Journal of Adivasi and Indigenous Studies (JAIS)
(A bi-annual peer-reviewed online journal posted on Academia.edu)
Vol. XV, No. 2, August 2025: 19-42

The Numeral System of the Mog Language: A Morphosyntactic Study

Niloy Chakraborty
Research Scholar
Department of Linguistics and Tribal Languages
Tripura University, Suryamaninagar
Orcid.org/0000-0002-5235-6223
Email: nilaychk@gmail.com

Sagolsem Indrakumar Singh
Assistant Professor
Department of Linguistics and Tribal Languages
Tripura University, Suryamaninagar
Email: iksagol@gmail.com

Abstract

Mog is a Tibeto-Burman language, specifically spoken in the north-eastern state of India called Tripura. According to the 2011 census report, the total speakers of this language are estimated 37893. It is a critically endangered language. The concentration of the native speakers is found in South Tripura district and confined to Sabroom, Belonia, Jolaibari and Hrishyamukh subdivisions. This paper discusses in depth the numeral system in the Mog language. Numerals participate in the expression of a wide range of operations, including mass, volume, degree, ordering, counting, and arithmetic calculations. In Mog, the basic numeral system is decimal multiplicative system or base 10 system, which can be represented as $Base_{10}$+ n (n is any number from 1 to 9). This paper also discusses the other structural divisions of numeral systems, like cardinal, ordinal, fractional, multiplicative; from the morpho-syntactic aspects, formation and kinds of numerals by adopting the descriptive approach.

1. Introduction

In any language system, numeracy is a crucial component[1]. It is nearly impossible to have a meaningful conversation in a language without referring to amount, size, time, distance, and weight in precise numerical values. As Omachou (2011: 84) rightly says, counting or numbering is an essential and inseparable component of any language's grammar. The first anthropological evidence related to numeral system, more specifically counting system, across the culture is *Ishango Bone*. The bone is not only studied in mathematical way but also in astronomical and cautionary way. If we look into the history irrespective of civilizations, tally marking is considered to be the widest spread counting system across the globe. The number should be explained from the perspective of its internal morphology and syntactic construction, just like every other

[1] Tacettin Turgay in his seminal work, *A Minimalist Account of Numerals*, discussed the numeral system of a language from the syntactic point of view under the Minimalist desiderata. For further study, see https://dx.doi.org/10.18492/dad.1016340.

component of the lexicon. From an alternative perspective, it might be viewed as a technical instrument designed to assist humans in measuring their surroundings. For instance, teaching youngsters the number system is more structured than teaching them animal names. This may be part of the reason why the simple arithmetic principles which underline the building of numbers as a conceptual tool are most often transparently apparent in their names (Mazaudon 2010). In Bangla for instance, the number names up to 100, have changed so much in pronunciation that it is impossible to see the old structure without properly scientific reconstruction. For instance, bahanna 'fifty-two' is not immediately understandable when you know the words for 'fifty' is pãncãs and dui for 'two'. Comrie (2005) has suggested that the numeral systems are even more endangered than languages.

According to Hammerstrom (2010: 936), a numeral system is a 'spoken, normed expressions that are used to denote the exact number of objects for an open class of objects in an open class of situations with the whole speech community in question.' Linguists have long been interested in the typology and history of numerals and numeral systems. In the typological literature on numerals, Papuan languages are mostly recognized for their body-part tally systems and, to a lesser degree, restricted numeral systems that lack a cyclically recurring base (Laycock 1975; Lean 1995; Comrie 2005a). The fact that Papuan languages frequently employ bases[2] other than the cross-linguistically most common decimal and vigesimal bases, including quinary (Lean 1992) and senary bases (Donohue 2008; Evans 2009), makes them additionally typologically intriguing. According to Wiese (2003), 'natural number is infinite', since the recursive method is used to create increasingly complex numbers. Numbers are made unlimited with the aid of this recursivity. When we discuss quantifiers in this paper, we can observe that adjectives like 'few' and 'many' modifies the number. Mog has numeral classifier system, as numeral classifiers are the mostly shape-based classification of referents in languages like Sinitic languages (Hammarstrom 2022), so it is one of the proto-typical feature of Tibeto-Burman languages, which is again a sub-branch of Sinitic family. This classifiers can highlight various inherent features of a referent, including humanness, shape, and animacy.[3]

Ethnolinguistically, the term Mog stands for the tribe as well as the language of the community. The Mogs are the inhabitants of Tripura, but they also live in Mizoram and neighbouring country Bangladesh, where their concentration is the largest almost 150000 (2007 Census report of Bangladesh). In Tripura, they largely reside in South Tripura District (especially in Sabroom, Santirbazaar, Belonia subdivision). The Mogs

[2] According to Mengden (2010), bases are those elements that are combined with the smallest continuously recurring sequence of numbers in any numeral system combined. Base numbers include 2, 3, 5, 6, 7, 8, 9, 10, 12, 15, 20, 60. In certain languages, there are also hybrid bases such as 5, 20 and 80, 3 and 4, 2 and 5, 10 and 20 etc. A number system's base can be thought of as its primary component. It is utilized to construct higher numbers by being counted itself if it is the initial number reached in the counting. Languages often have more than one base.

[3] For more details, see Hammarstrom, H. 2022. *Defining numeral classifiers and identifying classifier languages of the world*. https://doi.org/10.1515/lingvan-2022-0006.

are the tribe of Mongoloid origin.[4] Linguistically, they belong to the Tibeto-Burman language family of Lolo-Burmese group. According to 2011 census report, over 32% of Tripura's population is tribal. After Tripuri, Reang, Jamatia, Chakma, and Halam, the tribe is among the sixth largest tribe in Tripura. Shortly after the independence of Bangladesh, the Mog people, who were Buddhist, left Bangladesh. Despite being the sixth largest tribe in Tripura, the Mog make up only two to three percentage of the state's overall population. The following Table 1 is showing the population growth in Mog (based on Census reports 1979-2011):

Year	**Persons who turned as their mother tongue**	**Decadal Percentage increaes**
1971	12378	
1981	17958	(1971-1981) = 41.06
1991	28135	(1981-1991) = 61.16
2001	30639	(1991-2001) = 8.90
2011	37893	(2001-2011) = 19.67

Table 1: Population Growth in Mog from 1971—2011

The following schematic presentation (Figure 1) shows the genetic classification of Mog. It is essential for a language to understand its typological features as well as its linguistic affiliation.

