

# PROTO-MONGOLIC

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*Proto-Mongolic* is the technical term for the common ancestor of all the living and historically attested Mongolic languages. By definition, Proto-Mongolic was spoken at a time when the differentiation of the present-day Mongolic languages had not yet begun. Like all protolanguages, Proto-Mongolic is an abstraction that can only be approached by the comparative and diachronic analysis of the synchronically known Mongolic languages. For the very reason that Proto-Mongolic is not actually attested our understanding of it will always remain imperfect. However, compared with many other Eurasian protolanguages, Proto-Mongolic is nevertheless relatively easily accessible due to the fact that the genetic relations between the Mongolic languages are even synchronically fairly transparent and, consequently, chronologically shallow.

The absolute dating of Proto-Mongolic depends on when, exactly, the linguistic unity of its speakers ended. For historical reasons it is commonly assumed that this happened only after the geographical dispersal of the ancient Mongols under Chinggis Khan and his heirs, in any case not earlier than the thirteenth century. This means that the present-day differences between the Mongolic languages are likely to be the result of less than 800 years of divergent evolution. If this is so, the Mongolic languages offer a laboratory example on how far linguistic evolution and diversification can take a language during such a limited time span. Perhaps even more interesting is the fact that the Mongolic languages have clearly not evolved at a uniform pace, for some of them, like Khamnigan Mongol, are conspicuously conservative and still relatively close to Proto-Mongolic, while others, like the languages of the Gansu-Qinghai complex, have undergone much more rapid and, as it seems, fundamental changes.

Philological evidence for the shallow dating of Proto-Mongolic is provided by the written documents surviving from the times of the historical Mongols and representing the Middle Mongol and Written Mongol languages. It is important to note that neither Written Mongol nor Middle Mongol is identical with Proto-Mongolic. Especially in the case of Written Mongol, including Preclassical Written Mongol, the inherent anachronism of the language makes a direct comparison with any particular diachronic stage of Mongolic impossible, or at least controversial. Nevertheless, it may confidently be said that the central properties of Written Mongol, like also the preserved sources on Middle Mongol, reflect a spoken language that was very close to the reconstructed idiom that emerges from the comparative analysis of the living Mongolic languages.

The chronological shallowness of Proto-Mongolic has two important consequences for linguistic conclusions. On the one hand, its grammatical structure and lexical resources can be reconstructed in great detail and with considerable accuracy, allowing it to be examined for synchronic purposes almost like a living language. On the other hand, Proto-Mongolic does not take us very far back in time, which makes its further diachronic analysis problematic, especially in view of external comparisons. The time gap of up to several thousands of years that separates Proto-Mongolic from some of the more ancient protolanguages of Eurasia can only imperfectly be filled by the methods of

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diachronic linguistics, such as internal reconstruction. Therefore, any external comparisons using Proto-Mongolic material should be carried out with the necessary caution, and with a proper understanding of the chronological discrepancy.

One aspect that can never be reconstructed by the comparative method is the internal diversity within Proto-Mongolic. Like all real languages, and like all protolanguages, Proto-Mongolic was certainly no uniform linguistic entity. It must have had some areal and social variation, part of which may survive in the synchronic material of the Modern Mongolic languages. Also, due to the distorting effect of the comparative method, it may well have had more grammatical and lexical idiosyncrasies and irregularities than can be reconstructed on the basis of the synchronic material. However, for methodological reasons we have no alternative to defining Proto-Mongolic as a maximally uniform and regular idiom, from which the actual synchronic diversity within Mongolic can be derived.

### PERIODIZATION

Since Proto-Mongolic is the reconstructed ancestor of the Modern Mongolic languages, it can only contain features that can be induced from the extant language material. The application of internal reconstruction and external comparisons to the Proto-Mongolic corpus do, however, yield limited information also on the stages preceding Proto-Mongolic. These stages may be termed *Pre-Proto-Mongolic*. Correspondingly, any phenomena chronologically younger than Proto-Mongolic may be identified as *Post-Proto-Mongolic*. Unlike Proto-Mongolic, which represents a single point on the time scale, both Pre-Proto-Mongolic and Post-Proto-Mongolic are open continuums. Pre-Proto-Mongolic, in particular, extends indefinitely far back in time as long as diachronic conclusions are possible.

In practice, the conclusions that can be made by the method of internal reconstruction concerning the structural and material properties of Pre-Proto-Mongolic involve mainly the linguistic stage immediately preceding Proto-Mongolic. This stage may also be called *Late Pre-Proto-Mongolic*, and in terms of absolute chronology it may be dated to the last centuries preceding the rise of the historical Mongols. Some of the earlier stages of Pre-Proto-Mongolic can be approached through the analysis of the traces of areal contacts with neighbouring language families, notably Turkic and Tungusic. Also, there is the tantalizing possibility that future research will further increase the time depth of reconstruction by giving us more insights into the *Para-Mongolic* linguistic diversity that is likely to have coexisted with Late Pre-Proto-Mongolic.

Among the extant Mongolic languages, the only one that may give us some direct information on the linguistic characteristics of Late Pre-Proto-Mongolic is Written Mongol, whose orthographical and morphological anachronisms include a few peculiarities that appear to reflect diachronic stages extending beyond Proto-Mongolic. Written Mongol is also likely to preserve traces of the dialectal diversity that actually existed in both Proto-Mongolic and Pre-Proto-Mongolic times. This diversity was extinguished at the level of the spoken language by the ethnic and political (re)unification of the Mongols under Chinggis Khan.

We might also say that the period of the Mongol empire functioned as a kind of linguistic bottleneck. Prior to the time of Chinggis Khan, the speech of the ancient Mongols may be assumed to have been a conglomeration of geographically dispersed tribal idioms, including those of the Naiman, the Kereit, the Mongols proper, and others. These tribal idioms seem to have been mutually intelligible, and they may therefore be classified as dialects of Late Pre-Proto-Mongolic. However, in the absence of factual information we

will never know what the actual degree of diversity was. In any case, with the victory of Chinggis Khan, intensive linguistic unification took place, and, as a result, the primary dialects were lost in favour of a more homogeneous Proto-Mongolic language. The latter, in turn, yielded a number of Post-Proto-Mongolic secondary dialects, to which the Modern Mongolic languages can be traced.

For some purposes, it is useful to make a distinction between the concepts of Proto-Mongolic and *Common Mongolic*. While Proto-Mongolic implies any reconstructed feature that actually derives from the Proto-Mongolic period, Common Mongolic can also comprise Post-Proto-Mongolic features shared by the Mongolic languages on an areal basis. Due to the geographical closeness and genetic compactness of the core group of the Modern Mongolic languages, it is often impossible to draw an unambiguous line between primary genetic retentions and secondary areal innovations. In many cases, even very late elements, especially in the lexicon, can exhibit the same type of correspondences as the inherited component of the modern languages. In case of ambiguity it is always safer to speak of Common Mongolic, rather than Proto-Mongolic. This is true of both lexical elements and structural properties.

Technically speaking, there are two types of criterion that can be used in order to establish the Proto-Mongolic origin of any given feature. The first type may be identified as *distributional*, and it is based on the linguistic fact that Proto-Mongolic features tend to have a wide distribution in the modern languages. In particular, any feature that is attested in, or perhaps restricted to, two or more peripheral Mongolic branches, such as Moghol, Dagur, or the Gansu-Qinghai complex, is likely to represent common Proto-Mongolic heritage. However, it should be kept in mind that the absence of a feature from the peripheral languages does by no means rule out the possibility of its Proto-Mongolic origin.

