GRAMMAR OF TANI LANGUAGES OF ARUNACHAL PRADESH

Dissertation submitted to Jawaharlal Nehru University
In partial fulfillment of the requirements
for the award of the Degree of

MASTER OF PHILOSOPHY

LISA LOMDAK

Center for Linguistics
School of Language, Literature and Culture Studies
Jawaharlal Nehru University
New Delhi 110067
2006

Centre for Linguistics
School of Language, Literature & Culture Studies
Jawaharlal Nehru University
New Delhi-110067, India

Date: 28/07/2006

CERTIFICATE

This thesis titled *"Grammar of Tani Languages of Arunachal Pradesh "*, submitted by **Ms. Lisa Lomdak**, Centre for Linguistics, School of Language, Literature and Culture Studies, Jawaharlal Nehru University, New Delhi, for the award of the degree of **Master of Philosophy**, is an original work and has not been submitted so far in part or in full, for any other degree or diploma of any University or Institution.

This may be placed before the examiners for evaluation for the award of the degree of Master of Philosophy.

(PROF. ANVITA ABBI)
SUPERVISOR
Professor Anvita Abbi
Centre for Linguistics
School of Language, Literature & Culture Studies
Jawaharlal Nehru University
New Delhi - 110 067

(PROF. PKS PANDEY)
CHAIRPERSON
Acting Chairperson
Centre for Linguistics
School of Language, Literature & Culture Studies
Jawaharlal Nehru University, New Delhi-110067

Date 28th July, 2006

DECLARATION BY THE CANDIDATE

This dissertation titled *"Grammar of Tani Languages of Arunachal Pradesh"* submitted by me for the award of the degree of Master of Philosophy, is an original work and has not been submitted so far in part or in full, for any other degree or diploma of any University or Institution.

(Lisa Lomdak)
M. Phil Student
CL/SLL&CS
JNU

DEDICATED TO

MUMMY AND PAPA

Acknowledgements

TABLE OF CONTENTS

List of Figures

List of Tables

Abbreviations

1SG	1st Person singular
2SG	2nd Person singular
3SG	3rd Person Singular
ABL	Ablative case
ACC	Accusative case
ADJ	Adjective
DET	Determiner
FUT	Future
GEN	Genitive
HAB	Habitual aspect
HCLF	Human classifier
INSTR	Instrumental
LOC	Locative
NOM	Nominative
NUMCLF	Numeral Classifier
PP	Postposition
PR	Partial reduplication
PRS	Present
IPFV	Imperfective
PROG	Progressive
PST	Past
OBJ	Object
IMP	Imperative
NEG	Negative
PERF	Perfective
MOD	Modal
COMPL	Completive

CHAPTER ONE: AN INTRODUCTION TO TANI LANGUAGES

I.1. Introduction to the Five Languages

Tani languages are spoken in the central part of Arunachal Pradesh state in the northeastern part of India. The Tani language is a cover term used to include eleven languages that are spoken by the Scheduled tribes of Arunachal Pradesh.. For my research study I have taken data from five major languages grouped under Tani languages. They are Galo (Adi), Nissi (Nishi), Hill Miri, Apatani and Tagin. They share their tribe's name with the languages they speak. These languages are related to each other in terms of their shared ancestry and typological homogeneity. The languages are in a continuous process of influencing each other's languages through contact and diffusion. Because of these factors they have often been referred to as being dialects of each other. Tani languages has no written script of it's own.

Each tribe has a specific geographic distribution. The Tani languages are situated in the central part of the Arunachal Pradesh state. Apatani language is spoken in the Lower Subansisri district of Arunachal Pradesh. Hill Miri and Tagin are spoken in the Upper Subansisri district. Galo is spoken in the West Siang district. Nissi is spoken in and around the Papumpare and lower Subansisri districts. (See Map, pp 109)

It is important to note that the names of the tribes like Adi, Nissi and Hills Miri etc. are generic terms for grouping of several Tani tribes, which in turn speak many distinct languages and sub- dialects. The generic terms are not a language in itself as is often claimed to be. For example, the word 'Adi' in Adi (Galo) simply means "people living in the hills". Similarly, in the tribe name Hill Miri as explained by the educated village elders; the word 'miri' is interpreted as "mediator". Hence the Hill Miris referred to 'mediator from the hills'. Here 'mediator' would be interpreted as 'a mediator between the people of the hills and the people living in the plain areas of Assam'. At present the Hill Miris have been grouped under Dafla, which is an old

name for Nissi. In the case of the word 'Nissi', it is variously interpreted as 'people from the highlands' and by some 'those who have originated from *sici'*, which means earth.