[4] Numerous academics contend that Mogs are descended from Mongoloids. They go by several names in different places. For example, the Mog people, who speak their own language, but the term 'Mog' is derived from Bangla. However, the same speakers of the relevant language are referred to as Marma in Bangladesh. It's interesting to note that the tribe, whether it Marma in Bangladesh or Mog in Tripura, has the same name as its language. Given that Bangladesh encircles Tripura on three sides—the north, south, and west—it is most likely that the tribe is migratory, most likely from the Chittagong Hill Tracts in Bangladesh. The tribe's migration saga is extensive and rich. Nearly all historians asserted that the tribe originated in Arakan, a region of Burma (Myanmar). Some academics claim that the word Marma is derived from the Burmese word 'Myamm', changing it to Myamma > Mamma > Mara > Marma. Some others hold alternative views because they claim that the name 'Marma' originates from the Chinese words 'Ming' or 'Mirma', which are used to refer to the Burmese people of Myanmar in China. It is also clear from historical Myanmar coins, which called the country's citizens as 'Meyama'.

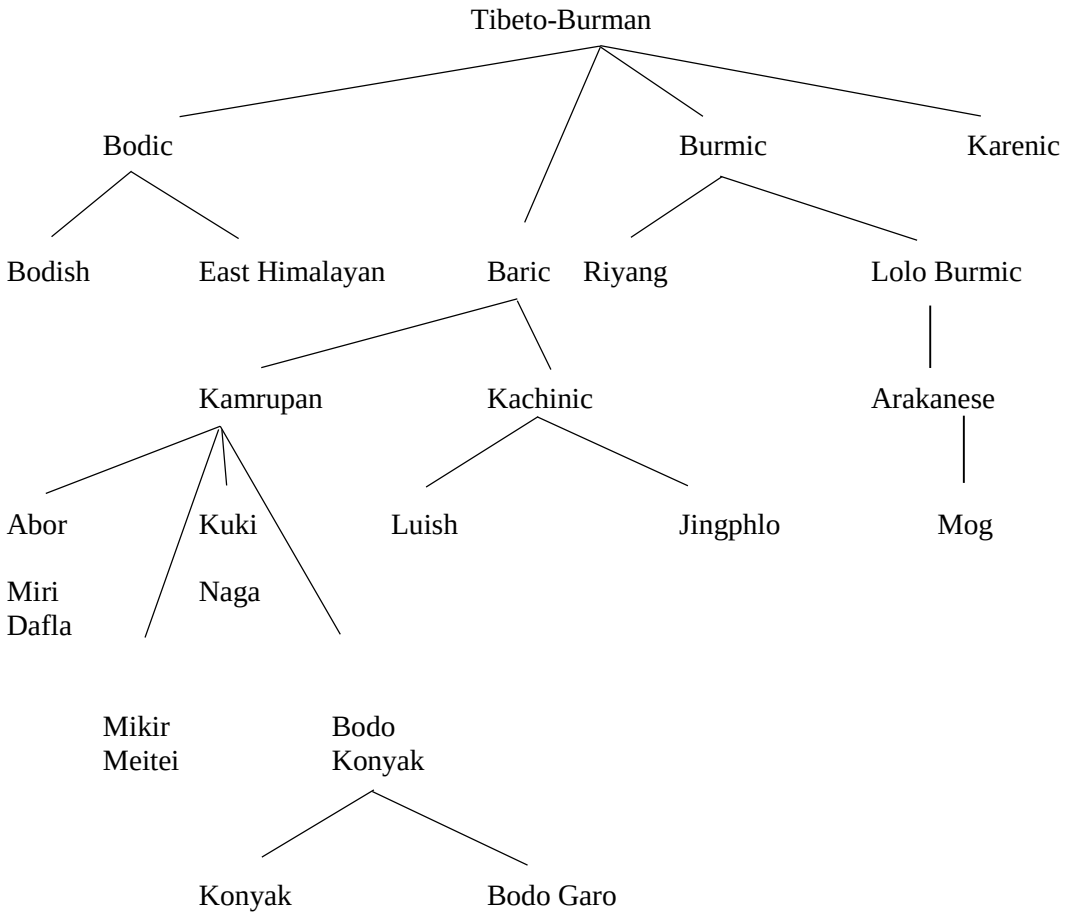

Figure1: Genealogical classification of Mog

Scot de Lancy (1989) classified Tibeto-Burman into four groups—Bodic, Baric, Burmic, Karenic. He again grouped Bodic as Bodish and East Himalayan; Baric as Kamarupan and Kachinic; Burmic as Riyang Lolo Burmic. Kamrupan again sub-classified into Abor Miri Dafla, Mikir Meitei, Kuki Naga, Bodo Konyak. On the otherhand, Kachinic grouped into two—Luish, Jingphlo. Bodo Konyak again sub-branched into two as Konyak and Bodo. Under Lolo Burmic group there is Burmese languages which is again categorizes as Arakanese, and further as Mog language.

Mog is an endangered language[5], so it is very much essential to document the language. Majority of the north-eastern TB languages are critically endangered. One of

[5] Depending on the UNESCO's vitality test, Mog is a vulnerable language, where the most of the native speakers are coming from the parental generation and limited to younger generation. Here is a detail of the endangerment level—

a. Intergenerational Language Transmission, it is unsafe, as the language is used by some children in all domains; it is used by all children in limited domains.

b. Proportion of Speakers within the Total Population, again it is unsafe, because, nearly all speak the language.

c. Response to New Domains and Media, it is in minimal grade, as the language is used only in a few new domains.

d. Availability of Materials for Language Education and Literacy, in this parameter, written materials exists but they may only be useful for some members of the community; for others, they may have a symbolic significance. Literacy education in the language is not a part of the school curriculum.

the most important reasons is language shift, due to the constant influence of the neighbouring dominant Indo-Aryan languages like Assamese, Bangla, and Hindi. Just like various TB languages, this numeral classifier system is also an endangered grammatical feature of world languages (Hammarstrom 2008), so it is very crucial to safeguard a language as well as its salient features. In this paper the sections are divided into the following way, in section two we have discussed about the methodology and data analysis, section 3 discusses on numeral system in Mog with special reference to cardinal numerals, ordinal numerals, fractions and multiplicative, in section 4 a detailed description on classifier has been given, which ends with conclusion in section 5.

