

Numerals in Mangar

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Abstract

The paper provides a description of numeral system used in Mangar (aka Magar ~Magari), focusing on its formation. It primarily examines the patterns of numerals formation and the various categories of numerals within the numeral system. The data is collected from the native speakers of the west Sikkim district of Sikkim, where majority of the speakers are found. The paper deals with cardinal, ordinal, multiplicative, distributive, fractional and restrictive numerals; that is, it describes the morphological processes employed in the formation of numerals in Mangar. The findings discovered that the Mangar has decimal numeral system. The cardinal number in Mangar can be classified into three sub types: i) additive compound numerals, ii) multiplicative compound numerals and iii) multiplicative cum additive compound numerals. Here, we can also categories multiplicative compound numerals into two sub types: i) lower multiplicative compound numerals and ii) higher multiplicative compound numerals. In lower multiplicative the lexical form *-tsu* ‘ten’, is compound with the basic lower cardinal numerals, and in higher multiplicative compound numerals the lexical form *kia* and *way* ‘hundred’ and thousand’ respectively. The multiplicative-cum-additive compound are achieved by multiplication of first two digits followed by addition of the third digit, such as $3 \times 10 + 1 = 31$. Ordinal are derived from cardinal by suffixing the bound morpheme *-sara* to the cardinal numerals to make it ordinal. Multiplicative numerals are formed by suffixing *-khep* to the cardinal numerals. Distributive numerals in Mangar can done by two ways either by suffixing *-wata* to the cardinal numerals or by reduplicating the base form of cardinal numerals. The restrictive numerals in Mangar are formed by postponing disyllabic free form *matri*, ‘only’ to the cardinal numerals. Lastly the fractional numerals are formed by borrowing Indic words.

Key words: Mangar, numerals, decimal, Tibeto-Himalayan

1. Introduction

In India, speakers of Mangar are mostly found in Sikkim and extensively in its neighbouring country called Nepal. Mangar is classified under the non-pronominalized Himalayan subgroup of the Tibeto-Himalayan branch within the Tibeto-Burman language family (Grierson 1903). Shafer (1966-73) did not recognize Tibeto-Burman as a primary branch. In his tentative classification of Sino-Tibetan languages, he placed Mangar within the West central branch of the Bodic subgroup, which he classified directly under Sino-Tibetan. According to Benedict (1972) Mangar is more closely affiliated with the Tibeto-Kanauri (also known as Bodish-Himalayish) group than to any other group. He further observed that Mangar exhibits significant lexical correspondences with Bahing-Vayu, suggesting that it serves as a linguistic link between the Bodish-Bahing link. The population of Mangar is not reflected in the Census of India 2011 implying that their population was below 10,000. Previously in the 2001 Census of India, it was clearly reported that the population of Mangar was below 10,000. This work provides a description of numeral system in Mangar a lesser-known Tibeto-Burman language spoken in Sikkim. The report covers the matters of cardinal, ordinal, multiplicative, distributional, fractional and restrictive numerals.

2. Typological Overview of Mangar

- (i) The occurrence of velar nasal η in word initial position is frequently noticed in the language.
- (ii) Most of the words in the language are disyllabic in nature, however some monosyllabic and trisyllabic lexical forms are found in the language, as well.
- (iii) Gender distinction in Mangar is based on the natural recognition of sex rather than on grammatical marking. Therefore, Mangar exhibits a natural gender system.
- (iv) Number is not a grammatically significant category in Mangar, as verbs do not agree with their subjects in number. Consequently, the same verb is used regardless of whether the subject is singular or plural.
- (v) Negation in Mangar is done by affixation, mainly prefix.
- (vi) The basic word order in Mangar is SOV.

3. Numerals in Mangar

According to Hartmann and Stork (1972), “Numerals mostly function as an adjective or pronoun, which convey a number and a relation to the number such as sequence, fraction, quantity, and frequency.” Numerals system in Mangar is based on decimal system. The numerals in Mangar may be classified into six types as follows.