These tribal groups are mostly multilingual Apart from speaking their own mother tongue; they are well versed in at least two distinct dialects and languages of the contact area. But due to existence of numerous distinct languages and sub-dialects and to avoid conflict amongst these different groups, other languages like Assamese, Hindi, and English are used as lingua francas in the region.

I.2. Language Family Tree of the Tani Language

The Tani languages are grouped under the Tibeto-Burman group of language family. The figure below depicts the family tree of Tani language.

Sino-Tibetan

|

Tibeto-Burman

|

North Assam

|
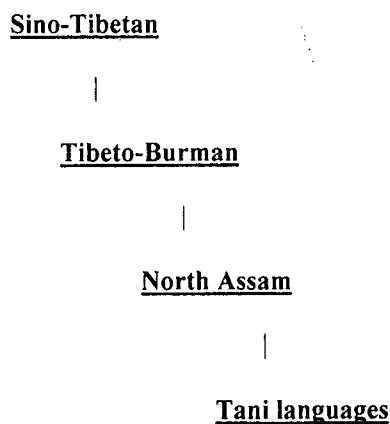
Tani languages

Fig.I.1. Language Family Tree of Tani Languages (Ethnologue 14. [Site Map for Achieved 14th Edition, 2004]

I.3. Religion and Culture

The following subsection is a very brief discussion on the religion and culture of Tani Tribes. As a rule the tribes did not inter-marry. But in recent times, however these rules are no longer abided if the concerned parties have mutual consent. Each tribe follows distinct social, cultural and religious practices. On this basis the tribes are

distinguished from each other. But the most common religious practice is animism, in which deities of nature and various spirits are worshipped. The religion followed is termed as Donyi (Sun) - Polo (Moon). Ritual sacrifice is a very important and a common practice, and the mithun (a domesticated gaur, or wild ox) is especially revered as a sacrificial animal. The mithun is also a great asset and serves as a bride price in the occasions of marriages. However in the recent years, there has been a very rate of conversion taking place amongst the native speakers towards Christianity, Hinduism and Buddhism. For their livelihood people in the native areas like villages mainly practice Jhum cultivation.

I.4. Census Data on the Five Tani Languages

One of the first pioneering works on writing a descriptive grammar on major Tani languages was taken up by I.M Simon in 1978. His works presented in a series of grammar books and dictionary information helped me immensely in my research studies on the five languages and was responsible for my interest in the topic too. Simon (1978) provides the first ever figures on the population of the five languages and he classified them under one group, the Abor (an old term for Adi)-Miri-Dafla (an old term for Nissi, Nishang, Hill Miri, Tagin). The figures depicting population that were given for the individual five languages were as follows:

Table.I.1 Number of Speakers of the five languages (1978)

TRIBES	NUMBER OF SPEAKERS
The Adi group of tribes	99,372
The Nissi group (including the Nishangs)	80,325
Apatani	12,888
Hill Miri	8,174
Tagin	20,377

The significance of the above-mentioned table lies firstly in the fact that perhaps the above-mentioned figures of numbers under different tribes are the first data presented on number of native language speakers of these languages. Secondly it has also classified different languages under one group the Abor-Miri-Dafla group. However the numbers have undergone great changes today. Given below are the recent census data on mother tongue speakers of the respective languages.

- According to 1991 census there were 45,616 mother tongue speakers of Galo (Adi). In recent years the number of Galo speakers is between 30,000 to 40,000 (Post: 2005).

- According to 1991 census there were 68,176 mother tongue speakers for Nissi. It's sub dialect i.e.. Nishang had an entry for 16,976.

- According to 1991 census, there were 19,600 mother tongue speakers of Apatani. In the year 2004, the number of speaker has increased to 21,500.

- According to 1991 census, there were 31, 845 mother tongue speakers of Tagin. However recent figures on the number of mother tongue speakers of Tagin could not be procured.

It is important to note here that, in several Tani languages, dialects within their own groups appear to be spoken by small groups (comprising of 500-2000 people). To obtain census data on the individual five languages was a difficult task. Firstly, the Ethnologue data (2004) doesn't make accessible the number of mother tongue speakers of Hill Miri and Galo separately. For example, the recent census data on the language Hill Miri could not be procured as it is sub-grouped under Dafla, which has been replaced by the group name 'Nissi' or 'Nishi'. It is often confused with the Miris of Assam. There is no recent data available on the number of mother tongue speakers of Hill Miri.