The second type of criterion may be identified as *documentary*, and it is based on the philological circumstance that written documents dating from either Middle Mongol or early Preclassical Written Mongol are more or less contemporaneous with Proto-Mongolic. If a linguistic feature is attested in such documents, we can infer that it was present in the Proto-Mongolic language. Again, it should be noted that the presence of such documentation is no prerequisite for linguistic reconstruction. Proto-Mongolic is and remains a product of the comparative method, and the fact that idioms close to it happen to be recorded in written documents is only of secondary interest from the reconstructive point of view. In this respect, Proto-Mongolic is comparable with any other relatively recent protolanguage which once coexisted with a close-lying literary standard (cf. e.g. the case of Latin vs. Proto-Romance).

### DATA AND SOURCES

The application of the comparative method to the diachronic analysis of Mongolic became possible only when the synchronic investigation of the living Mongolic languages was initiated by scholars such as M. A. Castrén, G. J. Ramstedt, Władysław Kotwicz, Andrei Rudnev, and others. Much of the early comparative work was focused on listing the differences between Written Mongol and the various Modern Mongolic languages and dialects, notably Khalkha. Middle Mongol provided another concrete point of comparison. Unfortunately, the easy availability of a diachronic perspective through Written Mongol and Middle Mongol has always tended to remain an obstacle, rather than a stimulation, to the strictly linguistic understanding of Proto-Mongolic.

The actual comparative work on Mongolic has become increasingly challenging with the introduction of fresh synchronic data on the previously little-known peripheral

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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. Darvaaev (1988) and A. A. Darbeeva (1996), offer no substantially new insights. Tömörtoogoo (1992) is nevertheless useful as a bibliographical tool, while G. C. Pyurbee (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 \**ü*. 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 *cegin* 'ear' < \**cigi/n* < \**ciki/n*. Obviously, the paradigmatic merger of the vowels \**i* \**ü* 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 \**miika/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

$*b$ $*m$	$*t$	$*c$	$*k$
	$*d$	$*j$	$*g$
	$*s$		$*x$
	$*n$		$*ng$
	$*l$		
	$*r$		
		$*y$	

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* >  $*deel$ ,  $*küpiün$  ‘man’ >  $*küümün$  > Oirat *kümn* vs. Common Mongolic  $*kiixün$  >  $*küün$ . 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* (*gahan*) 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 *sään*.

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 *vkulav* ‘cloud’ for *\*exile/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 ~ \*biyyi* [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 \**ii*). 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* \**ii* (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 (\**ii* \**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 combined with any of the vowels \**a* \**e* \**u* \**ii* 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-ii*, 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-ii* into \**ö-ii*, 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-ii* > \**ö-ii* 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 \**ii-e* and \**u-a*, respectively, as in \**tuxa* (or \**toxa*) ‘number’, \**büxe* (or \**böxe*) ‘shaman’.

Importantly, the vowels \**a* \**o* \**u* vs. \**e* \**ö* \**ii* were all distinguished in non-initial syllables following \**i* (< \**i* & \**ii*) of the initial syllable, as in \**sira* (< \**süra*) ‘yellow’ vs. \**sine* ‘new’, \**cino* (< \**cüno*) ‘wolf’ vs. \**silö* ‘soup’, \**cisu*/n (< \**cüsu*/n) ‘blood’ vs. \**sidü*/n ‘tooth’. Similarly, any vowel quality of the initial syllable could be combined with \**i* (< \**i* & \**ii*) of the second syllable, as in \**ami*/n (< \**amii*/n) ‘life’ vs. \**xeki*/n ‘head, beginning’, \**mori*/n (< \**mori*/n) ‘horse’ vs. \**ökin* ‘daughter’, \**gulir* (< \**gülir*) ‘flour’ vs. \**küril* ‘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 (\**tali-* 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* \**ii*) or \**i* (< \**i* & \**ii*), 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 (nominata, 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 ‘fleeting’ \*/*n*. The unstable \*/*n* was in a regular paradigmatic alternation with zero ( $\emptyset$ ), as in \**mori/n* ‘horse’ : gen. \**mori-n-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 \*.tU or \*.tA.(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-, \*.lgA- or \*.xUl- (after vowel stems); reciprocals by \*/*U.ldU-*; cooperatives by \*/*U.lcA-*; and pluratives 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 verbality 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 \*.l (general action) and \*.mA (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, \*.IAng, \*.lgA, \*.ltA, \*.li, \*.m, \*.mji, \*.mtA, \*.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, \*.mA, \*.ng, \*.si; state or quality resulting from action: \*.xU or \*.xUn, \*.gAyI or \*.gAr, \*.mA; 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 preposing 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 inflectional 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 inflectional 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 \*.s*U/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’, \**sidi/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

TABLE 1.3 PROTO-MONGOLIC CASE MARKERS

	V	C	N	O
gen.	*-/y-i-n	*-/U-n	*-U	
acc.	*-/y-i	*-i		*-tU/r
dat.	*-dU/r			
abl.	*-A-cA			
instr.	*-xAr	*-/i-xAr		
com.	*-/lUx-A			

level, the synchronic allomorphy of the Proto-Mongolic case endings can be shown to derive from original invariance, while at the Common Mongolic level several new complications had appeared.

A very simple type of allomorphy is involved in the accusative case ending, which clearly derives from Pre-Proto-Mongolic \*-i with the only complication that vowel stems required the presence of the connective consonant \*y. The genitive ending, on the other hand, may be reconstructed as \*-n, which after consonant stems required the connective vowel \*U. After nasal stems, the actual case ending was dropped, leaving only the connective vowel to signal its former presence: \*/U-n > \*-U. Vowel stems probably originally took the primary genitive ending \*-n, but this was secondarily expanded into \*/y-i-n on the analogy of the consonant stems, and under the influence of the accusative ending \*/y-i.

As far as their functions are concerned, the genitive and the accusative may be identified as the basic grammatical cases in Mongolic, with the genitive marking the adnominal (attributive) and the accusative the adverbial (objective) type of dependence. It has to be noted that these two cases, although clearly distinct for all stem types in both Proto-Mongolic and Pre-Proto-Mongolic, show a secondary tendency to merge in several Modern Mongolic languages, notably Dagur and the languages of the Gansu-Qinghai complex. From the point of synchronic description, it seems that the formally syncretized genitive-accusative, combining the functions of its two ancestors, cannot be treated as two separate cases. Rather, it is a single new case, which is perhaps best termed the *connective*.

The history of the dative ending is connected with several unsolved problems. The full ending \*-dUr (\*-DUR) is only attested in Written Mongol and Middle Mongol, while all the Modern Mongolic languages point to the shape \*-dU (\*-DU). This apparently means that the ending was irregularly shortened already in Proto-Mongolic. However, there are indications that the original ending may have been simply \*-d, as still attested in a number of adverbial and postpositional words, such as \*uri-d ‘before’. If this is so, the complex ending \*-dUr is best explained as a combination of the elements \*d and \*r, joined with the intermediation of the connective vowel \*U. The role of the final element \*r remains unclear, though it has been compared with the adverbial suffix \*-xUr > \*g/-UU, which functions as a prosecutive ending (‘via’) in a number of Modern Mongolic languages. The prosecutive might, however, also be connected with the directive in \*-rUU ~ \*-UUr, which derives from the independent postposition \*uruxu > \*uruu ‘down/wards; towards’ (cf. also \*uru-gsi ‘forward’).

In addition to the dative in \*-dU-r > \*-dU/r, Proto-Mongolic still had traces of another case in \*-A, often also identified as a dative but perhaps better termed the *locative*.

The locative ending is well attested in both Written Mongol and Middle Mongol, but unlike the dative ending it had the restriction of being added only to consonant stems, e.g. \*gajar ‘place’ : loc. \*gajar-a. In Common Mongolic it is mainly preserved in adverbial and postpositional items, in which it is often preceded by the elements \*-r or \*-n, as in \*dexe.r-e ‘on top of’, \*emü.n-e ‘in front of’. Even more importantly, the locative ending occurred in combination with the dative element \*-d-, yielding \*-d-A (\*-D-A), which is attested as an alternative dative ending in Middle Mongol, and in a few Common Mongolic fixed phrases, e.g. \*nasu/n ‘age’ : \*nasu-d-a ‘always’. All of this suggests that the element \*-d- of the dative may originally have been a coaffix, to which other elements were added, yielding the complex dative endings \*-d-A and \*-d/U-r > \*-dU. Due to the effect of vowel reduction, the endings \*-d-A and \*-d-U are largely indistinguishable in the Modern Mongolic languages.

