects, from which Proto-Mongolic derived, it developed regularly to **x*. In some cases, **p* yields a variation between **g* and **x*, as in **depel* 'garment' > both **debel* (= Written Mongol **tabal**) > *degel* (as in Buryat) and **dexel* > *deel* (as in Mongolian proper). There are also cases in which **x* alternates with **m*, Written Mongol **m**, which represents the labialized reflex of **p* in syllables ending in a nasal, as in **küpün* 'man, human being' > **kümün* (= Written Mongol **guimuv**) > *kümn* (as in some forms of Oirat) vs. **küxün* > *küün* (as in Khamnigan Mongol) > (by irregular reduction:) *xün* [xuŋ] (as in Mongolian proper). In some cases, the dual representation can also have been caused by a difference in the morphological environment, as in **kepe-* (basic form) 'to say' > **kexe-* >> (by irregular reduction) *g(e)-* vs. **kepe-n* (modal converb) > **keme-n* (= Written Mongol **gamav**, from which a new basic form **gama-** was generalized, yielding ultimately the modern secondary reading pronunciation *xemee-*).

It has to be added that in the position before the high unrounded front vowel **i* intervocalic **x* yields the glide **y* [j] in Proto-Mongolic, as is still evident from Written Mongol, where the segment is written as **i**. In these cases, **i* can also represent the corresponding back vowel **ï*, as in **sayin* 'good' (= Written Mongol **saiiv**) < **saxin* < **saxïn* < **sagï-n* = Turkic **sagï* > **sag (say)* (Poppe 1960: 61). It is, however, unclear whether all sequences of the type vowel + *i* in modern Mongolic are of this type, for there remains the possibility of original syllable-final glides, an issue that will require a special discussion in the future.

The sources of Proto-Mongolic **g*

The fact that Proto-Mongolic intervocalic **x* can derive from **g* means that **g* in this position must have a different origin. Again, the Turko-Mongolic areal parallels can shed some light on this question. The Proto-Turkic obstruent system (Table 2) was rather similar to that of Proto-Mongolic, but there were significant differences in the phonotactic behaviour of the segments. On the Turkic side, the strong obstruents **p *t *k* contrasted with the weak obstruents **b *d *g* in medial and final position, but in initial position only the weak stop **b* and the strong stops **t* and **k* were permitted, complemented by the palatal stop (affricate) **c*. The medial weak obstruents are conventionally reconstructed

as continuants (**w *δ *γ*), but there is no phonological basis for this. In any case, the strong segment **p* and the weak segments **d* and **g* (placed in square brackets in the table) were excluded from the initial position, rendering the system synchronically asymmetric. Also, there was no weak palatal stop in the paradigm, though a secondary **j* [dʑ] was developing from the palatal glide **y*.

Table2: The Proto-Turkic obstruent system.

[**p*]	**t*	**c*	**k*
**b*	[**d*]		[**g*]
	**s*		**x*

The asymmetry of the system of initial stops has been explained in various ways. Although the modern Turkic languages have completed the paradigm by introducing the phonemes **p *d *g* also in initial position, the Proto-Turkic system should strictly speaking synchronically be reconstructed with three unmarked stops **p *t *k* and with no contrast between strong and weak segments (Shherbak 1970: 173–174). However, comparative evidence from Mongolic shows that this situation was characteristic only of a brief period in the history of Turkic. Pre-Proto-Turkic originally had a weak **d*, which had been lost by change to **y*, as in Turkic *yagï (yayï)* 'adversary' < **dagï* = Mongolic **dagï-* > **daxï-n* > **daxi-n* > **dayin* (Ramstedt 1957: 50). Also, we know that the Turkic initial velar continuant **x* [x/h] had developed from a previous **p* in very much the same way as in Mongolic, but slightly earlier. Due to the time difference, traces of **x* are preserved only marginally in a few modern Turkic languages, mainly in Khalaj, but also elsewhere, as in Uzbek *hükiz* 'oxe' = Old Turkic †*öküz* < **pöküs* > Bulghar Turkic **pökür* = Mongolic (by metathesis) **püker* > Middle Mongol †*xüker (hüker)* > modern Mongolian (*)*üker* (Poppe 1960: 12).