While investigating into the grammar of Tani languages I came across a very unique pattern of numeral classifiers, which occur, in a certain morpho-syntactic environment of quantifying phrases. The numeral classifiers constituted one of the major word classes in these languages. The study of numeral classifiers throws a light over the various phonological processes in the languages. Moreover the subject matter of numeral classifier exposes the various realms of the grammar like the "grammaticalization" process. No major study has been done on the topic so far. This is the reason why I chose to deal with Numeral classifier intensively in the following third chapter.

The numeral classifiers are the most well known type of Classifier System. The term 'classifier systems' is used to denote a continuum of methods of noun categorization. Tani numeral classifiers are categorized under lexical numeral classifiers of Southeast Asia. Numeral classifiers are special morphemes, which only appear next to a numeral or quantifier. As pointed out by Aikhenvald (2000) they appear contiguous to numerals in noun phrases and expressions of quantity. The choice of numeral classifier is predominantly semantics. The categorization of the referent of a noun is based on terms of its animacy, shape and other inherent properties.

During my fieldwork I have come across at least fourteen numeral classifier morphemes for each language, all of them referring to form (round, cylindrical, plain, flatness, thickness) of the referent noun. The native speakers classify new objects consistently and easily on the basis of their inherent and observed attributes. One very recurrent and relevant phenomenon in numeral classifier construction of Tani languages is the employment of partial reduplication as a device to construct morphemes derived from the referent nouns which function like numeral classifiers.

I.5. Aims and Objectives

- In addition to giving a short and consolidated grammatical sketch of Tani languages, my main objective has been to give a descriptive account on the semantics involved in numeral classifier construction and how these languages employ numeral classifier constructions as noun categorization device. Even though there has been significant works on the five languages, those early literary sources have not attempted to probe further on the issues like the semantics involved in the construction of numeral classifiers. Therefore, my research studies is an attempt to describe all the distinguishing features shared by these five languages and also make a descriptive and comparative study on a very unique feature of the numeral classifiers.

- The objective is motivated by the dire need to document the data on Tani languages. The special linguistic feature of using numeral classifiers for noun categorization is getting lost amongst the younger generation of these tribal communities. As the younger generations are growing among multilingual speech communities their loyalty towards their mother tongue is shifting towards contact languages like Assamese, Hindi and English. This calls for an urgent need for resurgence among the younger generation to use their mother tongue.

- Tani languages are one of largest group of languages in Arunachal Pradesh. Unfortunately there has not been any detailed linguistic study on most of the linguistic aspects of languages so far. Data on the following languages have come from my own fieldwork and also through great contribution from previous works like *Hill Miri: A Language Guide* (1976) written by I.M Simon and first edition of *Apatani dictionary (2004)*.

- The study is also an attempt to contribute in my own way to preserve the endangered languages of Arunachal Pradesh.

- My research study is a cross-linguistic comparison between five languages and it cites the similarity and dissimilarity of linguistic features shared across five languages namely Apatani, Galo, Hill Miri, Nissi and Tagin. It also

accounts for a special linguistic process of noun categorization devices for five languages.

I.6. Methodology

- The data for the present research were collected using linguistic field methodology during my field survey to Itanagar, the capital of Arunachal Pradesh. Data were also collected from native informants residing in Arunachal Bhavan and Arunachal House, which are located in Chanakyapuri, New Delhi.

- Data were collected from the informants through language typology questionnaire, interviews and observation. The questionnaire were prepared with the help of two most important literary sources which are *Hill Miris; A Language Guide* (1979) written by I.M Simon and first edition of *Apatani Dictionary* (2004).

- During the interviews the native speaker's data were recorded with the help of SONY WM-GX400 Recoding Walkman. The data on numeral classifiers were stored in three Sony and T-Series audiocassettes.

- The records of the data were then documented in the form of drafts simultaneously carrying out the systematic analysis of the data in consideration with the most recent and consensus view on basic linguistic theories.

- First language approach was employed. The native informants learnt their respective languages as first language during childhood. The domains of speech were home, with friends and market place in their native areas. All the informants were mostly bilinguals and borrowed frequently from Assamese, Hindi, and English. The informants were also well versed in at least one of the Tani language apart from their own mother tongue, which were motivated due to the factors like geographical proximity, and contact influences.

- Informants belonged to different age groups, mostly bilinguals, educated, born and brought up in their native areas. A variety of Hindi, 'Arunachali Hindi' which is spoken by people of Arunachal, was employed as a medium of communication in cases of mutual unintelligibility.

- Inductive methodology- to try to account for native hearer's competence. The study is not speculative but it tries to account for native hearer's competence on the subject of study.

- The sources of the data were contemporary forms of the language as is reflected in the formal and informal speeches. Source of data constituted of informants based in native places but who came to places like Itanagar and New Delhi for various reasons. Several interviews and discussions were conducted in both formal and informal situations where the informants were asked to give equivalent examples from their mother tongue.

