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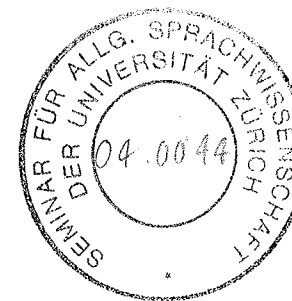
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Edited by
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languages of the family. Even so, there are still several Mongolic languages, including, in particular, those of the Gansu-Qinghai complex, that remain not fully integrated into the comparative framework. While it is generally assumed that these languages derive from a protolanguage identical with the reconstructable ancestor of the more centrally located Mongolic idioms, many diachronic details remain unclear, making any definitive conclusions concerning the genetic and areal developments impossible for the time being.

As in all diachronic linguistics, phonology has always played a central role in Mongolic comparative studies. Two constantly recurrent issues include the role of the 'laryngeals' and the phenomenon of vowel breaking, as discussed, among others, by G. J. Ramstedt (1912), Paul Pelliot (1925), Nicholas Poppe (1956), and Juha Janhunen (1990, 1999). A more temporary controversy was involved in the dispute over the so-called 'primary long vowels', as discussed by Masayoshi Nomura (1959), Nicholas Poppe (1962), Shirô Hattori (1970), and Gerhard Doerfer (1969–74). Among the multitude of other contributions to Mongolic diachronic phonology, the brief but innovative paper by Eugene Helimski (1984) on Gansu-Qinghai Mongolic deserves to be singled out.

While much of the comparative work on Mongolic in the past has been a side-product of general Altaic studies, as developed by Ramstedt (1952–66) and Poppe (1960, 1965, 1975), the important handbooks by Poppe (1955) and G. D. Sanzheev (1953–64) focus specifically on the Mongolic languages. Poppe's work, in particular, remains by far the most explicit and internationally accessible synthesis of Mongolic comparative phonology and morphology. With the exception of the brief synopsis by Doerfer (1964), later general works, such as those by P. A. Darvaev (1988) and A. A. Darbeeva (1996), offer no substantially new insights. Tömörtogoo (1992) is nevertheless useful as a bibliographical tool, while G. C. Pyurbeev (1993) introduces some aspects of comparative syntax.

Outside the general Altaic framework, relatively little has been written on the dialectological and chronological aspects of Proto-Mongolic. An attempt to approach Late Pre-Proto-Mongolic, or 'Ancient Mongolian', largely by the method of internal reconstruction, was nevertheless made by Poppe (1976). Another important contribution is that by Michael Weiers (1970) on the periodization of Proto-Mongolic in relationship to Written Mongol and Middle Mongol.

SEGMENTAL PHONEMES

The Proto-Mongolic vowel system comprised seven qualities, divided into three harmonic pairs and one neutral vowel. The harmonic pairs are conventionally written as **u* **ü* for the high rounded vowels, **o* **ö* for the non-high rounded vowels, and **a* **e* for the unrounded vowels (Table 1.1). The distinction within each harmonic pair was based on the palato-velar correlation, opposing the back vowels **a* **o* **u* to the front vowels **e* **ö* **ü*. In this context it remains irrelevant whether the unrounded front vowel **e* was phonetically a low [ä] or a mid-high [e].

TABLE 1.1 PROTO-MONGOLIC VOWELS

<i>*u</i>	<i>*i</i>	<i>*ü</i>
<i>*o</i>		<i>*ö</i>
<i>*a</i>		<i>*e</i>

The isolated position of the neutral vowel **i* immediately suggests that in Pre-Proto-Mongolic there must have been a harmonic opposition between a front **i* and a back **i*. This is confirmed by the presence in both Middle Mongol and the language underlying Preclassical Written Mongol of an opposition between *ki* < **ki* and *qi* < **ki*, still synchronically preserved in Moghol (and, as it seems, Santa), as in Moghol *ceqin* 'ear' < **ciqi/n* < **ciki/n*. Obviously, the paradigmatic merger of the vowels **i* **i* and the accompanying restructuring of the vowel system took place only in Late Pre-Proto-Mongolic. Technically, an original Pre-Proto-Mongolic **i* can be reconstructed for all words involving Proto-Mongolic **i* in a back-vocalic context, or in the presence of a documented back velar consonant. Under other conditions, however, the distinction remains beyond the reach of internal evidence.