2. Methodology and data analysis

Research design

This research employs a linguistic fieldwork methodology to examine the structures of numerals in Mog[6]. Twelve native speakers with a variety of ages, genders, and educational levels provide the corpus for the study. Several locations were used for the research, including the villages of Rifru Chowdhury Para, Chagra Para, Pathai Mog Para[7] in Jolaibari and Sabroom subdivisions, respectively, under South Tripura district, to ensure a comprehensive representation of Mog speaking population.

Data collection

A variety of techniques were employed to gather the primary data during the fieldwork. These include the following:

a. Word lists—the number system is thoroughly documented by word lists, which are compilations of numerals and related words (150 words), for instance the basic numerals i.e. 1—100, 1000, 10000, 100000 has been collected.

b. Sentence lists—are groups of words and sentences that have numbers in them so that their usage in context may be thoroughly examined. In this case, we have collected almost 20 sentences, where the number or digits are mentioned.

Narratives—the historical and cultural significance of Mog counting system is examined through the oral traditions, traditional tales, and spoken narratives, especially 2 folk tales, which include reference of numbers or counting system. Apart from this, the narratives also contain the information about their rich culture and their traditional believes and practices.

Mog is an endangered language, according to the vitality test, for more details, *Language Vitality and Endangerment: A Case Study of Mog language of Tripura* in Journal of Native India & Diversity Studies 2 (1), 99—111, 2025.

[6] Like the other tribes of Northeast, Mog community has also its own clan system. Though the number of clans varies according to various sources, but the most attested clan number in Mog is 12, namely—Palaingsa, Khyaungsa, Rembrisa, Awagyengsa, Kokdaingsa, Oweiengsa, Kyauphyasa, Plaingnyosa, Longduksa, Rakhaingsa, Frangsa, Rigresa. For our study, we have collected data from Plaingsa variety. There are considerable variations among the clans.

[7] Out of these three villages Rifru Chowdhury Para comes under Jolaibari subdivision, and the name of the informants from this village are—Thaiugya Mog (25), Umrasong Mog (30), Sanaiong Mog (50), Aoya Mog (45); Pathai Mog Para and Chagra Para are from Sabroom subdivision and the name of the informants are—Sabita Mog (18), Refruchai Mog (45), Uchainda Mog (38), Thaifru Mog (72) and Paichong Mog (18), Amiye Mog (44), Chimafru Mog (37), Panrima Mog (86) respectively.

d. Questionnaire and Interviews—comprehensive questionnaires and interviews with language consultants are used to gather data regarding their use and understanding of numerals. Questionnaire also helps us to understand the level of endangerment of the language which is traditionally based on the UNESCOs' vitality test.

Sampling

Twelve language consultants from 3 villages (4 from each village) took part in this research. To ensure diversity in terms of age, gender, and educational achievement, the sample was carefully chosen to give a more complete view of the numeric system usage across different demographics. Random sampling has been applied to minimize the bias and to carry both the qualitative and quantitative research.

Data elicitation

To ensure accurate and reliable spoken data records, data was elicited via interviews, questionnaires, and an audio recorder (Zoom H4N Pro). A variety of data elicitation approaches were employed to enable a comprehensive collection of number expressions in various communicative situations.

Data analysis

The collected data was thoroughly examined by utilizing established linguistic analysis techniques. A portion of the analysis involved the following steps:

Transcription—the process of transferring spoken content from audio recordings into a standardized format while maintaining its original structure and linguistic features.

Translations—English translations (especially for the folk literature) of Mog transcriptions were made to facilitate analysis and comprehension.

Thematic coding—the process is applied to the translated and transcribed data allowed for the categorization of numerical aspects, usage patterns, and cultural connotations.

3. Numeral system

Numerals are considered to be a fundamental component of human language. Different systems are used by different languages around the world for counting. According to Turgay (2010: 112), 'numerals are epitomic examples of the generative power of human thought and human language in such a way that with so few primitives, the human mind can generate a truly infinite set of numerals.' However, the class of words known as numeral is used to specify numbers and other countable objects. In fact, one of the main theories in the work of Human number faculty developed as a result of the language faculty, or perhaps more precisely that both abilities depend on the same underlying mechanism of recursion. It states that, 'we might think of the human number faculty as essentially an abstraction from human language, eliminating the other special features of language and preserving the mechanisms of discrete infinity.'

Cardinal numerals

Mengden (2009) states that 'cardinal numerals are again the part of a larger class of expressions, that all specify the size of a set.' Numbers and numerals have different

definitions; numbers express amount or order, whilst numerals are used to depict them. There are three possible variations in the morphosyntactic characteristics of cardinal numerals. First, they differ within the counting sequences. Second, depending on the context and certain characteristics of the qualified noun, most notably its countability, one piece of the counting sequence in the same language may exhibit different inflectional and syntactic behaviour. Last but not the least different languages have different cardinal numerical morphosyntactic characteristics. There are two kinds of cardinal numerals: simplex and complex. Complex numbers are made up of two or three numeral phrases, while simplex numerals are primarily monomorphemic or monosyllabic in character (Mamta 2024: 8). Arithmetic procedures are used to combine components in complex numerals. Moreover, cardinal numerals are not ordinal numeral, fraction, distributive, nor restricted numerals; instead, they are counting numbers that begin with the value 1 and proceed in sequential order. Cardinal numerals can be discussed in two-fold ways:

a. Basic cardinal number/ Simplex cardinal numerals
b. Compound cardinal number/ Complex cardinal numerals

Simplex cardinal numerals

In Mog, the simplex cardinal numerals are the raw digits 1—10. These fundamental natural numbers, which range from 1 to 10, are underived and monomorphic, as demonstrated in Table 2.