The only initial stop segment for which there seems to be no good evidence in Turkic is **g*. This suggests that initial **g* had been lost before the first wave of borrowings from Turkic to Mongolic took place. However, in medial intervocalic position the opposition of **k* vs. **g* is well documented for Turkic and is also present in items borrowed by Mongolic. Here we see a difference in the behaviour of **k* depending on whether it followed the initial (stressed) or the following (unstressed) syllable. At the boundary between the two first syllables (1/2) Turkic **k* is represented as Mongolic **k*, as in Turkic *yakï (yaqï)* 'furcoat' < **daku* = Mongolic **daku* (Poppe 1960: 55), while at the boundary between the second and third syllables (2/3) it is represented as Mongolic **g*, as in Turkic *ïduk (ïduq)* 'sacred' < **ïduka* = Mongolic **ïduka* > **iduga-n* 'shamaness' (Janhunen 2010). Turkic **g*, however, is represented in both positions as Mongolic **x*, as in Turkic **bügü* 'wise' < **bügö* = Mongolic **bügö* > **büxe* > modern (*)*böö* 'shaman', Turkic *yïlïg (yïlïy)* 'warm' < **yulug* < **duloga* = Mongolic **duloga* > **dulaga-n* > **dulaxa-n* > modern (*)*dulaan* (Poppe 1960: 60, 23). In both positions, the representations of **g* merged with those of **p* (Table 3).

Deviations from these, as it seems, regular correspondences, are rare, and aberrant etymologies are either invalid or represent other (later) time levels of borrowing, or also results of morphological analogy. What is more important, however, is that we can use the information provided by the Turko-Mongolic parallels to reconstruct the original state of the corresponding segments in native Mongolic words. Thus, **g* at the boundary between

Table3: Selected Turko-Mongolic correspondences.

Turkic	Mongolic	
	1/2	2/3
*-*k*-	*-*k*-	*-*g*-
*-*g*-	*-*x*-	*-*x*-
*-*p*-		

the second and third syllables can be confidently derived from an earlier **k*, as in **ecige* 'father' < **etike* (Poppe 1960: 56), while **x* in intervocalic position can represent either **g* or **p*, two segments that cannot be distinguished in the etymological material without additional internal or external information. What we may take for certain is that there is no need to explain the distinction between intervocalic **g* and **x* by assuming an opposition of vowel length (or stress), as was once proposed by Nicholas Poppe (ibid. 146).

There are, however, two cases of intervocalic velars in Mongolic which have no solid foundation in the Turko-Mongolic corpus. In these cases we are dealing, on the one hand, with **g* at the boundary of the first and second syllables, as in **baga* 'small', **üge* 'word', and, on the other, with **k* at the boundary of the second and third syllables, as in **araki/n* 'liquor', **erüke* 'smoke hole'. We may conclude that many of these words have entered the language after the early Turko-Mongolic contacts, as is also the case in, for instance, **togos* 'peacock' (Rybatzki 2008). Occasionally, they may involve irregular internal developments, as in *negen* 'one' < (*)*nigen*, still attested as †*niken* in Middle Mongol (Rybatzki 2003: 70).

The possibility of primary **x*

It is obvious that the velar continuant **x*, including its laryngeal realization [h], has different origins in the different "Altaic" languages. In Mongolic it represents the strong labial stop **p* in initial and medial intervocalic positions, but intervocalically it can also represent the weak stop **g*. In Turkic, it represents only initial **p*, while medial **p* and **g* are preserved as stops — we may here ignore the phonetic tendency of **g* to be velarized and optionally spirantized to [ɣ] in words with a velar vocalism. The situation is more complicated in Tungusic, where **p* yields (*)*x* in Ewenic and Orochic (Oroch-Udeghe), but where there also was a primary **x*, which is represented as *x* only in the Nanai group but lost elsewhere, as in **xedün* 'wind' > Nanai *xedun*, Manchu *edun*, Ewenki *edin* (Benzing 1956: 41–43). Altogether, the Proto-Tungusic system of obstruents (Table 4) was more complete than that of either Proto-Mongolic or Proto-Turkic.