The reconstruction of **i* of the initial syllable is to some extent complicated by the phenomenon known as *palatal breaking*, in which **i* was 'broken' into two segments under the influence of the vowel of the second syllable (**a* **o* **u* **ö* **ü*), as in **mingga/n* 'thousand' > Khalkha *myanggh*. Palatal breaking was basically an areally restricted Post-Proto-Mongolic innovation, most abundantly attested in Mongol proper, as well as in Buryat and Dagur. However, the phenomenon was anticipated and accompanied by the similar process of *prebreaking*, which involved the assimilation of the original back **i* before its merger with the front **i*, as in **mika/n* 'meat' > **maka/n* > Khalkha *max*. Prebreaking seems to have started already in Late Pre-Proto-Mongolic, and in some lexical items it was completed before the dissolving of Proto-Mongolic, leaving only Written Mongol more or less free of its impact.

While palatal breaking is a mechanism in which **i* is influenced by the vowel of the following syllable, some Mongolic languages also show the process of *palatal umlaut*, in which **i* influences the vowel of a preceding syllable, as in **mori/n* 'horse' > Kalmuck *mör/n*. Like palatal breaking, palatal umlaut seems to have been a Post-Proto-Mongolic innovation, but its parallel presence in both Oirat and the dialects of Mongol proper gives it, at least, a Common Mongolic dimension. It goes without saying that both breaking and umlaut have had a considerable impact on the subsequent evolution of the Modern Mongolic vowel paradigms.

In spite of claims made to the contrary, it has been impossible to establish any quantitative correlation for the Proto-Mongolic vowels. While virtually all the Modern Mongolic idioms have distinctive long (double) vowels, these are of a secondary contractive origin. Occasional instances of irregular lengthening are observed in most of the modern languages, and in a small number of cases there would seem to be a correspondence between two peripheral languages, notably Dagur and (Huzhu) Mongghul, as in Dagur *mood* 'tree, wood' = Mongghul *moodi* id. < **modu/n*. In spite of the seemingly perfect match, such cases are too few and involve too many counterexamples to justify any diachronic conclusion other than that of accidental irregular convergence.

The Proto-Mongolic consonant system is best to be reconstructed as having had fifteen basic phonemes, representing four places of articulation: labial, dental, palatal, and velar. The four places were, however, distinguished only for the weak stops **b* **d* **j* **g*. The strong stops **t* **c* **k* had a gap in the labial column, while the nasal system **m* **n* **ng* had no palatal member. The palatal stops **c* **j* were apparently realized as affricates. The continuant obstruents comprised the dental sibilant **s* and the velar spirant **x*, but no labial or palatal segment. Additionally, there were the two liquids **l* **r* and the palatal glide **y* (Table 1.2).

The gaps in the system suggest that there may have been additional consonants still in Late Pre-Proto-Mongolic. The strong labial stop **p* can actually be reconstructed on

TABLE 1.2 PROTO-MONGOLIC CONSONANTS

	<i>*t</i>	<i>*c</i>	<i>*k</i>
<i>*b</i>	<i>*d</i>	<i>*j</i>	<i>*g</i>
	<i>*s</i>		<i>*x</i>
<i>*m</i>	<i>*n</i>		<i>*ng</i>
	<i>*l</i>		
	<i>*ɾ</i>	<i>*y</i>	

internal evidence for some morphemes showing an irregular alternation between **b* or **m* and **x*, as in **depel* 'garment' > **debel* > Oirat *dewl* vs. Common Mongolic **dexel* > **deel*, **küpiin* 'man' > **kümiin* > Oirat *kümn* vs. Common Mongolic **küxün* > **küün*. For some suffixal morphemes, including the markers of the instrumental case (**-pAr*) and the reflexive declension (**-pA/n*), **p* can be reconstructed on the basis of Written Mongol, which shows the alternation **b** : **g qh**. Even so, it would be incorrect to reconstruct **p* as a separate phoneme for the Proto-Mongolic stage. The occasional claims that **x* was still pronounced as a labial spirant [ɸ] in Proto-Mongolic are apparently also incorrect.

The gaps in the system also reveal points at which Proto-Mongolic had a potential of introducing new consonant phonemes. The first segment to be added was the palatal sibilant **sh*, which may be characterized as Common Mongolic; it was introduced immediately after the Proto-Mongolic stage in loanwords such as **shasin* 'religion' (from Sanskrit), **shabi* 'disciple' (through Chinese). Other segments, including a new strong labial stop (*p*) as well as two labial continuants (*f w*), have been added later to the individual systems of several Modern Mongolic languages and dialects, where they still tend to retain a status of marginal phonemes. Generally, all the Modern Mongolic languages retain the Proto-Mongolic consonant system as the skeleton of their own synchronic systems.