Value	**Numerals**	**Gloss**
1	*ta*	One
2	*ŋ̊a*	Two
3	*suŋ*	Three
4	*le*	Four
5	*ŋa*	Five
6	*kʰrou*	Six
7	*kʰanou*	Seven
8	*ʃɔ*	Eight
9	*ko*	Nine
10	*cʰe*	Ten

Table 2: Basic numerals in Mog

Complex cardinal numerals

In addition to simplex cardinal numerals, compounding or the juxtaposition of two free numeral morphemes—can also be used to create complex cardinal numerals. Because they are productive and infinite in number, compound numerals can produce larger values. These numbers are further divided into two categories which are:

a. Complex numerals with multiplication
b. Complex numerals with multiplication plus addition

Complex numerals with multiplication

Here, the decimal number is multiplied by basic numerals to create the numerals. Therefore, compounding is created through multiplication by contrasting a single morpheme with the decimal number. The following examples from Mog demonstrate that the numbers twenty, thirty, forty, fifty, sixty, seventy, eighty, and ninety are multiplicative compound numbers created by multiplying base digits from two to nine to the value of ten as shown in Table 3:

Value	Numeral	Gloss
20	*ŋ̊ac^{h}e* 2×10	Twenty
30	*suŋc^{h}e* 3×10	Thirty
40	*lec^{h}e* 4×10	Forty
50	*ŋac^{h}e* 5×10	Fifty
60	*k^{h}rouc^{h}e* 6×10	Sixty
70	*k^{h}anouc^{h}e* 7×10	Seventy
80	*ʃɔc^{h}e* 8×10	Eighty
90	*koc^{h}e* 9×10	Ninety

Table 3: Complex numerals with multiplication

Complex numerals with multiplication plus addition

Here, the decimal number is multiplied by basic numbers to create the numerals. So, this type of complex numerals form, the compounding of numbers is done by comparing the decimal number to a single free numeral morpheme. To put it another way, the lower value from 1 to 9 is added to the greater value from 11 to 19, 21 to 29, 31 to 39, 41 to 49, 51 to 59, 61 to 69, 71 to 79, 81 to 89, 91 to 99. Simply, the higher value from

eleven to nineteen is created by adding the decimal number ten to the basic cardinal numerals, as shown in the following example below:

Value	Numerals	Gloss
11	*ta-cʰe-ta* *1×10+1*	Eleven
19	*ta-cʰe-ko* *1×10+9*	Nineteen
21	*ŋ̊a-cʰe-ta* *2×10+1*	Twenty-one
29	*ŋ̊a-cʰe-ko* *2×10+9*	Twenty-nine
31	*suŋ-cʰe-ta* *3×10+1*	Thirty-one
39	*suŋ-cʰe-ko* *3×10+9*	Thirty-nine
41	*le-cʰe-ta* *4×10+1*	Forty-one
49	*le-cʰe-ko* *4×10+9*	Forty-nine
51	*ŋa-cʰe-ta* *5×10+1*	Fifty-one
59	*ŋa-cʰe-ko* *5×10+9*	Fifty-nine
61	*kʰrou-cʰe-ta* *6×10+1*	Sixty-one
69	*kʰrou-cʰe-ko* *6×10+9*	Sixty-nine
71	*kʰanou-cʰe-ta* *7×10+1*	Seventy-one
79	*kʰanou-cʰe-ko* *7×10+9*	Seventy-nine
81	*ʃɔ-cʰe-ta* *8×10+1*	Eighty-one
89	*ʃɔ-cʰe-ko* *8×10+9*	Eighty-nine
91	*ko-cʰe-ta* *9×10+1*	Ninety-one
99	*ko-cʰe-ko* *9×10+9*	Ninety-nine

Table 4: Complex numerals with multiplication plus addition

Ordinals

Ordinals are the morphologically developed form of equivalent cardinal numerals. Various morphological processes, most frequently the addition of a prefix or suffix, are used to generate these. However, in certain languages, as Mengden (2009: 118) notes, 'a change in word order is another method for of indicating the ordinal as opposed to the cardinal'. Ordinal marking, a morphological process, is a fundamental characteristic of cardinal numerals and is, in theory, applied only to all numerically defined cardinality expression. Cardinal numeral features are thus implicitly revealed when describing ordinal numerals.

Ordinal numerals are not commonly used in Mog; according to the native speakers, they are borrowed from Bangla[8] (particularly 1st, 2nd, and 3rd). But, this tendency is specifically witnessed among the younger generation speakers, because the older generation (above 60) still use the ordinal numbers in a very restricted domain (home domain, among their speech community). One of the possible reasons of this restricted use, the language is surrounded by neighbouring dominant languages such as Bangla and Kokborok, so whenever a Mog speaker is out of home domain, s/he is bound to use the ordinal numbers which are not their native. However, the ordinals do follow a combination pattern, as *-ma* and *-ya* are added as suffix with the basic numerals. The following describes the term as well as exemplify ordinal numeral.

Value	Numerals	Gloss
1st	*patʰama*	First
2nd	*tudiya*	Second
3rd	*tadiya*	Third
4th	*lema*	Fourth
5th	*ŋama*	Fifth
6th	*kʰrouma*	Sixth
7th	*kʰanouma*	Seventh
8th	*ʃɔma*	Eighth
9th	*koma*	Ninth
10th	*cʰema*	Tenth

Table 5: Ordinal numbers in Mog

Fractions

Any number system must include fractions since term quantity is widely used nowadays. Not all languages in the past required this fractional system, but as languages and civilizations have evolved, the system has been included into practically all

[8] If we look into the first 3 ordinal number in this series, we can readily observe that there is an indirect influence of neighbouring Indo-Aryan language Bangla, for instance, /*patʰama*/, has been influenced by /*pratʰam*/, so like /*tudiya*/ and /*tadiya*/ from */diɻiyo/ and / ʈriɻio/*.

languages. Some languages may just utilize three or four fractions because that is all they needed therefore this system doesn't have to be too complex. The syntactic construction of fractions in other languages may involve the use of affixes and the fraction's numerator and denominator parts. Last but not least, some languages decide to directly borrow from the most widely used ones. Sanskrit and Hindi, for instance, are the primary sources of it in Indian languages. In every language, half (1/2) is a highly common fraction, followed by ¼ and 1/10. While these fractions are widely found in languages, we are less likely to see ¾, 2/5 and 1/3. Fractional numbers are very rare in Mog, only instance of half (1/2) is recorded, i.e. *taboiŋ*

Multiplicative

Coupe (2007) claims that 'multiplicative(s) are used to denote the number of occurrences of the same event.' It indicates the number of times or folds. In the majority of languages, multiplicative(s) function as adverbs and are created by appending a suffix or prefix to the cardinal numerals. In certain languages, such as Pnar (an Austro-Asiatic language, spoken in Jaintia hills of Meghalaya), multiple affixations occur during the multiplication construction process. In the majority of languages, 'once' is an irregular word that expresses its adverbial meaning without the need for an affix. The remaining numeral adverbs are entirely regular and are derived from their corresponding cardinal numbers. As stated above, Khasi and Pnar (Both are Austro-Asiatic language) use the particle */sen/* and */sən/*, respectively, to form multiplicatives, followed by cardinal numbers. This is a compounding process where two roots */ar/*, which means 'two', and */sen/*, which means 'times', join prosodically to form a single word, */arsen/*, which means 'two times' or twice (Mamta 2023).