At the Proto-Mongolic level, the functions of the locative in \*-A seem to have been identical with those of the dative in \*-dU-r, which explains the ultimate marginalization of the locative. Both cases are attested in a wide range of locative and dative (dative-locative) functions, expressing not only spatiality (‘where’, ‘whither’) and temporality (‘when’), but also the recipient (‘for whom’) and possessor (‘in whose possession’). Analogous functions were filled by the ablative with the difference that it indicated the source of action (‘from where’, ‘from whom’). The original ablative ending seems to have been \*-cA, still preserved in relicts in Written Mongol, as in *vguvca* for \*exün-ce ‘from this’. Already in Proto-Mongolic, however, the ablative was mainly expressed by the complex suffix \*-A-cA, which incorporates the locative ending \*-A-.

The dative and the ablative, together with the remains of the locative, may be identified as the local cases of Proto-Mongolic. The instrumental and the comitative, correspondingly, were the modal cases, expressing, roughly, the means of action (‘by what’) and the social context of action (‘with whom’), respectively. The instrumental ending may be derived from the basic shape \*-xAr < \*-pAr, expanded into \*-/i-xAr after consonant stems. The comitative ending \*-/lUx-A incorporates the locative in \*-A, revealing that the comitative was a secondary case formed relatively late in Pre-Proto-Mongolic on the basis of a denominational derivative suffix for possessive adjectival nouns. This development has later recurred, in that the original comitative in the Modern Mongolic languages has largely been replaced by what may be termed the *possessive case*, based on the Common Mongolic possessive adjectival suffix \*-tA(y)i.

In the Post-Proto-Mongolic period, none of the original case endings has developed along completely regular phonological lines. One particularly conspicuous tendency, which may be regarded as Common Mongolic, is the secondary lengthening of the suffix-initial (morpheme-boundary) vowel elements for all stem types. As a result, the modern genitive and accusative endings typically incorporate the long vowel elements \*-Ai- or \*-ii-, while the ablative and instrumental have \*-AA-. The vowel element has in some cases become morphologically distinctive, cf. e.g. \*xaan ‘emperor’ : gen. \*xaan-ai vs. acc. \*xaan-ii. Another irregular feature is the development \*-cA > \*-sA in the ablative ending \*-A-cA, yielding Common Mongolic \*-AA-sA. The declensional patterns of the stems ending in the unstable /n vary considerably in the modern languages.

As the history of the ablative ending \*-A-cA shows, Proto-Mongolic had a tendency to accumulate certain case suffixes to sequences in a pattern that has been termed *double declension*. Apart from the occasional combination of two local case endings (normally dative + ablative), it is particularly common in several Modern Mongolic languages to form a secondary case paradigm on the basis of the genitive (especially genitive + dative or ablative). Although the actual forms cannot necessarily be derived from

Proto-Mongolic, the tendency of double declension itself may well be characterized as at least Common Mongolic.

There is, incidentally, one type of double declension that is definitely both Common Mongolic and Proto-Mongolic. This involves the use of the suffix *\*-ki* (or *\*-ki/n*) after the locative, dative and genitive endings to form new nominatives, which can, in principle, be further inflected in different case forms. The dative ending used in this connection is always *\*-da*(*\*-DA*), e.g. *\*ger* ‘house’ : *\*ger-te-ki* ‘(the one) located in the house’ : dat. *\*ger-te-ki-düi/r*. The suffix *\*-ki* is traditionally treated as a derivational feature, but it differs from all other derivative suffixes in that it is normally added to an inflected form. Unlike most actual derivative suffixes, it is also fully productive, and must have been so in Proto-Mongolic already. It is therefore probably best analysed as a special kind of nominative case ending, used in double declension to nominativize other case forms. The underlying structural motivation is obvious: the nominative is unmarked in its normal use, but when built upon other case forms, it is a marked feature and requires an ending, which is *\*-ki*.

Additional information on the history of the case system is offered by the reflexive (reflexive-posessive) declension, in which the case endings are followed by the reflexive marker *\*-xA/n* < *\*-pA/n*, after consonants *\*i-xA/n*. The adding of the reflexive marker seems originally to have been fairly mechanical, though secondary irregularities are observed in some modern languages especially in the genitive and accusative. Perhaps most importantly, the dative ending used in the reflexive declension has always been *\*-da* (*\*-DA*), yielding the complex *\*-da-xA/n* (*\*-DA-xA/n*). The reflexive marker could also follow the bare stem, yielding an unmarked form functionally equivalent to the accusative.

## NUMERALS

In view of its relatively shallow dating, it is not surprising that Proto-Mongolic had a fully developed set of native numerals, corresponding to a decimal system of counting. It is, indeed, perhaps more surprising that some of the peripheral Mongolic languages, notably (Minhe) Mangghuer and Moghol, have replaced the original numeral set, or large sections of it, by recent borrowings and other innovations. Although this is mainly indicative of the exceptionally strong areal reorientation of the languages concerned, the possibility of similar replacements in Pre-Proto-Mongolic should not be overlooked. As it is, the Mongolic numerals are a promising object for internal reconstruction.

The Proto-Mongolic numerals of the first decade may be reconstructed as: 1 *\*nike/n* > *\*nige/n* (> Common Mongolic *\*nege/n*), 2 *\*koxar* ~ *\*koyar*, 3 *\*gurba/n*, 4 *\*dörbe/n*, 5 *\*tabu/n*, 6 *\*jirguxa/n*, 7 *\*doluxa/n*, 8 *\*na(y)ima/n*, 9 *\*yersü/n* (> Common Mongolic *\*yesü/n*), 10 *\*xarba/n*. The other decades were expressed by separate correlative derivatives: 20 *\*kori/n*, 30 *\*guci/n*, 40 *\*döci/n*, 50 *\*tabi/n*, 60 *\*jira/n*, 70 *\*dala/n*, 80 *\*naya/n*, 90 *\*yere/n*. There were also words for the lower powers of ten: 100 *\*jaxu/n*, 1,000 *\*mingga/n*, 10,000 *\*tüme/n* (generically also ‘myriad’).

An examination of the numeral material immediately reveals some diachronically relevant regularities and irregularities. Most importantly, it may be observed that all numerals, with a single exception, belong to the same stem type, ending in the unstable */n*. The exception is 2 *\*koxar* ~ *\*koyar*, which, because of its aberrant shape, is likely to be a secondary innovation. In fact, it is commonly assumed that the original numeral for ‘two’ was *\*jiri/n*, still used in Middle Mongol for counting female beings. The primary

status of this stem is confirmed by the fact that the numeral 6 *\*jirguxa/n* is transparently a compound word, analysable as *\*jir* + *guxa/n* ‘2 x 3’, with 3 *\*gu(r)ba/n* as the latter component. This, on the other hand, suggests that the Proto-Mongolic numeral for ‘six’ was also an innovation replacing a more original stem.