Due to the merger of the unrounded high vowels **i* **i* in Late Pre-Proto-Mongolic, there briefly existed a distinction between the velars **k* **g* **x* and a corresponding series of back velars or uvulars, of which the strong stop **q* is the one most reliably attested. Although, technically speaking, the opposition **ki* vs. **qi* was present at exactly the Proto-Mongolic stage, its low functional load allows it to be ignored for most reconstructive purposes. It is true, the natural tendency to develop positional variants for the velar consonants depending on the vocalic environment is observable in several (though not all) Modern Mongolic languages, in which only the back vowels **a* **o* **u* have conditioned the spirantization of the velars, as in Oirat *ax* 'elder brother' vs. *ek* 'mother' < **aka* vs. **eke*.

It has to be noted that the opposition between the dental and palatal stops in Proto-Mongolic was absent before the vowel **i*. In this position, only the palatal stops **c* **j* were permitted, while before all other vowels the segments **c* vs. **t* and **j* vs. **d* could freely contrast. Words containing the sequences **ti* **di* are therefore invariably Post-Proto-Mongolic, though some of them have a Common Mongolic distribution, e.g. **tib* 'continent' (from Sanskrit). This suggests that there had been a neutralizing process in Pre-Proto-Mongolic, changing **t* **d* into **c* **j* before the vowel **i*. There is, indeed, occasional evidence of this process in the comparative material, cf. e.g. Khalkha *ghada(a)* 'outside' < **gadaxa* < **gadixa* vs. Buryat *gazaa* id. < **gajaxa* < **gajixa* <

**gadixa*. Unfortunately, when no such evidence is available it is impossible to determine the exact Pre-Proto-Mongolic source of the segments **c* **d* before the vowel **i*.

It would be tempting to assume that the developments **ti* > **ci* and **di* > **ji* were due to palatal assimilation, conditioned by the palatal quality of **i*. Since, however, this assimilation was not confined to words with a palatal vocalism, it must have taken place only after the merger of the vowels **i* and **i* > **i*. A possible order of all the processes involved would, then, be: (1) **ki* > **qi*, (2) **i* > **i*, (3) **ti* **di* > **ci* **ji*, (4) **qi* > **ki*. The first three of these processes may be dated as Late Pre-Proto-Mongolic, while the last, involving the loss of the opposition between the velar and postvelar sets of consonants, was still going on in Proto-Mongolic.

The Proto-Mongolic velar spirant **x*, which also represented original Pre-Proto-Mongolic **p*, was probably pronounced as a laryngeal [h], which was gradually being lost. The loss of medial intervocalic **x* may, indeed, be regarded as Common Mongolic, for the segment is only attested in Written Mongol (**g qh**) as well as, occasionally, in Middle Mongol, as in **kaxan* 'emperor' > Written Mongol **qaqhav**, Middle Mongol *kaxan* (*qahan*) or *ka'an* vs. Common Mongolic **kaan*. Initial **x* was, however, regularly preserved in Middle Mongol, and direct reflexes of it are still synchronically present in two peripheries of the Mongolic family: Dagur in the northeast and the Gansu-Qinghai complex in the south, as in **xulaxan* 'red' > Middle Mongol *xula'an* (*hula'an*), Dagur *xulaang*, Mongghul *fulaan* vs. Common Mongolic **ulaan*. Rather unexpectedly, initial **x* is not reflected by the Written Mongol orthography.

The loss of the intervocalic 'laryngeal' **x* is, consequently, the main source of the long (double) vowels in the Mongolic languages. In the case of two identical vowels, the contraction automatically produced a long monophthong, but two different vowels yielded initially a diphthongoid. Diphthongoids ending in the vowels **u* **ü* are preserved as such only in Dagur, while elsewhere they have undergone monophthongization, as in **naxur* 'lake' > Dagur *naur* vs. Khalkha *nuur*. Diphthongoids ending in the vowel **i* (< **i* & **i*) have, however, diphthongoid reflexes in most languages, though monophthongization also occurs. In these sequences, the presumably original intervocalic **x* seems to have been palatalized into **y* already in Late Pre-Proto-Mongolic, as in (**saxin* >) Proto-Mongolic **sayin* 'good' > Khalkha *saing* vs. Oirat *sāin*.

In accordance with their contractive origin, the diphthongoids of the modern languages are normally reflected in Written Mongol as bisyllabic sequences (with intervocalic **g qh j**). In a few items, however, Written Mongol has simple vowel sequences ending in **u**. In the modern languages, such sequences are indistinguishable from the corresponding contractive diphthongoids, but the question is whether there was a diachronic difference. There are several possibilities: Proto-Mongolic may actually have had such vowel sequences, or the sequences may have contained an intervocalic consonant not indicated in the Written Mongol orthography, or the vowel may represent the vocalized reflex of an original syllable-final consonant (possibly **w*). The evidence remains inconclusive, but it is perhaps safest to make a distinction between **x* and Ø (zero) when reconstructing the sources of the diphthongoids, e.g. Written Mongol **vgulav** 'cloud' for **exüle/n* vs. **taugae** 'history' for **te(Ø)üke*.