- i. Cardinal numerals
- ii. Ordinal numerals
- iii. Multiplicative numerals
- iv. Distributive numerals
- v. Fractional numerals and
- vi. Restrictive numerals

3.1. Cardinal numerals

Morphologically, cardinal numerals in Mangar can be further classified into following types.

- i. Basic cardinal numerals and
- ii. Compound cardinal numerals

3.1.1. Basic cardinal numerals

Basic numerals are non-derived ones denoting numbers from one to ten, hundred and thousand. The cardinal numerals in Mangar are predominantly monosyllabic; only the words denoting ‘four’ and ‘five’ are disyllabic. The basic numerals found in Mangar are shown in Table 1.

Basic cardinal numeral	Gloss
<i>kat</i>	‘One’
<i>nis</i>	‘Two’
<i>som</i>	‘Three’
<i>buli</i>	‘Four’
<i>baja</i>	‘Five’

<i>tu</i>	‘Six’
<i>tun</i>	‘Seven’
<i>ke</i>	‘Eight’
<i>ku</i>	‘Nine’
<i>tsu</i>	‘Ten’
<i>kia</i>	‘Hundred’
<i>waŋ</i>	‘Thousand’
Table 1: Basic cardinal numerals	

3.1.2. Compound cardinal numerals

Compound numerals in Mangar are formed by the juxtaposition of two or more independent numeral morphemes. Compound numerals in Mangar can be further classified into:

- i. Additive compound numerals
- ii. Multiplicative compound numerals
- iii. Multiplicative-cum-additive compound numerals

3.1.2.1. Additive compound numerals

In Mangar, the numerals, from 11/eleven to 19/nineteen are formed through the summation of basic numerals from 1/one to 9/nine to decade *tsu* ‘10’. It is observed that the *tsu* is prefixed to the basic cardinal numerals as demonstrated in the Table 2.

Compound cardinal	Gloss
<i>tsu-kat</i> 10+1	‘Eleven’ 11
<i>tsu-nis</i> 10+2	‘Twelve’ 12
<i>tsu-som</i> 10+3	‘Thirteen’ 13
<i>tsu-buli</i> 10+4	‘Fourteen’ 14
<i>tsu-baŋa</i> 10+5	‘Fifteen’ 15

<i>tsu-tu</i> 10+6	‘Sixteen’ 16
<i>tsu-tun</i> 10+7	‘Seventeen’ 17
<i>tsu-ke</i> 10+8	‘Eighteen’ 18
<i>tsu-ku</i> 10+9	‘Nineteen’ 19
Table 2: Additive compound numerals	

3.1.2.2. Multiplicative compound numerals

In Mangar, all the numerals which end up with 0 from 20 upwards are all multiplicative compound numerals. In this language, multiplicative compound numerals can be divided into two: first, lower multiplicative compound numerals, and second, higher multiplicative compound numerals

3.1.2.2.1. Lower multiplicative compound numerals

The lower multiplicative compound numerals in Mangar are 20, 30, 40, 50, 60, 70, 80, and 90. These numerals are purely multiplication of *tsu* ‘10’ with the basic numerals as manifested in the Table 3.

<i>nis-tsu</i> 2x10	‘Twenty’ 20
<i>som-tsu</i> 3x10	‘Thirty’ 30
<i>buli-tsu</i> 4x10	‘Forty’ 40
<i>banja-tsu</i> 5x10	‘Fifty’ 50
<i>tu-tsu</i> 6x10	‘Sixty’ 60

<i>tun-tsu</i> 7x10	‘Seventy’ 70
<i>ke-tsu</i> 8x10	‘Eighty’ 80
<i>ku-tsu</i> 9x10	‘Ninety’ 90
Table 3: Lower multiplicative compound numerals	

3.1.2.2.2. Higher multiplicative compound numerals

Higher multiplicative compound numerals are formed through multiplication of *kia* ‘hundred’ and *waŋ* ‘thousand’ to a cardinal numeral as exemplified in Table: 4.