Another detail revealed by internal reconstruction is that several basic numerals contain a derivative suffix which can be reconstructed as Pre-Proto-Mongolic *\*.pA/n*, yielding Proto-Mongolic *\*.bA/n* : *\*.mA/n* : *\*.xA/n*. The variant *\*.bA/n* occurs in three numerals after the consonant *\*r*, which itself is also likely to be a derivative suffix: 3 *\*gu.r.ba/n*, 4 *\*dö.r.be/n*, and 10 *\*xa.r.ba/n*. It may be noted that *\*r* also appears in 2 *\*ji.r.i/n*, though the segmentation of this numeral is problematic. The variant *\*.xA/n* occurs after a vowel in 6 *\*ji.r+gu.xa/n* and 7 *\*dolu.xa/n*, while the variant *\*.mA/n* was obviously conditioned by the initial nasal in 8 *\*na(y)i.ma/n*. Altogether, *\*.pA/n* was clearly a suffix making fully formed numerals of the first decade out of a set of abstract (primary) numeral roots. The absence of *\*.pA/n* in 1 *\*nike/n* > *\*nige/n*, 5 *\*tabu/n*, and 9 *\*yersü/n* suggests that these numerals were somehow special and perhaps secondary.

Further conclusions can be made from the comparison of the basic numerals with the corresponding set for the decades. The numerals for the decades are clearly divided into two groups, the first ending in *\*.i/n*, as seen in the items for 20 to 50, and the second ending in *\*.A/n*, as seen in the items for 60 to 90. The conclusion lies close at hand that these suffixes represent the meaning ‘ten’, though an immediate comparison with Proto-Mongolic 10 *\*xa.r.ba/n* appears phonologically impossible. In any case, the elements preceding *\*.i/n* and *\*.A/n* may be identified as the original roots for the basic numerals of the first decade, which may then be reconstructed as: 3 *\*gu(-)*, 4 *\*dö(-)*, 5 *\*tab*, 7 *\*dal*, 8 *\*nay*, 9 *\*yer*. The root in 60 *\*jir:a/n* represents, of course, 2 *\*ji.r*.

There still remain many unanswered questions about the Mongolic numerals. There is, for instance, not sufficient internal evidence to explain the alternation *\*r* : *\*c* in 3 *\*gu.r.ba/n* : 30 *\*gu.c.i/n* and 4 *\*dö.r.be/n* : 40 *\*dö.c.i/n*. In 7 *\*dol/u.xa/n* : 70 *\*dal.a/n* the correspondence *\*o* : *\*a* is easily explained by assuming a sporadic assimilation in *\*dol/u.xa/n* < *\*dal/u.xa/n*, but it is not clear why the suffix *\*.xA/n* < *\*.pA/n* is here preceded by what appears to be the connective vowel *\*U*. The root in 8 *\*na(y)i.ma/n* : 80 *\*nay.a/n* is potentially important for the reconstruction of Proto-Mongolic diphthongoids, but it is also possible that 8 *\*na(y)i.ma/n* should be segmented as *\*nay/i.ma/n*, with *\*i* functioning as a connective vowel. In the latter case, the numeral root *\*nay* could ultimately derive from Pre-Proto-Mongolic *\*nax* (or even *\*nap*).

A few of the original numeral roots are also attested in a limited set of archaic ordinals, comprising: *\*ji.tixer* ‘second (wife)’, *\*gu.taxar* ‘third’, *\*dö.tüixer* ‘fourth’, *\*tab.taxar* ‘fifth’. The ordinal suffix in question shows irregular variation both in the vocalism (*\*U* : *\*A*) and in the consonantism (*\*x* : *\*g*), but it seems to be based on the more primary ordinal suffix *\*tU* or *\*tA*, expanded by the instrumental case ending *\*-xAr*. In Common Mongolic, *\*tA* forms multiplicatives, while the ordinal suffix appears in the generalized shape *\*.dUgAr* > *\*.dUgAAr*, normally added to the full stems of the basic numerals, with only the unstable *\*n* omitted, e.g. *\*nige.düger* ‘first’, *\*gurba.dugar* ‘third’. Occasional irregular truncation of the stem is, however, observed in *\*koya(r).dugar* ‘second’, *\*jirgu(xa).dugar* ‘sixth’, *\*dolu(xa).dugar* ‘seventh’.

Two other widespread categories of numeral derivative that can unambiguously be dated back to Proto-Mongolic are the collectives in *\*.xUla/n*, e.g. *\*koya.xula/n* ‘two together’, and the distributives (later also approximatives) in *\*.xAD*, e.g. *\*gurba.xad* ‘three each’. The distributive *\*kosiya.xad* ‘two each’ contains an exceptional root variant, revealing a derivative connection with *\*kos* ‘pair’ (which is probably etymologically

separate from the numeral *\*koxar* ~ *\*koyar* ‘two’). The distributive *\*niji.xed* ‘one each’ is also exceptional. Moreover, *\*niji.xed* is alternatively attested as *\*niji.xel*, suggesting that the distributive suffix *\*.xA.d* was originally a plural (*\*.xA.d*) from the primary suffix *\*.xAl*.

### PRONOUNS

A major formal difference between pronouns and substantival nouns in Proto-Mongolic was that the former almost invariably involved maximally simple monosyllabic roots (CV, in the modern languages often lengthened into CVV). In actual use, however, most pronominal roots were expanded by derivative and inflectional elements, many of which were unknown in regular nominal morphology. From the point of view of function, the three principal categories of pronoun were: personal, demonstrative, and interrogative pronouns.

The personal pronouns (Table 1.4) formed an almost perfect grid, in which person was marked by the initial consonant (1p. *\*b* : *\*m*, 2p. *\*c* : *\*t*, 3p. *\*Ø*), and number by the stem vowel (sg. *\*i* : pl. *\*a*). In the inflected forms, the singular pronouns had two expansions, one for the genitive (*\*.n-*) and the other for the rest of the oblique cases (*\*.mA-*), while the plural pronouns had only one expansion for the whole paradigm (*\*.n-*). The system that can be reconstructed for Pre-Proto-Mongolic was even more regular, in that the alternations of the initial consonants in the first and second person stems can be derived from original invariance (1p. *\*m* < *\*b* by nasalization, 2p. *\*c* < *\*t* by palatalization). The same is true of the seemingly irregular first person singular oblique stem (*\*na.ma-* < *\*ni.ma-* < *\*mi.ma-* < *\*bi.ma-* by nasalization, dissimilation, and prebreaking).

One detail that is not immediately clear from the comparative material concerns the harmonic status of the singular pronouns 1p. *\*bi*, 2p. *\*ci*, 3p. *\*i*. The fact that the oblique stems, 1p. *\*na.ma-*, 2p. *\*ci.ma-*, 3p. *\*i.ma-*, are clearly back-vocalic suggests that the pronominal roots originally contained the velar vowel *\*i*. However, the velar vocalism of the oblique stems can also be due to the regressive influence of the element *\*.mA*, which is etymologically obscure, but which may originally have been back-vocalic itself. It happens that the corresponding genitive forms are harmonically ambivalent, and have been variously reconstructed either as back-vocalic, 1p. *\*mi.n-u*, 2p. *\*ci.n-u*, 3p. *\*i.n-u*, or as front-vocalic, 1p. *\*mi.n-ü*, 2p. *\*ci.n-ü*, 3p. *\*i.n-ü*. Strictly speaking, the genitives were restructured into 1p. *\*mi.n-i*, 2p. *\*ci.n-i*, 3p. *\*i.n-i* already in Proto-Mongolic, as suggested by all the Modern Mongolic languages.

TABLE 1.4 PROTO-MONGOLIC PERSONAL PRONOUNS

		1p.	2p.	3p.
sg.	nom.	<i>*bi</i>	<i>*ci</i>	<i>*i</i>
	gen.	<i>*mi.n-U</i>	<i>*ci.n-U</i>	<i>*i.n-U</i>
	obl.	<i>*na.ma-</i>	<i>*ci.ma-</i>	<i>*i.ma-</i>
	excl.		incl.	
pl.	nom.	<i>*ba</i>	<i>*bida</i>	<i>*ta</i>
	gen.	<i>*ma.n-u</i>	<i>*bida.n-u</i>	<i>*ta.n-u</i>
	obl.	<i>*ma.n-</i>	<i>*bida.n-</i>	<i>*ta.n-</i>

The reconstruction of the genitives of the personal pronouns is further complicated by the presence of a set of possessive pronouns, formed from the basic genitives by the suffix *\*-xA(y)i*. This suffix is functionally close to the general nominativizing element (double declension nominative ending) *\*-ki*, which is, in fact, also used to form possessive pronouns in several Modern Mongolic languages. The suffix *\*-xA(y)i* seems to survive in the modern languages in, at least, the genitives of the plural personal pronouns 1p. *\*man-u-xa(y)i* > *\*man-ai*, 2p. *\*tan-u-xa(y)i* > *\*tan-ai*. The latter are, however, not confined to the possessive (predicative) function, but are also used as regular (attributive) genitives. It is unclear whether a similar merger of the two forms has taken place in the singular.