A related question concerns the origin of the diphthongoids ending in **i*. In final position, such diphthongoids are rendered as simple vowel sequences in Written Mongol. Since this is a regular convention, the sequences may be reconstructed as contractive diphthongoids of the normal type, e.g. Written Mongol **bui** for **buyi* ~ **büyi* [copula], **talai** 'sea' for **dalayi* > Common Mongolic *dalai*. It cannot, however, be ruled out that the language originally had a distinction between **x* and Ø also before the vowel

*i (< *i and *ī). A possible candidate for a medial diphthongoid without an original intervocalic consonant is Written Mongol *naimav* 'eight', for *na(y)ima/n > Common Mongolic *naima/n.

WORD STRUCTURE

The most important phonotactic restriction in Proto-Mongolic was formed by vowel harmony, which allowed only either back or front vowels to occur within a phonological word. Palatal harmony was originally the only phenomenon that conditioned the occurrence of the vowels *a *u (back) vs. *e *ü (front) in non-initial syllables, as in *kara 'black' vs. *nere 'name', *olan 'many' vs. *mören 'river', *kura 'rain' vs. *üre 'seed', *casu/n 'snow' vs. *temür 'iron', *xodu/n 'star' vs. *xödü/n 'feather', *ulus 'people' vs. *xüsü/n 'hair'. There seem to have been no exceptions to the palatal harmony in Proto-Mongolic, which means that the phenomenon might also be described by postulating a markedness hierarchy, or, alternatively, a set of neutralized archiphonemes (*A *U).

An important phenomenon that has affected the manifestations of vowel harmony in many Modern Mongolic languages, including Mongol proper and all of its northern and eastern neighbours (Khamnigan Mongol, Buryat, Dagur), is *vowel rotation*, in which the palato-velar pairs have become rotated so that the palatal members (*ü *ö *e) have received a raised tongue position in comparison with their velar counterparts (*u *o *a). At the same time, the palatal members have undergone velarization, resulting in the replacement of the original palatal harmony (back vs. front) by an apertural harmony (low vs. high). During an intermediate stage in the process (as in modern Khalkha), the original back vowels seem also to have been accompanied by a varying degree of pharyngealization. Since vowel rotation has not necessarily removed any oppositions, it is difficult to establish whether it may already have been present as in incipient tendency in Proto-Mongolic. In the modern languages it has, however, often resulted in various paradigmatic neutralizations.

Apart from palatal harmony there was a partial labial harmony (labial attraction), because of which the non-high rounded vowels *o *ö of non-initial syllables were not allowed to be combined with any of the vowels *a *e *u *ü of the initial syllable. This restriction was, already in Proto-Mongolic, being complemented by another rule which assimilated the vowels *a *e of non-initial syllables into *o *ö after an initial syllable also containing *o *ö, as in *kola 'distant' > *kolo, *köke 'blue' > *kökö. Owing to these phenomena, it is difficult to distinguish in the comparative material the combinations *o-a vs. *o-o and *ö-e vs. *ö-ö. It is generally assumed that the original state is best preserved in (Preclassical) Written Mongol, but it remains unclear whether Written Mongol is really chronologically representative of Proto-Mongolic for this detail.

A similar problem is connected with the combination *e-ü, which is generally preserved in the language underlying Written Mongol, as in *tamur* 'iron' for *temür. It seems that Written Mongol in such cases represents a stage that is best identified as Late Pre-Proto-Mongolic, while Proto-Mongolic was characterized by the regressive assimilation of *e-ü into *ö-ü, e.g. *temür > *tömür. In the modern languages, owing to the reduction and neutralization of most single vowels in non-initial syllables, the reflexes of *e-ü > *ö-ü have generally merged with those of *ö-e > *ö-ö. None of these phenomena have exact back-vocalic analogies, but in sequences containing an intervocalic *x the combinations *ö-e (front) and *o-a (back) are indistinguishable from *ü-e and *u-a, respectively, as in *tuxa (or *toxa) 'number', *büxe (or *böxe) 'shaman'.