I.7. The Structure of the Dissertation

Chapter one deals with an introduction to the Tani languages. The chapter introduces the five languages chosen amongst eleven languages (which are sub-grouped under Tani languages) for the research study. Further it gives the general background information on the five languages, its social area and distribution. Section I.2 traces the language family tree of the Tani languages. Section I.4 provides the census data on the mother tongue speakers of the languages. Section I.5 and I.6 deal with the aims and objectives of the research conducted and methodology that was employed in order to carry forth the data collection, data elicitation and research analysis. The chapter also introduces the subject matter of the following chapters and motivations behind the study.

Chapter two gives a short and consolidated grammatical sketch of the Tani languages based on the study of the five languages. Section II.1 deals with the phonology of the languages. In case of difference in features, those topics are dealt separately. Section II.2 discusses the morphological and syntactic features of the five Tani languages. Examples are cited from each language under every grammatical feature listed. As a result the chapter dealing with the grammar of five languages will help in giving an overview of

the grammar shared by all the languages that are sub-grouped under Tani languages. The last section of the second chapter is a prelude to the following third chapter on numeral classifiers. The section deals briefly with the theories on numeral classifiers.

The third chapter deals with a detailed discussion on the topic of numeral classifiers in the five Tani languages. The chapter discusses in detail how numeral classifiers are constructed in Tani languages. The semantic parameters of noun categorization devices are listed and given in Table III.4.1. The sub-classification of the Tani language numeral classifier is identified, namely the numeral classificatory prefixes. Grammaticalization processes of numeral classificatory affixes are discussed in section III.6. In the last section III.7 of the third chapter there is a discussion on the mensural classifiers of Tani languages.

The fourth chapter is the conclusion to the topic. It summarizes my findings after undertaking the research on grammar of Tani languages. It also makes a summary on the topic numeral classifiers. It addresses the various problems that occurred during the research study.

The following chapter presents a short and consolidated grammatical sketch of Tani languages based on the study of data collected from five Tani languages.

II.1. Phonology

The table given below is a consolidated chart describing the vowels and consonants that are found across the five languages.

Table. II.1. Consonants (Pulmonic)

	Bilabial	Labio-dental	Dental	Alveolar	Post alveolar	retroflex	palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b		t d				c ɟ	k g			ʔ
Nasal	m			n			ɲ	ŋ			
Trill				r							
Tap or Trill											
Fricative		f v		s ʃ							h
Lateral fricative											
Approximant							j				
Lateral Approximant				l							ˈ

Where symbols appear in pairs, the one to the right represents a voiced consonants.

Table. II.2. Vowels

Part of the tongue	Front		Central		Back	
Height of the tongue	UN-R	R	UN-R	R	UN-R	R
High	i				ɯ	u
Lower high	ɪ					
Higher – mid	e					o
Mean mid			ə			
Lower mid						
Higher- low						
low		a				

- Tani languages make extensive use of Nasals [n], [ɲ], [ŋ], [m].

(1). Apatani example: *paʔɲi* 'stick'

aguŋ " language"

anɯ "leaves"

(2). Galo example: *ŋoi* " fish"

nəbɯ "spear"

ɲimə "wife"

(3). Nissi example: *aɲəŋ* "year"

- There is abundant use of [ɯ] [+high] [-*back*] [-round].

(4). Hill Miri example: *ɯ* " body"

ɯllɯ "stone"

(5). Tagin example: *pɯpɯ* "egg"

ɯsɯŋ " tree"

- Palatalisation is frequent in Apatani, but not found in other Tani languages.

(6).   *puⁱʲě ʈarɯ* " Clothes shirts "

mʲoɖu " Season"

aⁱʲǎ " Ten"

As seen in the examples, nasalization of vowels is also a distinct feature of Apatani. This process gives a distinct sound to the language, which can be observed even by a non-native speaker.

- Nissi, Galo, Tagin and Hill Miri languages are not tonal languages. But Apatani is a tonal language because tones are phonemic in Apatani. Tonal languages show contrastive pitch on the lexical items and consequently it leads to change of the meaning.

    amì "tail"

    amī "eyes'

    amǐ "cat"

    anū̄ "mother"

    anuì "leaves"

- The basic syllable structure is; V   *o* "vegetable", *uɪ* "body"

    VC   *al* " salt"

    VCV   *aba* " Father", *opo* " beer"

    CVC   *puɪp* "egg",

In a syllable structure of CCVCCV, the consonant cluster in the word medial position is generally a geminate consonant. For example in Apatani, *cʰukku* means "upside down". In the other languages too there is abundance of consonant clusters, which occurs word medially. However I concentrated more on the consonant clusters that are allowed word initially and word finally.