In the Post-Proto-Mongolic period, the system of personal pronouns has been affected by three major structural innovations. The first innovation, which was apparently initiated already in Late Pre-Proto-Mongolic, was the appearance of a secondary inclusive pronoun for the first person plural. The new pronoun was of a compound origin, consisting of sg. 1p. *\*bi* and pl. 2p. *\*ta*, i.e. *\*bi+ta* ‘I and you’ > *\*bida* (also > *\*bide*). With this innovation, the original pronoun *\*ba* : *\*man-* was restricted to the exclusive function and was gradually marginalized. Although the distinction between the inclusive and exclusive forms is preserved in several Modern Mongolic languages in the oblique paradigm, there has been a tendency to merge the categories in the nominative by replacing *\*ba* by *\*bida*. The only modern language preserving the original set is Dagur.

The second innovation concerned the third person pronouns sg. *\*i* : pl. *\*a*, which already in Proto-Mongolic were becoming obsolete, and which in Common Mongolic have been completely replaced by the demonstratives. The original pronouns are still attested in Middle Mongol and Preclassical Written Mongol, but the only modern languages preserving them, or traces of them, are Dagur and Moghol.

The third innovation was the honorific use of the plural second person pronoun *\*ta* in reference to a single person: ‘you [single, honoured one]’. In order to make the plural reference unambiguous, several Modern Mongolic languages have introduced suffixally marked plurals, such as *\*ta.nar* (> Common Mongolic *\*taa.nar*) ‘you [many]’. Similar plurals are also formed of the first person pronoun: *\*bida.nar* (> *\*bide.ner*). While these innovations serve obvious communicative functions, they have seriously altered the formal structure of the pronominal system.

Apart from their normal independent use, the personal pronouns in Proto-Mongolic were apparently used enclitically, which in several Modern Mongolic languages has resulted in grammaticalized systems of possessive suffixes and predicative personal endings. The possessive suffixes are based on the genitives: 1p. sg. *\*-mini* : pl. excl. *\*-mani* : incl. *\*-bidAni*, 2p. sg. *\*-cini* : pl. *\*-tani*, 3p. sg. *\*-ini* : pl. *\*-ani*. The predicative personal endings, on the other hand, are based on the nominatives: 1p. sg. *\*-bi* : pl. excl. *\*-ba* : incl. *\*-bidA*, 2p. sg. *\*-ci* : pl. *\*-ta*. Generally, except in Dagur, the third person singular and plural possessive suffixes have converged into the Common Mongolic shape *\*-ni*. Also, except in Dagur, the first person plural exclusive and inclusive forms have been neutralized in favour of the exclusive form in the possessive paradigm, and in favour of the inclusive form in the system of the predicative personal endings.

The demonstrative system in Proto-Mongolic was based on the two roots *\*e* ‘this’ and *\*te* ‘that’. These were probably never used alone, though the independent use of *\*te* is superficially suggested by synchronic data from Moghol and the languages of the Gansu-Qinghai complex. In any case, the demonstrative roots were normally combined with additional elements, both derivational and inflectional, yielding two sets of correlative forms and derivatives. These, in turn, were closely paralleled by interrogative words based on the root *\*ke* ‘who, what’ (Table 1.5).

TABLE 1.5 PROTO-MONGOLIC PRONOMINAL CORRELATIONS

		*e 'this'	*te 'that'	*ke 'who, what'
sg.	nom.	*e.n.e	*te.r.e	*ke/n
	obl.	*e.xü/n-	*te.xü/n-	*ke/n-
pl.	nom.	*e.d.e(-xer)	*te.d.e(-xer)	*ke.d
	obl.	*e.d.e/n-	*te.d.e/n-	*ke.d-
der.	emph.	*e.li	*te.li	*ke.li
	'where'	*e.n-d-e	*te.n-d-e	
	'when'	*e.n.ü.x-e		*ke.r
	'how'			
	'to do what'	*e.yi-	*te.yi-	
	'what kind of'	*e.yi.m.ü	*te.yi.m.ü	
	'how many'	*e.d.ü.n	*te.d.ü.n	*ke.d.ü.n
	'how much'	*e.d.ü.(y)i	*te.d.ü.(y)i	*ke.d.ü.(y)i
	'when'	*e.d.ü.x-e		*ke.j.i.x-e

Many of the pronominal derivatives concerned are actually obscured inflectional forms based on the expanded stems \*e.n- vs. \*te.n- vs. \*ke.n- : pl. \*e.d- vs. \*te.d- vs. \*ke.d-. The quantitative expressions \*e.d.ü.n vs. \*te.d.ü.n vs. \*ke.d.ü.n, for instance, are possibly simply the genitives of pl. \*e.d- vs. \*te.d- vs. \*ke.d-, while \*e.d.ü.(y)i vs. \*te.d.ü.(y)i vs. \*ke.d.ü.(y)i might be obscured accusatives. The locative ending is transparently present in \*e.n.ü.x-e (> \*öñüxe) and \*e.d.ü.x-e (> \*oduxa) 'now', as well as in \*ke.j.i.x-e (< \*ke.d.i.x-e) 'when', while \*e.n-d-e 'here' and \*te.n-d-e 'there' are formally dative (dative-locatives). The participially used narrative marker is present in \*e.yi.m.ü vs. \*te.yi.m.ü, based on the verbal derivatives \*e.yi- vs. \*te.yi-, cf. also conv. mod. \*e.yi-n vs. \*te.yi-n 'like this/that'. In some cases, the formal correlation is not matched by the semantic functions. For instance, the demonstratives \*e.li (or \*e.le) vs. \*te.li seem to have been emphatic pronouns ('this/that very/same thing'), while their interrogative counterpart \*ke.li has a temporal function ('when').

Proto-Mongolic also had several other pronominal roots with more restricted derivational patterns. As the pronoun \*ke/n : pl. \*ke.d became confined to the meaning of 'who', the meaning of 'what' was expressed by the root \*ya, as in \*ya.xu/n (> \*yexü/n) 'what' : \*ya.xu.ma (> \*yexüme) 'what thing' : \*ya.m.bar (> \*yamar) 'what kind of' : \*ya.xa+ki-(> \*yaxa-) 'to do what'. Other interrogative words were \*ali/n 'which' and \*ka.mix-a (> \*kaxa/n-a) 'where', while demonstratives included \*nögüxe 'that one; the other one' and \*mön 'the very/same': pl. \*mö.d : der. \*mö.n.ü.x-e 'now'. The interrogatives also functioned as indefinite pronouns. The most notable Post-Proto-Mongolic development in some languages (including Mongol proper) has been the grammaticalization of the pronouns \*mön and \*yaxuma into copulas (sentence-final predicative particles).

The Proto-Mongolic reflexive pronoun may be reconstructed as \*öxe.n : pl. \*öxe.d (< \*öpe.n : pl. \*öpe.d), which transparently lies behind the reflexive marker \*xA/n (< \*pA/n). The basic form \*öxe.n is, however, today preserved only in Dagur, while the other Mongolic languages point to the shapes \*öxe.r or \*öxe.r.sü/n : pl. \*öxe.r.sü.d (> \*öxe.sü.d). The reflexive pronoun was apparently already in Proto-Mongolic normally followed by the reflexive marker, except in the genitive \*öixer-ü-n 'one's own'. The absolute (possibly originally accusative) form \*öixer/i-xe/n seems to have had both objective ('oneself') and adverbial ('by oneself') uses.