Importantly, the vowels *a *o *u vs. *e *ö *ü were all distinguished in non-initial syllables following *i (< *i & *ī) of the initial syllable, as in *sira (< *sira) 'yellow' vs. *sine 'new', *cino (< *cino) 'wolf' vs. *silö 'soup', *cisu/n (< *cisu/n) 'blood' vs. *sidü/n 'tooth'. Similarly, any vowel quality of the initial syllable could be combined with *i (< *i & *ī) of the second syllable, as in *ami/n (< *ami/n) 'life' vs. *xeki/n 'head, beginning', *mori/n (< *mori/n) 'horse' vs. *ökin 'daughter', *gulir (< *gulir) 'flour' vs. *küiril 'bronze', *bicig 'script'. Because of a variety of neutralizing developments, all Modern Mongolic languages have either lost or restructured most of the vowel combinations concerned.

Most of the vocalic phenomena reconstructable for the various stages of Mongolic, including palatal harmony, breaking, and umlaut, point to a systematic tendency of accumulating information into the initial syllable of the word. This tendency was probably prosodically manifested in Proto-Mongolic as the presence of an initial expiratory stress, which was lexically non-distinctive. Some Post-Proto-Mongolic developments, such as the widespread tendency of reduction and loss of all vowels in non-initial syllables, also point to initial stress, though there are counterexamples suggesting the loss of initial vowels or entire initial syllables, as in Middle Mongol *umarta-* vs. Common Mongolic *marta- 'to forget'. Altogether, prosodic features in Mongolic have always tended to be determined by positional factors, rather than vice versa.

The Proto-Mongolic syllable structure allowed only single consonants in the beginning (CV) and end (VC) of syllables, yielding medial clusters of maximally two segments (CC). Moreover, only the nasals *m *n *ng, the liquids *r *l, the sibilant *s, and one set of non-palatal (non-affricate) stop obstruents were possible syllable-finally. Morphophonemic relationships, such as *bulag 'spring [of water]': gen. *bulag/u-n, allow the syllable-final stops to be identified with the weak series *b *d *g, which, consequently, may be viewed as unmarked with regard to the strong series. In clusters beginning with a nasal, only the labial nasal could be followed by another labial consonant (*mb), while both the labial and the velar nasal could be followed by a velar consonant (the types *mg *ngg). All nasals could be followed by a dental or a palatal consonant.

While most original consonant clusters can be easily verified, there are several examples of clusters beginning with the liquids *r *l that are only preserved in a few peripheral languages, as in *yersü/n 'nine' > Bonan *yersung* vs. Common Mongolic *yesü/n, *caxarsu/n 'paper' > Khamnigan Mongol *caarhu/n* vs. Common Mongolic *caasu/n. In some cases, a vowel seems to have been inserted into such a cluster, as in *mölsü/n 'ice' > *mölisü/n > Khamnigan Mongol *mulihu/n* vs. Common Mongolic *mösü/n. In other cases the cluster can be reconstructed on the basis of Written Mongol, while the spoken languages show an irregular correspondence of single consonants, as in Written Mongol *talbi-* for *talbi- 'to place' > Dagur (*)*itali-* vs. Common Mongolic *tabi-.

The final segment of a stem determined the stem type, on which a number of suffix-initial morphophonological alternations depended. The basic division was into *vowel stems* and *consonant stems*. Before suffixes beginning with a vowel, normally *i, vowel stems required a connective consonant, normally *y, as in *aka 'elder brother': acc. *aka/y-i. On the other hand, before suffixes beginning with a consonant, consonant stems required the connective vowels *U (*u *ü) or *i (< *i & *ī), as in *ab- 'to take': conv. mod. *ab/u-n, *gar 'hand': instr. *gar/i-xar. The basic function of the connective segments was to block non-permitted phonotactic structures, such as vowel sequences and clusters of two (word-finally) or three (medially) consonants. Certain occurrences of the connective segments were, however, morphologically conditioned.

Consonant stems were subdivided into *obstruent stems*, ending in the stops **b *d *g* or the sibilant **s*, and *sonorant stems*, ending in the nasals **m *n *ng* or the liquid **l*. This division correlates with the alternation of weak and strong obstruents in certain suffixes, as in **ol-* 'to find': pass. **ol.da-* vs. **ab-* 'to take': pass. **ab.ta-*. Rather unexpectedly, the functional obstruent stems also comprised the stems ending in the liquid **r*, as in **ger* 'dwelling': dat. **ger-tü/r* vs. **gal* 'fire': dat. **gal-du/r*. This peculiarity, preserved in most Modern Mongolic languages, suggests that **r*, at least word-finally, may originally (in Pre-Proto-Mongolic) have been a true obstruent. It is true, **r* seems also to have had a functional affinity with the other liquid **l*, for neither of the two liquids was originally permitted in word-initial position. The only other consonant with this restriction was **ng*. There are, however, several Common Mongolic words beginning with **l*, e.g. **luu* 'dragon' (from Chinese, through Uighur).