Table4: The Proto-Tungusic obstruent system

*p	*t	*c	*k
*b	*d	*j	*g
	*s		*x

The Tungusic primary **x* is attested only in initial position, but it is tempting to assume that it had been present also medially. In fact, Proto-Tungusic has a large paradigm of vowel sequences, including both "long vowels" (sequences of identical vowels) and "diphthongs" (sequences of non-identical vowels) (Talvitie 2016), and a natural explanation of these sequences would be to assume that they represented results of contraction due to the loss of an intervocalic weak consonant of the type **x*. The development would have been exactly the same as in Mongolic, except that the intervocalic **x* that conditioned the later vowel sequences in Mongolic was not primary but secondary and derived from **p* and **g*. It may be recalled that the secondary **x* in initial position is still preserved in some peripheral Mongolic languages, notably Dagur and Shirongolic (Amdo Qinghai Mongolic), but even in Dagur it is lost dialectally (Tsumagari 2003: 132), reminding of the dialectal loss of secondary **x* in Ewenic.

A similar primary **x* could also be postulated for Pre-Proto-Turkic to explain the origin of the Proto-Turkic long vowels. It is well known that Proto-Turkic had long vowels of all qualities (Räsänen 1949: 64–71), but certain correspondences between Common Turkic and Chuvash suggest that some Turkic long vowels actually derive from sequences of non-identical vowels, as in Common Turkic **taash* 'stone' vs. Chuvash *cul* < **tïash* (Poppe 1960: 15). In such cases, it would be natural to assume that the vowels were originally separated by an intervocalic consonant, which could hardly have been anything else but a primary **x*. However, unlike Tungusic, Turkic does not offer any evidence of a primary initial **x*.

Returning to Mongolic we can see that all occurrences of Proto-Mongolic **x* can be explained from **p* and/or **g*, which is why there is no internal reason to postulate a primary **x* for Mongolic. However, on the basis of external evidence Gerhard Doerfer proposed that Mongolic once also had a primary **x* at least in initial position, just as Proto-Tungusic. The evidence comes mainly from the Proto-Tungusic numeral **xorïn* > Nanai *xorin*, Manchu *orin*, Ewenki *orin* 'twenty', which presupposes a Mongolic source of the type **xorïn* (Doerfer 1985: 81, 151–154, no. 238). The fact that the item is a borrowing from Mongolic to Tungusic, and not vice versa, is clear, since also the Proto-Tungusic numerals **gutïn* 'thirty' and **deki* 'forty' are of Mongolic origin. In actual Proto-Mongolic, the numeral for 'twenty' was **korïn* (> **korin*), but the initial **k* is apparently secondary and caused by an adaptation to **koyar* (< **koxar*) 'two', which itself is an innovation replacing the earlier numeral **jir-* 'two'. Thus, on the basis of the reconstruction **xorïn* it appears plausible to assume that Pre-Proto-Mongolic originally had an obstruent system identical with Proto-Tungusic, an assumption which is supported by the areal adjacency of the two language families. There is, however, a chronological difference, in that the loss of **x* in Mongolic must have taken place earlier than the analogous loss in Tungusic. Also, there seem to be no potential traces of a medial primary **x* in Mongolic.

The general conclusion from the above considerations is that the velar continuants of the type **x* in Turkic, Mongolic and Tungusic follow a pattern typical of "laryngeals" in many languages. Segments in this category are short-lived: they arise from other segments, exist for some time and disappear, often leaving traces in secondary phonotactic phenomena such as vowel length (Janhunen 2007). However, in the case of Mongolic, the history of **x* also reveals that some occurrences of medial **g* (between the first and second syllables) and **k* (between the second and third syllables) are secondary. Words with these segments are not present in the corpus of early Turko-Mongolic borrowings, and most of them must represent relatively late introductions into or innovations in Mongolic.

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Summary

The paper initiates a series of studies devoted to selected unsolved or disputed issues of comparative Uralic and Altaic Studies. In this particular paper, the author discusses the origin and phonological status of the Proto-Mongolic velar continuant **x*. It is shown that, depending on positional factors, **x* has two Pre-Proto-Mongolic sources, **p* and **g*, which can be verified by areal comparisons with Turkic. It is also possible that Pre-Proto-Mongolic once had a primary **x* similar to the one attested in Proto-Tungusic. The discussion demonstrates the correctness of the anti-Altaicist line of argumentation, according to which the parallels between the so-called Altaic languages are due to contacts, not to primary genetic relationship.