## PARTICIPLES

The verbal forms in all Mongolic languages, including Proto-Mongolic, can formally and functionally be divided into four categories: imperatives, finite indicative forms, participles, and converses. In the sentence, imperatives and finite indicative forms are used as finite predicates, while converses and participles appear as infinite predicates. The difference between imperatives and finite indicative forms is one of communicative function, while the difference between converses and participles is one of syntactic behaviour. Converses behave syntactically as adverbs, while participles can occur in the role of any nominal part of the sentence. Morphologically, imperatives, finite indicative forms, and converses are basically invariant verbal forms, while participles are nominal words, which can be inflected in all categories of the regular nominal declension.

In the diachronic framework, participles (verbal nouns) may be regarded as the basic category of verbal forms. Participles have recurrently been incorporated into the imperative and finite indicative paradigms, and, especially in their inflected forms, they have also been an important source of converses. By contrast, imperatives, indicative finite forms, and converses are not known to have developed into participles. This suggests that the nominalization of the verb was a process of fundamental importance in the history of the Mongolic conjugation. The tools for the nominalization process were derived from the participle markers.

The Proto-Mongolic system of participles is normally regarded as having comprised five forms, which may be termed the futuritive, imperfective, perfective, habitive, and agentive participle, each marked by a distinct suffix (Table 1.6). All participles could function as verbal headwords, but, at the same time, they (or their case forms) could function as nouns modifying verbs (as objects, adverbials) or other nouns (as attributes). There were differences, however, in how the verbal and nominal properties were balanced for each participle. The agentive participle, in particular, has in many Modern Mongolic languages tended to develop into a fully nominal actor noun (*nomen actoris*) with no verbal features. In principle, any participial form had already in Proto-Mongolic the potential of becoming lexicalized into a regular noun.

Apart from the contextually determined appearance of the connective vowel \*U after consonant stems (C), there was also variation in some participle markers. The two agentive participle markers \*-g.ci vs. \*-xA.ci may simply have been conditioned by dialectal factors, but in the case of the futuritive participle there are indications of a functional difference, in that the longer marker \*-kU.(y)i seems mainly to have been confined to substantival uses, while the shorter marker \*-kU was used adjectively. It has also been assumed that there was a gender distinction involved between \*-kU (masculine) and \*-kU.(y)i (feminine), as is vaguely suggested by the relevant Middle Mongol data. Similar distinctions may have been valid for the markers \*-xA vs. \*-xA.(y)i of the imperfective

TABLE 1.6 PROTO-MONGOLIC PARTICIPLE MARKERS

C	marker	variant
part. fut.	*-kU	*-kU.(y)i
imperf.	*-/U-	*-xA
perf.	*-/U-	*-g.SA/n
hab.	*-/U-	*-dAg
ag.	*-/U-	*-g.ci
		*-xA.ci

participle, but the documentation is too scanty to allow any conclusions. In any case, already in Proto-Mongolic \*-kU and \*-xA were the dominant markers, on which most of the modern reflexes are based.

Formally, the elements \*-g and \*-xA in the two agentive markers are probably ultimately related, representing variants of a single Pre-Proto-Mongolic suffix deriving deverbal nouns. The element \*-xA also occurs as the imperfective participle marker, while the element \*-g is contained in the perfective participle marker \*-g.sA/n. Apart from Written Mongol, the shape \*-g.sA/n is today preserved only marginally, while most of the modern languages show the irregularly simplified Common Mongolic shape \*-sAn. Moghol also has the plural form \*-g.sA.d. Otherwise, separate plural forms are registered in Written Mongol and Middle Mongol for part. fut. \*-kU.(y)i : pl. \*-kU.n and part. ag. \*-g.ci : pl. \*-g.ci.n.

Semantically, the participles involve a complex mixture of temporal, aspectual, and modal distinctions. A particularly wide spectrum of semantic dimensions in Proto-Mongolic was characteristic of the futuritive participle (*nomen futuri*), which could refer to the future tense, but which also had temporally unspecified (aorist) applications. Judging by some of its modern reflexes, the futuritive participle may also have had a modal (necessitative) connotation. Most importantly, this form was used as a general action noun (infinitive), which in Mongolic studies is traditionally regarded as the basic (dictionary) form of the verb. The opposition between the imperfective and perfective participles (*nomen imperfecti* and *nomen perfecti*) was probably originally based on an aspectual difference (uncompleted vs. completed action), but it is difficult to rule out an interconnection with the category of tense. The same is true of the habitive participle (*nomen usus*), which, in addition to its basic aspectual content (frequent or habitual action), may have had a temporal reference (present tense).

### IMPERATIVES

From the formal point of view, imperatives (also termed vocatives) may be regarded as the simplest type of predicate in Mongolic. This is reflected by the fact that the unmarked verbal stem itself functions as the basic imperative form (imperative proper), indicating a command directed at the second person (with no differentiation between singular and plural). The imperative use of the bare verbal stem has been inherited by all the Modern Mongolic languages, and, with few exceptions, the bare verbal stem is not attested in any other morphological function. All other forms of the imperative paradigm are, however, suffixally marked, and some of these are originally nominal forms of the verb.

In the Mongolic system of conjugation, the imperatives constitute a separate sphere, in which the distinctions are based on a variety of modal shades (command, request, wish, willingness, intention). Apparently on the basis of the differences between these shades, most imperative forms had already in Proto-Mongolic developed a fixed connection with a certain subject person (first, second, or third), and in some cases also with a certain subject number (singular or plural). The imperatives should, however, not be understood as having formed a full personal paradigm in Proto-Mongolic, though such an interpretation seems to be possible for some Modern Mongolic languages, notably Moghol.

The suffixally marked imperatives that have either a Proto-Mongolic or a Common Mongolic background may be identified as the voluntative, optative, benedictive, prescriptive, concessive, permissive, dubitative, and potential (Table 1.7). In the comparative material, the voluntative and optative are typically attested as first person forms, the benedictive and prescriptive as second person forms, and the concessive and permissive

TABLE 1.7 PROTO-MONGOLIC IMPERATIVE MARKERS

	person	C	marker	variant
vol.	1p. pl.	*-/U-	*-yA	*-yA-n
opt.	1p. sg		*-sU	*-sU-xA.(y)i
ben.	2p.	*-/U-	*-d-kU.(y)i	*-d-kU.n
prescr.	2p.	*-/U-	*-xA-rA.(y)i	
conc.	3p.		*-tU-kA.(y)i	*-tU-gA.(y)i
perm.	3p.	*-/U-	*-g	*-gV
dub.	1–3p.	*-/U-	*-xU-jA.(y)i	*-xU-ji/n
pot.	1–3p.	*-/U-	*-m-jA	

as third person forms. Moreover, the voluntative normally refers to the plural ('let us'), while the optative refers to the singular ('let me'). The two second person forms may have functionally differed by the degree of politeness, the prescriptive being more casual and the benedictive more polite. Some languages have a third form, the so-called *precative*, which is marked by a long vowel element (-AA or -ii-), to which personal endings can (or must) be added. No functional difference can be reconstructed for the concessive and permissive. The dubitative and potential express a negative resp. positive wish or doubt ('let it not happen that' vs. 'I wonder if').