Multiplicatives	Khasi	Pnar
Once	*si-sen*	*ʧi-sən*
Twice	*ar-sen*	*ar-sən*
Thrice	*lae-sen*	*le-sən*
Four Times	*sao-sen*	*so-sən*

Table 6: Multiplicatives in Khasi and Pnar

In Mog, a multiplicative number is the result of multiplying a suffixal morpheme by the cardinal numbers. The cardinal numerals are suffixed with the morpheme *-kʰou*, which means 'number of times', to create the multiplicative numerals. To put it another way, the classifier *-kʰou* can be used to generate the value of multiplicative numerals with any integer, greater or lower. Examples of how multiplicative numbers are formed in a language are shown below.

Value	Numerals	Gloss
1	*takʰou*	Once
2	*ŋ̊akʰou*	Twice
3	*suŋkʰou*	Thrice
4	*lekʰou*	Four times
5	*ŋakʰou*	Five times
6	*kʰroukʰou*	Six times
7	*kʰanoukʰou*	Seven times
8	*ʃɔkʰou*	Eight times
9	*kokʰou*	Nine times
10	*cʰekʰou*	Ten times

Table 7: Multiplicative numerals in Mog

4. Classifier

A classifier is a word (or, in some analysis, a bound morpheme) that follows a noun in specific grammatical contexts. It often represents a conceptual classification of nouns, primarily based on characteristics of their referents. As a result, a language may have one classifier for nouns that represent people, another for nouns that represent flat objects, a third classifier for nouns that represent time intervals, and so forth. There may also be some degree of unpredictability in the classifier assignment to nouns, as some nouns have historically been assigned particular classifiers. Classifiers can be typed as numeral-classifier also, when a noun is being—counted that is when it occurs with a numeral—classifiers are frequently employed in languages that have them. Similar to 'three pieces of mango', a phrase like 'three women' in these languages is frequently necessary to be stated as 'three X (of) women', where X is a classifier appropriate to the noun for 'women'. Numeral classifiers[9] are specifically those that come adjacent to a quantifier or a numeral. In some languages, particularly East and Southeast Asian languages (Chinese, Korean, Vietnamese etc.), they are crucial.

Aikhenvald (2000: 17) claims that in a language, classifier system offers an alternative approach to noun classification. In a sentence, they are used as attributive noun phrases (NPs) and are not part of the noun. They show up in remarks about amounts or numerical NPs. Often used with quantifiers or numerals, number classifiers can be separate words or affixes (though in the majority of cases in Mog they are attached with the root and occur in the suffix positions). They use the term's intrinsic qualities to describe it. Morphologically classifiers serve as affixes or standalone

[9] According to Krifka (1995), the semantics of numbers in classifier (CL) and non-classifier (non-CL) languages are different. Cross-linguistically they are called bare nouns. Numerals in non-CL languages are directly combined with bare NPs since they have a 'built-in' classifier. Since CLs and numbers are not grouped together in CL languages, a distinct overt CL is needed to act as a mediator between the NP and the numeric.

lexemes in Mog. Aikhenvald (2000: 104) states that Greenberg (1972) identified four potential constituent orders for the construction of numeral classifiers, which are as follows:

a. [NUM-CL]-N
b. N-[NUM-CL]
c. [CL-NUM]-N
d. N-[CL-NUM]

The language Mog follows the second constituent order i.e. N-[NUM-CL].

Sortal and Mensural classifiers are the two main classificatory categories in Mog. According to Lyons (1977:163), mensural classifiers differentiate referents based on quantity, but sortal classifiers differentiate referents based on the kind of object they imply or how people relate to them.

Sortal classifier

In Mog, sortal classifiers can be classified as either living or inanimate. They are classified as animate nouns and can be classified as human, animals, or groups of humans or animals. Under inanimate nouns, they are categorized as plants, shapes and dimensions, consistency, function, specific, etc. Mog language's robust classificatory system uses classifiers to divide nouns into different classes. Sortal classifiers have been divided into two categories—animate nouns and inanimate nouns. From animate nouns, which are further differentiated into human, non-human, and group of humans and non-humans; whereas the classification of inanimate nouns into one-, two- and three-dimensional groups is covered in this section that follows.

Animate Nouns [+human +animate]

Humans

The following examples show how the classifier *-yu* is used to quantify or categorize persons in the context of human nouns:

1. *mama* *ta-yu*
   girl one-CL
   'One girl'

2. *mama* *suŋ-yu*
   girl three-CL
   'Three girls'

3. *lwo* *ŋ̣a-yu*
   man two-CL
   'Two men'

4. *aserɔ* *ŋa-yu*
   young woman five-CL
   'Five young women'

Examples (1) to (4) demonstrate how the language Mog uses a distinct classifier to categorize human nouns; the quantity for girl(s) is indicated by the classifier *-yu*.

Non-humans

Examples (5) through (7) demonstrate how Mog language uses a specific classifier, *-goŋ* when referring to non-humans, animals, or birds.

5. *be* *ta-goŋ*
   duck one-CL
   'One duck'

6. *cʰowi* *ta-goŋ*
   goat one-CL
   'One goat'

7. *krwo* *n̥a-goŋ*
   rat two-CL
   'Two rats'

The classifier *-goŋ* is added into nouns which demonstrate living things, especially non-humans as we can see from the above examples.

Groups of humans and non-humans

Moreover, both human and non-human categories are indicated by the classifier *tarema*. As seen in examples (8), (9) and (10), particularly this classifier provides a crucial organizational feature by displaying the combined existence of elements in a single unit.

8. *maŋgjaiŋ* *saseŋ* *tarema* *cubo*
   man many group: CL gather
   'Many groups of man gather'

9. *maŋgjaiŋma* *saseŋ* *tarema* *cubo*
   woman many group: CL gather
   'Many groups of woman gather'

10. *ica* *kʰoi* *nakoŋ* *tarema* *pʰiakare*
    it dog two-CL group: CL detroy-PST
    'It was destroyed by two groups of dogs'

In examples (8) and (9), the term *tarema* is paired with the words *maŋgjaiŋ* (man) and *maŋgjaiŋma* (woman) to indicate that various groups of people have gathered together. Example no (10) illustrates the idea of animal (dog) groupings using the classifier. It is clear from this layout that multiple dog groups were responsible for the destruction. In these situations, the classifier *tarema* is essential for identifying the

collective character of a group, regardless of whether it is made up of human or non-human entities.