Here is some consonant cluster allowed word initially in Apatani;

    dr   *dri:*   "Festival"

    kl   *klo*   "Conditional particle"

    bj   *bjabiɲ* " to roast on fire"

It was found that the Apatani language has consonant clusters with mainly the approximant [j] in the word initial position.

The consonant clusters allowed in the word initial positions and word final positions could not be found for native words in Hill Miri, Tagin, Galo and Nissi. However, consonant clusters are found in the loan words that these languages have borrowed from Assamese, Hindi and English.

- Among the five languages Hill Miri shows the maximum number of vowel change as a result of change in the neighboring segments. This can be shown in the numeral classifier constructions of the language. The numeral classifier morpheme is prefixed to the numerals. With the change in numerals the numeral classifier prefixes undergoes changes.

For example the numeral classifier for long, slender objects is [so-]. When prefixed to numerals, firstly the initial vowel of the numeral gets dropped. Secondly, the prefixed numeral classifier undergoes change according to the change in segments of the following numbers.

(7) so- + aken (one   so-ken

     so- + eɲi (two) su-ɲi

     so- +oum (three)   suː-m

     so- + epi (four)   suː-pi

     so- + aŋo (five)   so-ŋ

There are also cases of vowel reduction where a vowel is converted into the short , lax segment [ə]. The numeral classifiers for flat, plank like objects is ɖak.

       (8).   ɖak- + aken (one)   ɖak-ken

              ɖak- + eɲi (two)   ɖam-ɲi

              ɖak- + aum (three)   ɖə-bum

              ɖak-+ epi (four)   ɖək-pi

By looking at the data of numeral classifiers morpheme we witness the various process of deletion of segments, epenthesis, assimilation, and vowel lengthening and vowel reduction. This area need to be further studied in depth.

II.2. Morpho-Syntactic Features;

- The Tani languages are synthetic and agglutinating in nature. Tani languages make extensive use of polymorphemic words (i.e., words containing a root and one or more affixes) in which each grammatical contrast is typically encoded by a separate and clearly identifiable morpheme. Case marking is basically nominative accusative type.

Grammatical categories of postpositions also function as case markings in the languages.

(9). *abbə   nam-lo   ɖo*

   father   house-PP   PRS

   "Father is in the house" or " Father is at home." (Hill Miri)

The suffix *-lo* functions as postposition and locative case both.

A similar example can be given for the postposition 'from' which also function as ablative case.

(10*).   ŋo   siloŋ-lokə   a-nə*

   1SG   shillong- ABL   come- PST

   " I came from Shillong." (Hill Miri)

(11). *saŋnə-logə   nanne-ŋə   jug-lu- ɖuŋ-ɖo*

   tree-ABL   leaf- DET   "to fall"-PRS.IPFV

   "Leaves are falling from the tree." (Nissi)

- The Basic Constituent Word Order of all the five Tani languages is Subject (S), Object (O) and Verb (V).

(12).

pulis-ə	*doco-bo-əm*	*noṯu-pa*
police - DET	"to steal"- Nominalizer- ACC	" to catch"- PST

"The policeman caught the thief." (Hill Miri)

(13).

ŋo	*ali-anə*	*ne-ken-go*	*ləka-pa*
1SG	seedlings	NUMCLF(seeds)- one- object marker	"to plant"- PST

" I have planted one seed." (Galo)

(14)

anə	*ŋom*	*kopuŋ*	*puŋ-ɲi- go*	*ji-pa*
mother	me	bangle	NUMCLF- two- object marker	" to give"- PST

" Mother gave me two bangles." (Tagin)

(15).

ṯai	*jasaŋ - mi*	*pa-ḍo*
Tai	firewood- DET	"to cut"- PRS.IPFV

" Tai is cutting the tree." (Apatani)

(16).

meri   ɖugu-əm   ɖə-pa

mary   mango- ACC   " to eat"- PST

"Sita ate the mango." (Nissi)

- The sentences have postpositions.

- No agreement is marked on the verbs to show number and gender of a subject or an object or an NP.

(17).

nam-lo   kubuŋ   uŋruŋ   ruŋ-ɲi-go   me-pe

House- PP   rat   hole   NUMCLF-two- object marker   "to make"- PST

"The rat has made two holes in the house." (Tagin).

(18).