WORD FORMATION

Apart from vowel harmony and the insertion of connective segments at the border of stem and suffix, Proto-Mongolic morphology was based on a rather mechanical agglutination of derivative and inflectional suffixes to essentially invariable stems. There were two major parts of speech which may be identified as nouns (nominals) and verbs (verbals), combined with two separate sets of suffixes, respectively. Morphological and syntactic details allow nouns to be further divided into substantives, pronouns, and numerals. Some nominal (including pronominal) stems, often with a defective or exceptional paradigm, functioned as adverbs and postpositions. Adjectival words were also basically nominal, though their derivatives could function as verbs, cf. e.g. **ca.ga.xan* 'white': ess. **ca.yi-* 'to be white', **köke* 'blue': transl. **köke.re-* 'to become blue'.

Nominal and verbal stems had a basically identical structure, and some stems (nominal-verba) can actually be reconstructed as having had both a nominal and a verbal function, e.g. **emkü-* 'to put into mouth': **emkü* 'bite'. Such cases could perhaps be analysed as examples of zero derivation, but synchronically it is impossible to determine which of the two functions (nominal or verbal) should be viewed as derivationally primary. Both nominal and verbal stems could end in a vowel, the liquids **l *r*, or any of the obstruents **b *d *s *g*. Importantly, however, there were no verbal stems ending in a nasal, while all the three nasals **m *n *ng* are well attested as the final segments of nominal stems.

The nominal stems ending in the nasal **n* may be viewed as a separate stem type, perhaps best identified as the *nasal stems* (proper). There were two kinds of nasal stem: those ending in a morphophonologically stable **n* and those ending in an unstable or 'fleeing' **/n*. The unstable **/n* was in a regular paradigmatic alternation with zero (\emptyset), as in **mori/n* 'horse': gen. **morin-u*: acc. **mori/y-i*. The fact that the unstable **/n* was not permanently present in the stem suggests that it may originally have been a suffix. Its original function remains, however, unclear; it may have been a derivative suffix, perhaps denoting a specific class of nouns, but it may also have been connected with the categories of number and case. It is probably relevant to note that the stems ending in the unstable **/n* were much more numerous than those ending in the stable **n*, a situation that is still valid for many (though not all) Modern Mongolic languages.

In accordance with the two basic parts of speech in the language, the derivative suffixes that can be reconstructed for Proto-Mongolic may be divided into four types, depending on whether they produced (1) denominal nouns, (2) denominal verbs, (3) deverbal nouns, or (4) deverbal verbs. Each type of derivative had a specific set of

suffixes, many of which are still productive in the Modern Mongolic languages. From the structural point of view, the denominal derivative suffixes are relatively uninteresting, though some of them seem to have been extremely productive, such as **.IU* or **.IA.(y)i* [possessive adjectival nouns], **.IA-* [denominal verbs with a variety of functions]. Among the more restricted and less commonplace categories of derivation was gender (female sex), indicated by the denominal suffixes **.jin* [female beings, from tribal names and age expressions] and **.gcin* [female animals, from colour terms].

A higher degree of grammaticalization was present in the deverbal verbs, most of which may be understood as expressions of the category of *voice*, comprising the subclasses of passive, causative, reciprocal, cooperative, and pluritative verbs. Passives were marked by the suffix variants **.dA-* (after sonorant stems), **.tA-* (after obstruent stems), and **.g.dA-* (after vowel stems); causatives by **.gA-* (after sonorant stems and stems in **r*), **.kA-* (after obstruent stems), and **.xA-*, **.l.gA-* or **.xUl-* (after vowel stems); reciprocals by **/U.lDU-*; cooperatives by **/U.lcA-*; and pluritives by **.cAgA-*. The details of the actual formation of these derivatives were already in Proto-Mongolic to some extent lexicalized. Some stems had, for instance, two alternative causatives, as in **bayi-* 'to be': caus. **bayi.xul-* or **bayi.lga-*. There were also double causatives, as in **gar-* 'to exit': **gar.ga.xul-* 'to cause to take out'.

Deverbal nouns were likewise inherently liable to be grammaticalized, and it is in some cases difficult to draw a distinction between derivational deverbal nouns and the inflectional category of participles (verbal nouns). The basic criteria are the degree of productivity and verballity of the derived nominal stems. Participles may be defined as fully productive deverbal nouns, which still function as verbal headwords in the sentence. In Proto-Mongolic there were, however, many cases of lexicalized participles which had apparently lost their verbal characteristics (or never developed them), like **ide-* 'to eat': **ide.xe/n* 'food' vs. part. imperf. **ide.xe*. On the other hand, some Proto-Mongolic and/or Common Mongolic deverbal nouns, like those in **.I* (general action) and **.mAr* (potential action), function very much like participles, but are, nevertheless, in Mongolic studies normally counted as derivational deverbal nouns.