Inanimate Nouns [-human –animate]

Things like natural items, plants, forms, and so on are examples of inanimate nouns. According to Denny and Creider (1976), Croft (1994:149) highlighted a shared trait that is essential for categorizing inanimate objects, especially, forms. Shapes were divided into two categories by Croft (1994): non-extended, which comprises round (three-dimensional) shapes, and extended, which includes long (one-dimensional) and flat (two-dimensional) shapes.

Dimensionality	Affix	Root	Gloss	Classification
1-D	*-paŋ*	*apaŋ*	Tree	Tree-like objects
	-gro	*kro*	Rope	Rope-like objects
2-D	*-rou*	*arou*	Leaf	Leaf-like objects
	-t^{h}e	*awet^{h}e*	Flat	Flat-like objects
3-D	*-luŋ*	*siluŋ*	Fruit	Fruit-like objects
	-ci	*aci*	Seed	Seed-like objects

Table 8: Mog classifier database
(Along with each classifier's affix, root, forms, gloss, and semantic attributes)

One-dimensional category (long)

In addition to assigning height and length, a one-dimensional classifier may also have orientation features like vertical or horizontal and consistency features like rigidity or flexibility. One-dimensional objects that resemble stems or tree are defined in Mog by using *-paŋ* classifier. *apaŋ*, which signifies 'tree' in Mog, has been replaced by the stem-like classifier *-paŋ*. It is frequently used to refer to hard, long, cylindrical objects that resemble sticks and are upright, like trees, as examples (11) & (12) below demonstrate:

11. *ŋa* *apaŋ* *ta-paŋ* *mraŋre*
    I tree one-CL see-PRES
    'I see a tree'

12. *ŋa* *apaŋ* *na-paŋ* *mraŋre*
    I tree two-CL see-PRES
    'I see two trees'

It is interesting to note that, Mog language uses two different classifiers *-zi* and *-k^{h}au* with numerals, for the twigs and branches of a tree or shrub. As an illustration:

13. *boti* *ak^{h}au* *ŋa-k^{h}au*
    banyan branch five-CL
    'Five branches of banyan tree'

14. *wabaŋ* *azi* *le-zi*
    bamboo twigs four-CL
    'Three twigs of bamboo'

15. *ak^{h}au* *suŋ-k^{h}au*
    branch three-CL
    'Three branches'

Mog has altered the noun *kro*, which means 'rope' to *-gro*, which resembles rope. It is used to categorize objects that look like ropes and are long, flexible, thin, thread like, etc., as seen in the following examples (16) and (17).

16. *kro* *ta-gro*
    rope one-CL
    'One rope'

17. *k^{h}re* *na-gro*
    thread two-CL
    'Two threads'

In order to designate objects like teeth, hands, pens and so on in the one-dimensional category, Mog employs three different and unique classifiers as *-k^{h}yuŋ, -p^{h}au, -k^{h}o* respectively. As explained in the examples (18) through (20).

18. *sowa* *ta-k^{h}yuŋ*
    tooth one-CL
    'One tooth'

19. *alow* *na-p^{h}au*
    hand two-CL
    'Two hands'

20. *koloŋ* *le-k^{h}o*
    pen four-CL
    'Four pens'

Two-dimensional category (flat)

By the term 'Two-dimensional category' one can understand, (classifiers) that can display either vertical or horizontal variables and show width and length. Mog speakers use the term *-t^{h}e* and *-rou* to refer to two-dimensional items. The Mog two-dimensional classifier *-t^{h}e* has been reduced to the noun *awet^{h}e,* which means flat and *-rou*, which

has been reduced from *arou*, stands for leaf. *-tʰe* and *-rou* describe two-dimensional, flat objects, as shown below—

21. *arou* *ta-rou*
    leaf one-CL
    'One leaf'

22. *tolsi* *arou* *na-rou*
    basil leaf two-CL
    'Two basil leaves'

23. *saŋpʰruŋ* *ta-tʰe*
    mat one-CL
    'One mat'

24. *awetʰe* *suŋ-tʰe*
    cloth three-CL
    'Three cloths'

It makes use of the flat-like two-dimensional classifier *-leŋ*. In Mog, *-leŋ* denotes two-dimensional, flat items, as illustrated by the following instances (25) through (28):

25. *leŋri* *na-leŋ*
    road two-CL
    'Two roads'

26. *ranji* *le-luŋ*
    shirt four-CL
    'Four shirts'

27. *yea* *kʰrou-leŋ*
    hand-fans six-CL
    'Six hand-fans'

28. *léŋri* *ta-leŋ*
    main road one-CL
    'One main road'

Three-dimensional category (round)

The term three-dimensional stands for, cubes round or spherical objects, and large, heavy objects which is rounded in appearance. Mog speakers use the classifier *-kʰo* to indicate grain like objects as shown in example no (29), and a specific classifier *-zi* to refer any objects which is round or oval-like structure as illustrated in example (30) to (32).

29. *haŋ* *ta-kʰo*
grain one-CL
'One grain'

30. *miaoci* *na-zi*
eye two-CL
'Two eyes'

31. *neiŋzi* *ta-zi*
mole one-CL
'One mole'

32. *aci* *le-zi*
seed four-CL
'Four seeds'

In Mog, the word *siluŋ*, meaning fruit, has been transformed into the fruit-like classifier *-luŋ*. This particular classifier *-luŋ* is used to refer to three-dimensional objects that resemble fruits, but as (33) and (34) demonstrate, it can also be used to identify vegetables.

33. *seraosi* *suŋ-luŋ*
mango three-CL
'Three mangoes'

34. *ŋa* *napsi* *ta-luŋ* *mraŋre*
I banana one-CL see-PRES
'I see one banana tree'

The classifier *-kʰu* indicates the coin-like form. As demonstrated in example (35) below, the classifier *-kʰu* can only be used with coins or paisa. During data collection, we were unable to find a comprehensive counterpart for the word 'paisa' in Mog therefore we utilized the borrowed form (puisa) that they use on a regular basis.