ŋo   sanɯ- ho   cʰaṭe - pa

1SG   tree-PP   "to climb"- PST

" I climbed on the tree." (Apatani)

(19).

kiṭap-hə   ṭebul aoṭa   ɖo-pa

Book- DET   Table PP (above)   " to be"-PST

"The book is on the table."

- Genitives precede noun heads.

(20). Nissi example:

ŋaʔ nam " my house"

ŋul- gə nam "our house"

mɯ -gə nam " His/ Her house"

mul-gə nam " Their house"

na-ge nam   " Your house"

(21). *gaŋbura-gə   nam*

headman- GEN house

" The headman's house."

- Adjectives and numerals follow the noun heads.

(22). Apatani example

    a.   *miju ahie*

        Man   miser

        " miser man"

    b.   *ɖac^{h}ã   aie-ɖo*

        iron   heavy " to be"

        "The iron is heavy."

    c.   *ahɯ si   aieh-ɖo*

        fruit DET   raw " to be"

        " The fruit is raw."

There are three ways in which adjectives are constructed. It can be illustrated with Nissi example.

(22).   a. *eji   japuŋ*

        clothe white.

        " White cloth"

In the above example " white cloth" is a single concept. The colour is not separable from the speakers mind.

. b. *is   hariək-bu*

water   cold- "wala" particle

" water that is cold."

In the second example the speaker has in mind the water that is cold.

c. *is   hariək   ḍo.*

Water   cold   Vr " to be"   " water is cold"

The third example is a simple sentence constructed with an adjective.

- Question word position in sentence is final.

(23). *ṭaki lu   nohju   iŋne   nuɪ ?*

taki   and others   gone   where?

"where have Taki and others gone?"

(24). *nok   nam- ə   j oloka?*

your   house- DET   where?

"Where is your house?"

(25). *nok   iminə jok-ə?*

Your   name   what

"what is your name?"

- No gender distinction is marked in the pronoun system of the language. Pronoun system has a three-way distinction.

- Demonstrative pronouns are repeated after the noun head.

(26). *si   nam   si   namṭə   ḍo.*

this   house   this   Adj. ' big'   " to be"

" This house is big"

Demonstrative Pronouns distinguish the three distinctions in the levels.

A Hill Miri example:

Those that are placed at same level take [ə].

Those that are placed at the higher level take [bə].

Those that are placed at lower level take [ʃə].

- Major lexical classes consist of the nouns, adjectives and verbs. Other grammatical features include post positions, relative nouns, numeral classifiers, large system of aspectual suffixes, constituent-final particles coding functions related to epistemological status (such as evidentiality), discourse and pragmatic status, modality and other related functions.

Aspectual morphemes are obligatorily marked when the temporal state of the event is described as "already completed/ finished", " still continuing", " happens daily" or" at " regular intervals of time."

(27).

bɯ   jug -lɯ   *ḍo-ḍo*

3SG   "to run"   PRS.PROG

" She is running." (At present)

The morpheme *-lɯ* affixed to the verb root *jug* " to run", expresses the predicate occurring at the time of utterance.

(28)

bɯ   hel   *ḍo-ḍo*

3SG   " to write"   PROG

" She is writing" (Imperfective Aspect)

(30)

buɪ	siṭi	bor-go		hep-pa
3SG	letter	NUMCLF (letter)- object marker		"to write"- PST

"He wrote a letter"

(31).

buɪ	*siṭi*	*heb-bə*	*ɖo*
3SG	letter	"to write"- HAB	PRS

" He writes letter." (Habitually)

(32)

ŋo	pur- ripin	ɖo
1SG	" to study'- COMPL	PRS

"I have finished studying"

(33)

piṭar	kiṭap-ham	kaṭa ri-ne
peter	book-ACC	" to see"- FUT

"Peter will see the book."

- In Tani languages a very large productive systems of derivational suffixes are affixed to bound verbal roots. The verb particles are added to the verb to change the inherent semantic range. Since the derived form clearly expresses a new semantic range it can be coded as a new lexical item. To illustrate examples in Apatani, we take the verbs ' to do' and 'to write'.

(a).

ke   Verb root "To write"

Pa   Verb particle "to do something for the time being; to do something before the intervening time."

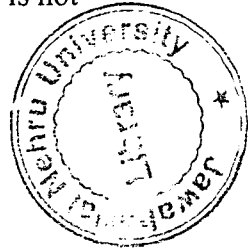ke-Pa   bi-to   (To denote performing task for others)

" To write it for him, till he arrives."