One of the most difficult borderline cases involves the actor nouns or agentive participles in **.g.ci* or **.xA.ci*. Normally listed as participles, these forms seem, indeed, to have had a number of verbal functions in Proto-Mongolic. Many actual examples of actor nouns are, however, better analysed as lexicalized regular nouns, like **jiru.g.ci* or **jiru.xA.ci* 'artist', from **jiru-* 'to draw, to paint'. In most Modern Mongolic languages, the verbal features of the actor nouns are absent or very marginal. It may also be noted that of the two alternative suffix variants, the variant **.xA.ci* is based on the imperfective participle suffix **.xA*, as in part. imperf. **jiru.xA* '(the act of) drawing', while the variant **.g.ci* is a secondary derivative of the non-productive deverbal noun in **.g*, as in **jiru.g* 'picture'.

Most of the Proto-Mongolic suffixes for deverbal nouns yielded clearly nominal formations with restricted productivity and a tendency of lexicalization. The derivatives concerned may be characterized as various types of general action nouns, such as those in **.dAl*, **.lAng*, **.lgA*, **.ltA*, **.li*, **.m*, **.mji*, **.mAt*, **.r*. Some were, however, more specialized and yielded nouns denoting, for instance, place of action: **.ri*, **.xUri* or **.xUli*; result or object of action: **.jA*, **.mAg*, **.ng*, **.si*; state or quality resulting from action: **.xU* or **.xUn*, **.gAyi* or **.gAr*, **.mAl*; performer of action: **.xUl*; or instrument of action: **.xUr*. It is easy to see that many of these suffixes contain certain recurrent initial elements, e.g. **.l*, **.m*, **.xU*, which may be identified as their original primary components, to which additional elements were added secondarily.

In deviation from the general dominance of suffixal derivation, there is a single aberrant phenomenon, in which prefixation also plays a role. This is the Common Mongolic pattern of forming emphatic (intensive) derivatives from adjectival nouns, especially colour terms, by prepositing to the stem its partially reduplicated initial syllable followed by the consonant *.b* according to the formula (C)V.b&(C)V-, e.g. **xulaxan* 'red' : **xu.b&xulaxan* 'reddish, quite red'. The reduplicated syllables may in such cases be analysed as independent emphatic particles, but in some modern languages they have yielded fully lexicalized structures, as in Bonan *shera* 'yellow' (< **sira*) : *shew.rexang* 'quite yellow' (< **si.b+sira.kan*).

A different type of reduplication is involved in the formation of the generic plural ('and other things like that'). Already in Proto-Mongolic, the generic plural seems to have been formed by pairing the nominal stem with an echo word, which was either a rhyme beginning with **m* or an alternate containing **a* in the initial syllable, e.g. **noka(y)i* & *moka(y)i* 'dogs and the like', **mori* & *mari* 'horses and the like'. In spite of its marginal function the generic plural, with some variations in the actual patterns, is surprisingly widely attested throughout the Mongolic family.

NOMINAL NUMBER

The morphological categories characteristic of the nominal declension in Proto-Mongolic were number, case, and reflexive possession. Unlike case and reflexive possession, however, number was not a regular inflexional category, but rather a derivational feature involving a considerable degree of facultativeness and irregular lexicalized variation. This need not always have been so, for there are indications that number marking had undergone a secondary diversification in Pre-Proto-Mongolic. This diversification has continued in some Modern Mongolic languages, while in others a strictly limited set of inflexional number suffixes has been established. The marked number in Mongolic has always been the plural (collective), but in some stem types the plural markers replace elements that may originally have functioned as singular (singulative) suffixes.

The plural in Proto-Mongolic was marked by two basic suffixes, **.s* and **.d*, which were in complementary distribution. The suffix **.s* was added to vowel stems, e.g. **ere* 'man' : pl. **ere.s*, while the suffix **.d*, preceded by the connective vowel **U* (> **UU*), was added to consonant stems, e.g. **nom* 'book' : pl. **nom/u.d*. However, most stems ending in the consonants **n* **l* **r* lost the final segment before the suffix **.d*, with no connective vowel involved, e.g. **kan* 'prince' : pl. **ka.d*, suggesting that these final consonants may originally have been suffixes. This analysis is particularly likely in the case of the stems ending in the unstable **/n*, which regularly formed their plural by the suffix **.d*, e.g. **mori/n* 'horse' : pl. **mori.d*. The same is true of polysyllabic stems ending in the derivative complex **.sU/n*, e.g. **nugu.su/n* 'duck' : pl. **nugu.d*.