35. *puisa* *ta-kʰu*
paisa one-CL
'One paisa' (coin)

The classifier *-bwo* is used to denote hole like structure in Mog, as shown in the following examples (36) and (37):

36. *apaŋ* *suŋ-bwo*
tree three-CL
'Three tree holes'

37. *pré* *na-bwo*
    earth two-CL
    'Two holes in earth'

As illustrated in the following example (38) and (39) the classifier *-loŋ* describes the oval shape structure that resembles an egg.

38. *bewo* *ta-loŋ*
    egg one-CL
    'One egg'

39. *iŋmrow* *na-loŋ*
    yam two-CL
    'Two yams'

The examples no (40) and (41) below demonstrate how the Mog language classifies rupees using a unique classifier *-kʰe*.

40. *teŋga* *ta-kʰe*
    rupee one-CL
    'One rupee'

41. *teŋga* *ŋa-kʰe*
    rupee five-CL
    'Five rupees'

Besides these classifiers, Mog also uses the classifier *-beŋ* to denote flowers, which are also three-dimensional objects, as illustrated in the following instances (42) and (43):

42. *peŋ* *ta-beŋ*
    flower one-CL
    'One flower'

43. *haŋgre* *ta-beŋ*
    jasmine one-CL
    'One jasmine flower'

Mensural classifier

. They are used to measure countable nouns and mass units. Aikhenvald (2000: 115) asserts that the physical characteristics of the thing and its quantity or measure have an impact on Lyons (1977: 463) defined mensural classifiers as those that individuate according to amount the choice of a mensural classifier. According to Lyons, mensural classifiers function similarly to mensural words, which are further separated into three subtypes: measure terms with collective, quantitative, and divisive meanings.

Quantitative measure items

The term ‘quantitative indicator’ refers to numerical standard used to assess people or organizations. Mog utilizes a few distinct terms to quantify goods such as wood, wine, tea, water, husked rice and rice. To demonstrate the way individuals or groups are being measured, Mog uses the following items:

44. *caba* *ŋ̊a-l̥aŋ*
husk two-CL
‘Two fistful amounts of husk’

45. *aṃ̊oŋ* *ŋ̊a-o*
rice two-CL
‘Two pots of rice’

46. *arau* *le-o*
rice-beer four-CL
‘Four pots of rice beer’

Collective measure items

Collective measure terms convey a specific impression of a well-defined distinct thing or entity. Examples of these words include group, bunch, pair, and others that imply a collection or undifferentiated mass of people. Classifier *-low* indicate to a mouthful of any solid things like mouthful of rice, betel nut etc. Example of such cases is given below:

47. *aṃ̊oŋ* *ta-low*
rice one-CL
‘One swallow of rice’

48. *aṃ̊oŋ* *ŋ̊a-low*
rice two-CL
‘Two swallows of rice’

49. *kweŋʃi* *le-low*
betel-nut four-CL
‘Four swallows of betel-nut’

In addition to this *-low* classifier, Mog uses the *-ci:* classifier to denote a bundle of wood, as explained in the following examples

50. *traŋ* *ta-ci:*
fire wood one-CL
‘One bundle of fire wood’

51. *wa* *ŋ̊a-ci:*
bamboo two-CL
'Two bundles of bamboo'

The classifier *-zoŋ* is used to collectively designate a pair of items, such as a pair of books, a pair of cloths etc., as seen in the following examples.

52. *tʰí* *ta-zoŋ*
umbrella one-CL
'One pair of umbrellas'

53. *raŋzi* *suŋ-zoŋ*
shirt three-CL
'Three pairs of shirts'

Divisive measure items

Divisive measure stands for an element or section of any specific thing, mass of objects, etc. Below, a number of examples of problematic measure terms are examined. Words associated with mud or clod is usually referred to by the classifier *-pe*, as illustrated in examples (54) and (55):

54. *kyou* *ta-pe*
mud one-CL
'One clod'

55. *kyou* *ŋa-pe*
mud five-CL
'Five clods of mud'

The classifier *-kyaŋ* is used to denote objects like node for example node of a bamboo, node of a sugar cane etc. The following examples are showing such instances.

56. *wa* *ta-kyaŋ*
bambooone-CL
'One node of bamboo'

57. *kreŋ* *ŋ̊a-kyaŋ*
sugar cane two-CL
'Two nodes of sugar cane'

In Mog, the classifier *-pow* is used to indicate drops of liquid, such as milk, oil, etc., as shown in the following examples:

58. *kʰó* *ŋ̊a-pow*
milk two-CL
'Two drops of milk'

59. *cʰi* *ta-pow*
oil one-CL
'One drop of oil'

In the following examples, the usage of the classifier *-to*, denotes pieces of meat, pork and fish etc. is thoroughly examined.

60. *krausa* *ŋa-to*
meat five-CL
'Five pieces of meat'

61. *wosa* *n̥a-to*
pork two-CL
'Two pieces of pork'

62. *ŋá* *suŋ-to*
fish three-CL
'Three pieces of fish'

5. Conclusion

In this paper we have discussed the numeral system in Mog. In Mog, there is no vigesimal numerals present; instead, the language has decimal system (as the base is 10, so *cʰe* (10) is added with the base to express a greater number, for instance *suŋ-cʰe*, which means 30). According to (Mazaudon 2008),[10] the vast majority of the three hundred or so modern Tibeto-Burman languages have decimal systems, like most contemporary languages, and more specifically like their large influential neighbours, the Sinitic and Indo-Aryan languages. Therefore, it is an areal feature. Again, like most of the TB language, they prefer to use addition and multiplication to create greater numbers, which can be considered as one of the areal features of TB languages in northeast India. We have analysed four types of numerals i.e. cardinal (*ta, n̥a, suŋ, le, ŋa, kʰrou, kʰanou, ʃɔ, ko, cʰe*), ordinal (*patʰama, tudiya, tadiya, lema, ŋama, kʰrouma, kʰanouma, ʃɔma, koma, cʰema*), fractions (*taboiŋ*), multiplicative (*takʰou, n̥akʰou, suŋkʰou, lekʰou, ŋakʰou, kʰroukʰou, kʰanoukʰou, ʃɔkʰou, kokʰou, cʰekʰou*). The basic numerals of the language are monomorphemic and non-derivative. The numbers 1 through 10 are identified as basic cardinal numerals. By contrasting one or more free numerical morphemes, compound numbers are created. From the basic cardinal numerals, the compound cardinal numerals—the numbers ranging from eleven to higher—are generated. Mog gives examples of several classifier types (sortal and mensural) that divide nouns into distinct groups using numeral classifiers. A sortal classifier (C) or a mensural classifier (M) is required in a numeral classifier language when a noun is quantified by a numeral (NUM). Cross-linguistically, Num and C/M are nearby, either in the order [Num C/M] or [C/M Num]. /*san-bai/*, which means 'three