(b).

mɯ   Verb root "To do"

Pa   Verb particle, "To rectify when something is something is not in proper condition."

mɯPa   " To repair"

The short and consolidated grammatical sketch given above discusses the most distinguishing grammatical features of Tani languages. An attempt has been made to explain and list all the features shared amongst these languages and also mention those features on which the five languages differed. These different languages are structurally homogeneous. The difference lies in the phonological realization of the individual lexical entries. Each language has a special feature, which is used more often in one language then the other. For example palatalization and nasalization in Apatani, vowels change in Hill Miri, glottal in Nissi and so on give different sound systems to the individual languages.

The study on grammatical sketch of Tani languages has opened numerous areas of research. The scope of undertaking one topic for research with the help of data collected from five different languages could be used to explain linguistic phenomenon of other related languages under Tani group. One such topic is the large set of numeral classifiers found in the five languages. Numeral classifiers interact with different aspects of grammar that is phonology and morpho- syntactic processes. It throws light over the topic

how these languages categorize nouns and how these languages perceive the outside world. Hence I have added a separate chapter on the Numeral classifiers of Tani language.

The following section is the theories on numeral classifiers.

II.3. The theories of Numeral Classifiers

Numeral classifiers are the most well known type of Classifier System. The term 'classifier systems' is used to denote a continuum of methods of noun categorization (Aikhenvald, 2000).

Allan (1977) points out that classifiers are defined with reference to two criteria:

1) They occur as morphemes in surface structures under specifiable conditions;

2) They have meaning, in the sense that a classifier denotes some salient perceived or imputed characteristics of the entity to which an associated noun refers (or may refer.).

Aikhenvald points out that classifier constructions are used as 'morpho-syntactic units' (it could be Noun Phrase, Verb Phrase or Clauses), which requires the presence of a particular kind of morpheme, the choice of which is dictated by the semantic characteristics of the referent of the head of NP.

(Collete, 2000) in the description of typology of classifiers at morphosyntactic level points out that '...it is simply a strategy for grasping the phenomenon... from its formal properties." Hence, '... A classifier is labeled accordingly by which morpheme it is closest or attached to..."

Hence four different types of classifiers have been established:

1) Numeral classifier

2) Noun classifier

3) Genitive classifier

4) Verbal classifiers

Of all the four-classifier systems numeral classifiers are the most common and easily recognizable type of classifiers. (Collete, 2000) They are labeled 'numeral' because they occur in the context of quantification, either as free or bound morphemes. Numeral classifier can vary morphologically from a free morpheme to an affix, to fused morpheme (they may be in fixed or realized through the process of reduplication). Aikhenvald (2000) too points out that numeral classifiers are frequently independent lexemes, but they can be affixed to numerals.

Aikhenvald (2000) lists the contingent properties of Numeral classifiers;

1. The choice of numeral classifiers is predominantly semantic.

2. Numeral classifiers do not have to appear on any constituent outside the numeral NP; thus there is no agreement in numeral classifiers between the noun and another constituent.

3. Numeral classifier systems differ in the extent to which they are grammaticalized. Numeral classifier can be an open lexical class. In a language with large set of numeral classifiers, the way they are used varies from speaker to speaker, depending on their social status and competence (Adams 1989). It is much more similar to the use of lexical items than to the use of a limited set of noun classes.

4. In some numeral classifier languages not every noun can be associated with a numerical classifier. Some nouns take no classifier at all; other nouns may have alternative choices of classifier, depending on which property of noun is in focus.

5 The use of numeral classifiers can depend on the numeral. Classifiers are likely to be restricted to use with smaller numbers.

6. Morphologically, numeral classifiers may be independent lexemes, they may be affixes or clitics, attached to, or fused with numerals. And extremely rare cases may be attached to or fused with, the head noun.

7. The range of semantic oppositions employed in numeral classifiers varies; it involves animacy, shape, size and structure. Also there are instances where one 'generic' classifier can be used with any or almost every noun replacing other more specific classifiers.

8. Existence of numeral classifier system can depend on which type of numeral system one language has. Languages that have large set of numerals usually have the numeral classifier systems.

Under the consensus view of the researchers in classifier systems now the numeral classifiers come under the terminology 'numeratives' as a generic term., which then sub divides into two distinct subclasses "classifiers 'and "quantifiers.

In counting inanimate as well as animate.referrants the numerals (obligatorily) concatenate with a certain morpheme, which is the so-called 'classifier'. This morpheme classifies and quantifies the respective nominal referent according to semantic criteria.

It implies a two-fold function to classifiers;

1) Classifier (proper); classifies a noun inherently- i.e. they designate and specify semantic features inherent to the nominal denotatum and divide the set of nouns of a certain languages into disjunct classes.

2) On the other hand quantifiers classifies a noun temporarily i.e. can be combined with different nouns in a free way and designate a specific characteristics feature of a certain noun which is not inherent to it.