Formally, the imperative paradigm involves several diachronically non-transparent suffixes and suffix complexes. Nevertheless, the \*-y- of the voluntative and the \*-g(-) of the permissive can be identified with the similarly shaped deverbal nominal suffixes \*(y)i and \*.g. The two variants of the benedictive marker may be analysed as the functionally obscured singular and plural forms of the futuritive participle in \*-kU.(y)i : pl. \*-kU.n, based on a secondary deverbal (possibly passive) stem in \*.d-. In the modern languages, the benedictive marker has largely been restructured into \*-gtUi : \*-gtUn. Also, in some modern languages, the optative has been replaced by the more complex form in \*-xA-sU-xA.(y)i > \*-AAsAi, which is known as the *desiderative*. The element \*-xA- in this form (and in the prescriptive) is apparently identical with the imperfective participle marker.

### FINITE INDICATIVE FORMS

The semantic dimensions of the system of participles are closely paralleled by the finite indicative forms, which in the Modern Mongolic languages are a mixture of original finite forms and predicatively used participles. Since it is impossible to identify any given finite indicative form as either temporal or aspectual, it is reasonable to speak of temporal-aspectual forms, in general. On the other hand, it has to be assumed that each actual tense-aspect marker originally had a function different from those of the other markers. Although we do not necessarily know the original functions of all markers, each temporal-aspectual form can most conveniently be identified by using a separate label. The labels adopted here for the original Proto-Mongolic finite temporal-aspectual forms are: narrative, durative, deductive, terminative, confirmative, and resultative (Table 1.8).

In more traditional terminology (Poppe), the narrative, durative, and deductive forms have been identified as representing the present tense and the imperfective aspect

TABLE 1.8 PROTO-MONGOLIC FINITE TENSE-ASPECT MARKERS

B	C	marker	variant
narr.	*/U-	*-m/U	*-m/U.(y)i
dur.	*/U-	*-n.A.m	*-n.A.(y)i
ded.	*/U-	*-(y)i	*-y.U
term.	*/U-	*-bA	*-bA.(y)i
conf.	*/U-	*-lUXA	*-lUXA.(y)i
res.		*-JU	*-JU.xU.(y)i

(*prasens imperfecti*), while other temporal-aspectual profiles have been postulated for the terminative (*praeteritum perfecti*), confirmative (*prasens perfecti*), and resultative (*praeteritum imperfecti*) forms. In view of the diversity of the comparative picture, it is difficult to defend any such specifications. It should therefore be emphasized that, whatever labels are adopted for these forms, their actual content can only be understood in the light of the comparative material.

In the modern languages the Proto-Mongolic system of temporal-aspectual forms has generally undergone simplifications, which, with some reservations, allow certain forms to be identified as temporal, rather than aspectual. Thus, the durative has widely served as the basis for what may be regarded as the Common Mongolic present tense form, while the confirmative and resultative have yielded past tense forms. The modern reflexes of the terminative also mainly refer to the past tense, but in Dagur this form has yielded the future tense, a circumstance that can only be explained by assuming a primary aspectual meaning.

A diachronic analysis of the finite tense-aspect markers reveals that the durative, narrative, and deductive forms are based on three obscured deverbal nouns (or participles), ending in \*-m, \*-n, and \*-(y)i. The three suffixes are fragmentarily preserved in lexicalized items, such as \*bari- ‘to grasp’: \*bari.m ‘grip’, \*singge- ‘to be absorbed’: \*singge.n ‘fluid’, \*gar- ‘to exit; to exceed’: \*garu.(y)i ‘exceeding’. It has been assumed that the terminative, confirmative, and resultative forms might also be based on deverbal nouns, but the evidence is less binding. When added to consonant stems (C), most of the tense-aspect markers required the connective vowel \*U, though before the terminative marker the connective vowel seems to have been required only by a restricted class of consonant stems ending in the segments \*b or \*r (B). In the modern languages, the distribution of the connective vowel has undergone considerable restructuring, which makes definitive reconstruction problematic.

Synchronously, the simple narrative in \*-m is still attested as a finite form in Moghol, Monghul, Bonan (and possibly Dagur), as well as in Middle Mongol. Middle Mongol also had the deductive in \*-(y)i, while the deductive in \*-y.U is well known from both Middle Mongol and Written Mongol, indicating actions that can be deduced or concluded from the circumstances. Otherwise, both the narrative and the deductive have been replaced by the durative, which in Modern Mongolic most commonly appears with the expanded marker \*-nAm (> \*-nA). The latter involves the periphrastic construction \*-n+a-m, comprising the primary marker \*-n and the narrative \*a-m of the auxiliary stem \*a- ‘to be’.

The narrative and durative markers are also attested in the shapes \*-m/U.(y)i resp. \*-n.A.(y)i, containing the final element \*-(y)i. The narrative in \*-m/U.(y)i is a typically Written Mongol form, while the durative in \*-n.A.(y)i is most reliably documented

from Shira Yughur. Similar expanded shapes in \*-(y)i are attested for the terminative in \*-bA : \*-bA.(y)i, the confirmative in \*-lUXA (> \*-lAxA > \*-lAA) : \*-lUXA.(y)i (> \*-lAxAi > \*-lAi), and the resultative in \*-JU (> \*-Ji) : \*-JU.xU.(y)i (> \*-JixAi > \*-JiAi). In all these cases, the origin of the element \*-(y)i is unclear, though the complex \*-A-(y)i might simply represent the deductive of the auxiliary stem \*a- ‘to be’, in analogy to the narrative \*a-m. On the other hand, a comparison with the element \*-(y)i in the participle markers part. fut. \*-kU.(y)i and part. imperf. \*-xA.(y)i appears also tempting. Evidence from Middle Mongol suggests that the finite forms in \*-(y)i may have specifically functioned as marked feminines (vs. unmarked masculines), though the possibility of other functions cannot be ruled out.

## CONVERBS

Converbs (also termed gerunds) are infinite verbal forms that express the circumstantial (modal, causal, conditional, or temporal-aspectual) relationship of an action to another action. Although certain converbs occasionally appear to play a ‘coordinative’ role, the syntactic link between a converb and its verbal headword is always one of subordination. The Proto-Mongolic or Common Mongolic system of converbs is normally considered to have comprised at least seven suffixally marked forms, conventionally known as the modal, imperfective, perfective, conditional, terminative, final, and preparative converb (Table 1.9).

The original core of the converb system seems to have been formed by the modal converb (‘by way of’), the imperfective converb (‘at the same time as’), and the perfective converb (‘after’). The modal converb marker \*-n is formally identical with the deverbal noun suffix \*-n, which also occurs as the basis of the durative form in \*-n+A-m. The imperfective converb marker \*-JU (> \*-Ji), on the other hand, is identical with the resultative marker of the finite indicative paradigm. This suggests that the perfective converb marker \*-xA may also be secondary in its converbial function; it might be, for instance, an obscured dative in \*-d from the imperfective participle marker \*-xA.

The element \*-xA is also contained in the marker \*-xA-sU (> \*-xA-sA) of the conditional converb (‘if, when’). The similarity between the element -sU of this marker and the optative marker of the imperative paradigm is perhaps not accidental, especially in view of the related complex suffix \*-xA-sU-xA(y)i, which occurs both as a variant of the conditional converb marker and as the desiderative marker of the imperative paradigm. In Modern Mongolic, the suffix \*-xA-sU (or its variants) is attested only peripherally in the northeast (Khamnigan Mongol, Buryat, Dagur), the south (the Gansu-Qinghai

TABLE 1.9 PROTO-MONGOLIC CONVERB MARKERS

	C	marker	variant
conv. mod.	*/U-	*-n	
imperf.		*-JU	
perf.	*/U-	*-xA	
cond.	*/U-	*-xA-sU	*-xA-sU-xA(y)i
term.		*-tAl-A	*-tAr-A
fin.	*/U-	*-r-A	
prep.	*/U-	*-r/U-n	

complex), and the far west (Moghol). In the more centrally located languages, the function of the conditional converb has been taken over by the terminative form of the finite paradigm in combination with the particles *\*a-xasu* ‘if’ (originally the conditional converb of *\*a-* ‘to be’) and *\*ele* (emphatic pronoun), yielding the constructions *\*-bA+\*a-xasu* (> \*-bAAs*U*) and *\*-bA+\*ele* (> \*-bAA). In the same way, the construction *\*-bA+\*cu* (> \*-bAc*i*), containing the particle *\*cu*, functions as a secondary concessive converb (‘although’).