<i>kia</i>		<i>waŋ</i>	
<i>nis-kia</i> 2x100	‘Two hundred’ 200	<i>nis-waŋ</i> 2x1000	‘Two thousand’ 2000
<i>som-kia</i> 3x100	‘Three hundred’ 300	<i>som-waŋ</i> 3x1000	‘Three thousand’ 3000
<i>buli-kia</i> 4x100	‘Four hundred’ 400	<i>buli-waŋ</i> 4x1000	‘Four thousand’ 4000
<i>baŋa-kia</i> 5x100	‘Five hundred’ 500	<i>baŋa-waŋ</i> 5x1000	‘Five thousand’ 5000
<i>tu-kia</i> 6x100	‘Six hundred’ 600	<i>tu-waŋ</i> 6x1000	‘Six thousand’ 6000
<i>tun-kia</i> 7x100	‘Seven hundred’ 700	<i>tun-waŋ</i> 7x1000	‘Seven thousand’ 7000
<i>ke-kia</i> 8x100	‘Eight hundred’ 800	<i>ke-waŋ</i> 8x1000	‘Eight thousand’ 8000
<i>ku-kia</i> 9x100	‘Nine-hundred’ 900	<i>ku-waŋ</i> 9x1000	‘Nine thousand’ 9000
Table 4: Higher multiplicative compound numerals			

3.1.2.3. Multiplicative-cum-additive compound

The multiplicative-cum-additive compounds are formed through the multiplication of first two numerals and summation of the third ones. So the normal order is multiplication of the first two numerals and the summation of the third ones. Consider the examples as shown in the Table 5.

<i>nis-tsu-kat</i> 2x10+1	‘Twenty-one’ 21
<i>nis-tsu-nis</i> 2x10+2	‘Twenty-two’ 22
<i>nis-tsu-som</i> 2x10+3	‘Twenty-three’ 23
<i>som-tsu-nis</i> 3x10+2	‘Thirty-two’ 32
<i>som-tsu-som</i> 3x10+3	‘Thirty-three’ 33
<i>som-tsu-buli</i> 3x10+4	‘Thirty-four’ 34
<i>buli-tsu-som</i> 4x10+3	‘Forty-three’ 43
<i>buli-tsu-buli</i> 4x10+4	‘Forty-four’ 44
<i>buli-tsu-five</i> 4x10+5	‘Forty-five’ 45
<i>baṇa-tsu-baṇa</i> 5x10+5	‘Fifty-five’ 55
Table 5: Multiplicative-cum-additive compound	

3.2. Ordinals

Ordinal numbers are derived from the cardinal numbers by means of the suffixation, specifically by attaching a bound morpheme *-sara*, as shown in the Table 6.

Ordinal	Gloss
<i>kat-sara</i>	‘First’
<i>nis-sara</i>	‘Second’
<i>som-sara</i>	‘Third’
<i>buli-sara</i>	‘Fourth’
<i>baŋ-sara</i>	‘Five’
<i>tu-sara</i>	‘Six’
<i>tun-sara</i>	‘Seven’
<i>ke-sara</i>	‘Eight’
<i>ku-sara</i>	‘Ninth’
<i>tsu-sara</i>	‘Tenth’
Table 6: Ordinals	

3.3. Multiplicative numerals

Multiplicative numerals in Mangar are formed by suffixing *-k^hep* to the cardinal numerals as shown in the Table7.

Multiplicative	Gloss
<i>kat-k^hep</i>	‘Once’
<i>nis-k^hep</i>	‘Twice’
<i>som-k^hep</i>	‘Thrice’
<i>buli-k^hep</i>	‘Four times’
<i>baŋa-k^hep</i>	‘Five times’
<i>tu-k^hep</i>	‘Six times’
<i>tun-k^hep</i>	‘Seven times’
<i>ke-k^hep</i>	‘Eight times’

<i>ku-k^hep</i>	‘Nine times’
<i>tsu-k^hep</i>	‘Ten times’
Table 7: Multiplicative numerals	

3.4. Distributive numerals

Distributive numerals are very common in Mangar. They are formed either by adding the distributive marker *-wata* (marking the meaning 'each') to cardinal numerals or by reduplicating the base form, i.e., the cardinal numerals. Thus, Mangar employs two strategies in distributive numerals: first, by suffixing the bound morpheme *-wata* to cardinal numerals, and second, by reduplicating the cardinal numerals as shown in the Table: 8 and Table: 9.