[10] For further details kindly go through, Mazaudon. M. 2008. *Number building in Tibeto-Burman languages*. https://shs.hal.science/halshs-00273445/document

hundred' in Mandarin, are an example of a complicated numeral with a multiplicative composition in which the base may come after the multiplier. In several languages, however, the base may also come before the multiplier, as in [base×n]. It is interesting to note that base and C/M tend to harmonize in word order; that is, [base×n] numerals appear with [C/M Num] and [n×base] with [Num C/M]. Thus, the concerning language Mog falls under second category i.e. [n×base] with [Num C/M]. Sortal and mensural classifiers are both essential linguistic tools for classification and quantification. The sortal classifiers categorize nouns according to their dimensionality and animacy, which allows them to differentiate between various dimensional shapes and between animate and inanimate creatures. Interestingly, Mog uses the classifiers *-goŋ* to indicate non-human creatures like animals, birds, etc., and *-yu* to count the quantity of humans. For expressing groups of both human and non-human objects, the classifier *tarema* is significant since it provides a methodical way to indicate the existence of a collective entity. Within the category of inanimate nouns, the classifiers classify a variety of properties, including dimensions, forms, and plants. Classifiers like *-paŋ, -gro, -rou, -tʰe, -luŋ, -ci* are used to accurately categorize one- two- and three- dimensional shapes. Additionally, mensural classifiers serve as measure words for divide, collective, and quantitative measures. From grains and fruits to groups and components, these measure items quantity and characterize a wide range of things, substances, and entities. In summary, the Mog classifier system is an excellent illustration of linguistic creativity since it provides a framework for categorizing and measuring a wide range of objects. This approach demonstrates how speakers of the language may arrange and communicate complicated ideas in addition to communicating the languages deeply ingrained cultural identity.

Abbreviation(s)

C—Sortal classifier

CL—Classifier

M—Mensural classifier

N—Noun

Num—Numeral

PRES—Present

1D—One dimensional

2D—Two dimensional

3D—Three dimensional

References

Aikhenvald, A. Y. 2000. *Classifiers: A Typological of noun categorization devices*. Oxford: Oxford University Press.

Chakraborty, Niloy. 2025. 'Language Vitality and Endangerment: A Case Study of Mog language of Tripura' in *Journal of Native India & Diversity Studies* 2 (1), 99—111, 2025.

https://jnids.com/index.php/ojs/article/view/29

Comrie, Bernard. 1981. *Language Universals and Linguistic Typology: Syntax and Morphology*. Chicago: University of Chicago Press

Comrie, Bernard. 2005. *Numeral Bases*. In Martin Haspelmath, Matthew S. Dryer, Bernard Comrie & David Gil (eds.). World Atlas of Language Structures, 530—533.Oxford: Oxford University Press.

Coupe, R. A. 2007. *A Grammar of Monseng Ao*. Walter de Gruyter.

Croft, William. 1994. *Speech act classification, language typology and cognition*. In Savas L. Tsohatzidis, Foundations of Speech Act Theory: Philosophical and Linguistic Perspective. Routledge, 460-477.

Denny, J Peter and Creider, Chet A. 1976. *The Semantics of Noun Classes in Proto-Bantu*. Studies in African Linguistics, 7/1. Los Angeles: Ohio State University.

Donohue, Mark. 2008. 'Complexities with restricted numeral systems.' *Linguistic Typology* 12, 423-429.

Evans, Nicolas. 2009. 'Two plus one makes thirteen: senary numerals in the morehead-maro region.' *Linguistic Typology* 13. 321-335.

Greenberg, J. H. 1972. 'Numeral Classifiers and Substantival Number: Problems in the Genesis of a Linguistic Type.' *Working Papers on Language Universals*, No. 9.

Hammarstrom, H. 2022. 'Defining numeral classifiers and identifying classifier languages of the world.' *Linguistics Vanguard* 2022; 8(1): 151-164.

https://doi.org/10.1515/lingvan-2022-0006.

Krifka, Manfred. 1995. *Common Nouns: A contrastive analysis of English and Chinese*. In Carlson, Gregory & Pelletier, Francis Jeffry (eds.), The generic book, 398-411. Canberra: Universityof Chicago Press.

Laycock, D. C. 1975. *Observations on number systems and semantics*. In Stephen A. Wurm (ed.), Papuan languages and the New Guinea linguistic scene, 219-233. Canberra:Pacific Linguistics.

Lancy. 1989. *Verb Agreement in Proto Tibeto-Burman.* Bulletin of the School of Oriental and African Studies. Cambridge University Press.

Lean, Glendon. 1992. *Counting systems of Papua New Guinea and Oceania*. Unpublished PhD thesis, Papua New Guinea University of Technology, Lae, PNG.

Lyons, J. 1977. *Semantics*. Volume I. Cambridge: Cambridge University Press.

Mazaudon, Martine. 2010. 'Number-building in Tibeto-Burman Languages.' *NEILS 2*. Guwahati. https://halshs.archives-ouvertes.fr/halshs-00273445

Mamta, Kumari. 2023. 'South Asian Numerals Database (SAND).' Leipzig. *Max Planck Institute of Evolutionary Anthropology*. https://doi.org/10.5281/zenodo.10033151

Mengden, Von. 2009. 'The grammaticalization cline of cardinal numerals and numeral systems.' *Typological Studies in Language*.

Omachonu, G. S. 2011. 'Derivational processes in Igala numeral system: Some universal considerations.' *Journal of Universal Language* 12/2: 81-101.

Turgay, Tacettin. 2022. 'A Minimalist Account of Numerals, discussed the numeral system of a language from the syntactic point of view under the Minimalist desiderata.' *Dilbilim Arastrirmalari Dergisi*, 2022/2, 111-144.

https://dx.doi.org/10.18492/dad.1016340.

Wiese, Heike. 2003. *Numbers, Language, and Human Mind.* Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511486562