The final converb in *\*-r-A* (‘in order to’) and the preparative converb in *\*-r/U-n* (‘in the following way’) may be analysed as the locative resp. the genitive case forms of an obscured deverbal noun in *\*.r*. Both are mainly confined to Written Mongol and Middle Mongol. The preparative converb is typically attested in the introductory phrase of the quotative construction (‘saying thus’), though there are indications that it originally had a more general causal (‘because of’) or temporal (‘when’) function. The locative case ending is also present in the terminative converb marker *\*-tAI-A* (‘until’). The element *\*-tAI-* in the latter has been compared with the deverbal nominal suffix *\*.dA1* (general action noun), though the phonological difference (*\*t* vs. *\*d*) remains unexplained.

The very fact that most converbs are based on nominalized verbs makes it difficult to delimit the category of converb in the synchronic morphology of any given Mongolic language. In addition to the established converbs, most Mongolic languages have a number of other forms with very similar functions. The latter are typically adverbial case forms of the regular participles, such as, for instance, part. fut. dat. *\*-kU-dU/r* (‘when’), part. perf. abl. *\*-gsAn-AcA* (‘after’). Although such forms have a potential of developing into actual converbs, their morphological transparency suggests that they should be treated as a separate category, which may be termed *quasiconverbs*. Some quasiconverbs have a wide distribution among the Modern Mongolic languages and may, indeed, be regarded as having entered the system of actual converbs. Examples are the so-called *successive* converb in (part. fut. com.) *\*-kU-lUxA* or (+ instr.) *\*-kU-lUxA-xAr* ‘as soon as’, *abtemporal* converb in (part. perf. instr.) *\*-gsA-xAr* ‘after’, and *contemporal* converb in *\*-msA-xAr* ‘at the same time as’.

## SYNTAX

Although syntax is generally the most difficult area of linguistic structure to approach by the comparative method, the Mongolic languages share a large number of syntactic features, suggesting that these derive from the common protolanguage. There is no doubt that the unmarked word order in Proto-Mongolic was subject-object-verb (SOV), while in the attributive phrase the genitive and nominal modifier preceded the head noun (GAN). Even in regular speech, many sentences are likely to have consisted of hierarchically ordered chains of conversibly linked clauses. The syntactic relationships were indicated by the case endings, which marked, for instance, the direct definite (or specific) object (accusative) and the indirect object (dative). In passive and causative constructions there also seems to have been a grammaticalized way of marking the agent (dative) or instrumental with passives, instrumental with causatives).

Many Modern Mongolic languages allow sentences with a nominal predicate to be formed without a copula. On the other hand, secondary copulas have developed from pronominal words like *\*yaxuma* ‘something’ and *\*mön* ‘the very same’. The exact situation in Proto-Mongolic is difficult to reconstruct, but it seems that verbal copulas were widely used. There were two copular stems, *\*a-* and *\*bü-* (> *\*bi-*), both of which

are preserved only peripherally or fragmentarily in the modern languages. Both copular stems also seem to have functioned as existentials (‘to be at’). In the modern languages, the role of existentials is mainly filled by regular verbs, such as *\*bayi-* ‘to stay, to be at’ and *\*saxu-* ‘to sit, to dwell’.

Two important features which were expressed by syntactic means in Proto-Mongolic are negation and interrogation. For the expression of *negation*, a number of particles were used, placed before the finite or infinite verb to be negated. The choice of negative particle was determined by the morphological category of the head verb. For the imperative paradigm, two prohibitive particles can be reconstructed, which themselves appear to be imperative forms of the copula *\*bü-*, imp. *\*bU* (> *\*bUU*) and conc. *\*bü-tüge(y)i* (> *\*bitegei*). In the non-imperative paradigms, the particles *\*ese* and *\*üüli* (or *\*üli*) were used, with no easily reconstructable rules of distribution. There are indications that *\*ese* may originally have been a fully-conjugated verb; at least it has conjugated forms in the modern languages in interrogative constructions of the type term. *\*kele-be ese-be* ‘did [he] say [it] or not?’, cf. *\*ese kele-be* ‘[he] did not say [it]’.

Proto-Mongolic also had two nominal words that were used to negate nominal phrases. The identity of a noun was negated by the postpositionally used ‘negative pronoun’ *\*busu* (> *\*bisi*) ‘other’ > ‘other than’, while the existence of a noun was negated by the likewise postpositionally used ‘negative noun’ *\*üge(y)i* (> *\*ügüi*) ‘absence, absent’. In the Modern Mongolic languages, the latter has also suffixed reflexes (> *\*-güüi*), which function more or less like a case ending (the privative or caritative case). Even more importantly, predicatively used participles, which in many Modern Mongolic languages function as regular finite predicates, are normally negated by *\*üge(y)i*. This usage has also spread to converbs and original finite forms. Altogether, the expansion of *\*üge(y)i* has largely rendered the particles *\*ese* and *\*üüli* superfluous and obsolete.

When no interrogative pronoun or pronominal verb was present in the sentence, *interrogation* in Proto-Mongolic was expressed by a sentence-final interrogative particle, which may be reconstructed as either *\*gii* (> *\*=gU*), as in Buryat and Khamnigan Mongol, or *\*xU* (> *\*=UU*), as in most other Mongolic languages. In questions containing an interrogative word, no particle was originally needed, but in Common Mongolic the copular form *\*bii-(y)i* > *\*büi* ‘being, present’ was grammaticalized in such sentences into what may be termed a *corrogative* particle.

## LEXICON

Due to their genetic closeness, the Mongolic languages share a large corpus of common vocabulary inherited from Proto-Mongolic. Most of the lexical items attested in Middle Mongol and Preclassical Written Mongol may also be regarded as Proto-Mongolic. In practice, it is, however, often difficult to distinguish between Proto-Mongolic and Common Mongolic lexical heritage, for many items introduced only in the Post-Proto-Mongolic period show basically the same phonological correspondences as the inherited vocabulary, cf. e.g. Common Mongolic *\*tamaki/n* ‘tobacco’. This is, in particular, true of lexical innovations shared by the core group of the Mongolic languages, comprising Mongol proper, Ordos, Oirat, Buryat, and Khamnigan Mongol.

On the other hand, the number of lexical items actually shared by all the Modern Mongolic languages is considerably smaller than the known Proto-Mongolic lexical corpus. Lexical divergence has been especially rapid and massive in some of the peripheral languages, notably Mangghuer, Bonan, Santa, and Moghol. The main reason underlying

the divergence has been external borrowing, but innovative semantic developments have also frequently obscured the etymological relationships even for items of basic vocabulary. For instance, the concept of 'head' is in the Modern Mongolic languages expressed variously by the reflexes of Proto-Mongolic \*xeki/n (in Dagur, elsewhere 'beginning'), \*terixün (in Santa and Bonan, elsewhere 'first, former'), \*taraki/n (in Khamnigan Mongol, elsewhere 'brain'), or \*tologa(y)i (in the other languages).

It goes without saying that the Proto-Mongolic lexicon also contained several Pre-Proto-Mongolic layers of loanwords, which, from the point of view of Mongolic comparative studies, are indistinguishable from original native items. The greatest number of etymologically detectable loanwords derives from Turkic (both Common Turkic and Bulghar Turkic), but there are also some dozens of words borrowed from Tungusic. More distant items, from languages such as Chinese, Tibetan, and Sogdian, were normally transmitted to Pre-Proto-Mongolic via various forms of Turkic, notably the Ancient Uighur. Direct contacts with Chinese and Tibetan seem to date mainly from the Post-Proto-Mongolic period.

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