- (i) Adding the distributive marker-*wata*

Distributive	Gloss
<i>kat-wata</i>	‘One each’
<i>nis-wata</i>	‘Two each’
<i>som-wata</i>	‘Three each’
<i>buli-wata</i>	‘Four each’
<i>banja-wata</i>	‘Five each’
<i>tu-wata</i>	‘Six each’
<i>tun-wata</i>	‘Seven each’
<i>ke-wata</i>	‘Eight each’
<i>ku-wata</i>	‘Nine each’
<i>tsu-wata</i>	‘Ten each’
Table 8: Distributive through suffixation	

- (ii) Reduplicating the base form.

Distributive	Gloss
<i>kat-kat</i>	‘One by one’
<i>nis-nis</i>	‘Two by two’
<i>som-som</i>	‘Three by three’
<i>buli-buli</i>	‘Four by four’
<i>baṇa-baṇa</i>	‘Five by five’
<i>tu-tu</i>	‘Six by six’
<i>tun-tun</i>	‘Seven by seven’
<i>ke-ke</i>	‘Eight by eight’
<i>ku-ku</i>	‘Nine by nine’
<i>ṭu-ṭu</i>	‘Ten by ten’
Table 9: Distributive through reduplication	

3.5. Restrictive numerals

The restrictive numerals in Mangar are formed by postponing disyllabic free form *matri*, marking the meaning 'only' to the cardinal numerals. As shown in the Table: 10.

Restrictive numerals	Gloss
<i>kat matri</i>	‘One only’
<i>nis matri</i>	‘Two only’
<i>som matri</i>	‘Three only’
<i>buli matri</i>	‘Four only’
<i>baṇa matri</i>	‘Five only’
<i>tu matri</i>	‘Six only’

<i>tun matri</i>	‘Seven only’
<i>ke matri</i>	‘Eight only’
<i>ku matri</i>	‘Nine only’
<i>tsu matri</i>	‘Ten only’
Table 10: Restrictive Numerals	

3.6. Fractional numerals

Fractional numerals are not much rich in Mangar. Indic loan words are employed for fractional numerals as illustrated in the Table: 11.

Fractional Numerals	Gloss
<i>adha</i>	‘One-two’
<i>kat-poa</i>	‘One-fourth’
Table 11: Fractional Numerals	

Conclusion

This study indicates that the numeral system of Mangar is of decimal type. The numerals in Mangar can be classified broadly into six types: cardinal, ordinal, multiplicative, distributive, restrictive and fractional.

Cardinal numerals can be subcategories into two types – basic and compound cardinal numerals. In the basic cardinal category, only the numeral forms for ‘four’ and ‘five’ are disyllabic and rest are monosyllabic forms, that is, monosyllable forms are predominate in basic cardinals. Compound cardinal can be further divided into three different kinds; additive compound, multiplicative compound, and multiplicative and additive compound.

We can further classify multiplicative compound numerals into two sub types: i) lower multiplicative compound numerals and ii) higher multiplicative compound numerals. Here in lower multiplicative compound numerals, the suffix *-tsu* is added to the basic cardinal numerals whereas in higher multiplicative compound numerals the suffix *-kia* and *-way* is added to the basic cardinal numerals.

In Mangar, ordinal, distributive, and multiplicative numerals are formed by suffixing the bound morphemes *-sara*, *-wata*, and *-khep* to cardinal numerals, respectively. In addition to suffixation, distributive numerals are also formed by reduplicating the cardinal numerals. Fractional numerals are formed in Mangar by employing Indic Loan words. Restrictive numerals are formed by postpositioning the free morpheme *matri* 'only' to cardinal numerals. Thus, the formation of numerals in Mangar involves several morphological processes, such as compounding, suffixation, post positioning, reduplication, and the borrowing, as well.

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