A third plural suffix, with a more restricted distribution, was **.n*, which regularly replaced the stem-final derivative element **(y)i* (possibly < **.xi*) in several complex suffixes, e.g. poss. **.ta.(y)i* : pl. **.ta.n*, part. fut. **-kU.(y)i* : pl. **-kU.n*. This suffix was also used with the actor noun marker part. ag. **-g.ci* : pl. **-g.ci.n*. Occasional traces of **.n* are still preserved in the Modern Mongolic languages, but generally it has lost its productivity in favour of the other plural suffixes. In Common Mongolic, regular nouns ending in **(y)i* > **.i* form their plural by the suffix **.s*, e.g. **noka.i* 'dog' : pl. **noka.s*, but evidence from Middle Mongol and Preclassical Written Mongol shows that the original pattern is likely to have involved the use of **.n*, i.e. **noka.i* : pl. **noka.n*.

Already in Proto-Mongolic, the basic plural suffixes were being complemented by a set of secondary suffixes. Some of the latter were simply semantically redundant reduplications or combinations of the basic suffixes (double plurals), e.g. **.d/U.d* (> **.dUUd*), **.s/U.d* (> **.sUUd*). Others may be analysed as combinations of original stem-final segments or syllables with the plural formative **/U.d*, e.g. Common Mongolic **.nUUd*, **.ciUd* (> **.ciUl*). A different type of innovation was involved in the element **.nAr*, also **.nA.d* or **.nar/U.d* (> **.nar.UUd*), which was added to nouns denoting humans or deities, e.g. **aka* 'elder brother' : pl. **aka.nar*, **tenggeri* 'god' : pl. **tenggeri.ner*. Owing to the diversification of the plural suffixes, the original rules of complementarity were lost, often allowing several different plurals to be formed of a single nominal stem.

Patterns of the type **mori/n* (**mori.n*) : **mori.d* and **noka.(y)i* : **noka.n* suggest that plural formation may originally have been part of a more general system of nominal classes, in which both the singular and the plural were marked by distinct class suffixes. What the semantic basis of this possible Pre-Proto-Mongolic class system may have been, remains to be clarified, but in any case it is obvious that the distribution of the plural suffixes was not only phonologically conditioned. It is unclear what the exact function of the plural originally was. As in the Modern Mongolic languages, the basic (singular) form of nouns in Proto-Mongolic was able to function as an unmarked (unspecified) plural. The use of the actual plural suffixes seems to have been limited to cases in which plurality was not otherwise obvious from the context.

An interesting perspective into the prehistory of class marking in Mongolic is offered by the bisyllabic stems ending in **sU/n* and **dU/n*. The former typically denote liquids or liquifiable masses: **usu/n* 'water', **üsü/n* 'milk', **casu/n* 'snow', **cisu/n* 'blood', **nisu/n* 'mucus', **tosu/n* 'oil', while the latter denote countable sets of identical objects: **modu/n* 'tree/s', **nidü/n* 'eye/s', **sidü/n* 'tooth/teeth', **sodu/n* 'quill feather/s', **xodu/n* 'star/s', **xödü/n* 'feather/s'. Simple internal reconstruction suggests that all of these stems were originally composed of a monosyllabic root (CV), to which a class suffix (**.d* or **.s*) was added, followed by the connective vowel **U* and the suffixally used unstable **/n*. This system of classes was obscured already in Pre-Proto-Mongolic, but it is perhaps relevant to note that the two class markers are identical with the two basic plural suffixes (**.d* and **.s*) still used in Proto-Mongolic.

NOMINAL CASE

The category of case in Proto-Mongolic is normally considered to have comprised six suffixally marked cases: genitive, accusative, dative, ablative, instrumental, and comitative. At the Common Mongolic level there are also other case-like forms. The unmarked basic stem may be regarded as a nominative. The case endings were identical for all nouns except for slight phonologically conditioned variation depending on the stem type. If we take vowel stems (V) as the basis, some case endings, though not all, had separate variants used with consonant stems (C) or, more specifically, with nasal stems (N) or obstruent stems (O). The case endings were also affected by vowel harmony (Table 1.3).

Just how the actual shapes of the case endings are to be reconstructed depends on what level of reconstruction is intended. For some details, both Written Mongol and Middle Mongol yield information that is not readily recoverable from the synchronic data of the Modern Mongolic languages. Case endings are, in fact, a good example of a morphological set that should be viewed at three different levels of reconstruction: Common Mongolic, Proto-Mongolic, and Pre-Proto-Mongolic. At the Pre-Proto-Mongolic