A few important points to remember about numeral classifiers;

Numeral classifiers come into two semantic subtypes; Sortal and mensural.

• Sortal classifiers are grammatically distinct from mensural ones.

• Sortal numeral classifiers describe the inherent properties of referents. Mensural classifiers describe the way s they can be measured.

• A sortal classifier is "the one which individuates whatever it refers to in terms of the kind of entity that it is"(Lyons, 1977:463). Sortal classifiers categorize nouns in terms of their inherent properties such as animacy, shape, and consistency.

Mensural classifiers are used for measuring units of countable and mass nouns.

- The choice of a mensural classifier is conditioned by two factors; the quantity, or the measure of an entity and physical properties (permanent, more often, temporary ones).

The following chapter is a detailed discussion on the numeral classifiers of Tani languages.

CHAPTER THREE: NUMERAL CLASSIFIERS OF TANI LANGUAGES

III.1 Introduction

The existence of the large set of numeral classifiers is one of the special linguistic features of Tani languages under study. The use of numeral classifier morphemes in quantifying phrases is indispensable and the native speakers actively use these numeral classifier morphemes in their daily discourse. The numeral classifier morphemes of all the five languages are prefixed to the numerals. The use of numeral classifier morphemes is obligatory when noun is being counted and its omission results in ungrammaticality of the sentence and incompleteness of meaning.

In the data that I have procured during the study of these five languages namely Apatani, Galo, Tagin, Hills Miri and Nissi, I have come across fourteen numeral classifiers, which are shared across these five languages. If there were variations, the variation occurred only in the phonological realizations of the individual classifier morphemes. In this chapter I have attempted a descriptive and comparative study on five languages of Tani Group namely; Apatani, Nissi, Galo, Hill Miri and Tagin.

III.2. Numeral Classifier Construction of Tani Languages

The choice of numeral classifiers is often based primarily on physical properties of the referent noun. Aikhenvald (2000: 288-290) lists them as given below. These physical properties are also employed in numeral classifier constructions of Tani languages.

- Shape
- Dimensionality: It is explained as "...language differ in how many dimensions they use and how differentiated the shapes are in each dimensions."
- Directionality: Horizontal, flat or vertical.
- Size (it is rarely employed as an independent parameter.)
- Consistency (flexible, rigid)
- Arrangement

Numeral classifier occurs in Numeral classifier noun phrases. They have dual semantic functions of quantifying and classifying (Greenberg, 1977). Here are some of the examples from the five languages.

(1) In Hill Miri:

> *kolom   su-pi*
>
> pen   NUMCLF-(long, slender, spherical)-three
>
> "Three pens"

(2). In Nissi:

> *socaŋ-go   su-ɲi-gu*
>
> small-OBJ   NUMCLF(long, slender)
>
> "Two small pencils"

(3). In Apatani:

> *puɯp'   pu-hiẽ*
>
> Eggs   NUMCLF (round objects)-three
>
> " Three eggs"

In Tani languages, the ordering of the numeral and the classifier is rigid in the noun phrases. The classifier must remain within the same constituent as the numeral. No other constituent can be inserted between them. When classifier attaches to numerals as prefixes, the resultant structure of the noun (+numeral) phrase is:

Head Noun   Numcl+ Numeral

As seen above, out of the four possible constituent orders in numeral classifier constructions listed by Greenberg (1972), the Tani group of languages belong to the fourth one, the **N- [CL-NUM]** order. The Tani language follows the Noun-Numeral

order, which is a word order, predominated and preferred in an area within South-East Asia, which include Tibeto-Burman languages of northeast India. (Dryer 2005; 363).

In Tani languages the numerals follows the head noun so the resultant NUMCLF + Numeral phrase takes the case marking. That is numeral classifier prefixes do not directly take the case marking but the NUMCLF + numeral phrase as a whole does. Given below is an example.

(4) A Hill Miri example :

ɲil   bo-ken-ə   *bok-ṭə*   *pola-ma*

man   HCLF (male)-numeral (one)-DET   make fish trap   "to make"-NEG

" One man (alone) cannot make trap in the river to catch fish"

In the above example, numeral classifiers along with their combination with numerals also serve pragmatic function of definiteness and indefiniteness. The human classifier is derived by partially reduplicating the last syllable of the word *ɲilbo*, which means a 'one particular man'.

The numeral classifiers are usually constructed till the numeral 20. The numeral classifier construction can be further extended to higher numerals for counting but this practice is tedious and therefore rarely employed. Therefore, their use in daily discourse usually is limited to a single numeral classifier construction with numerals ranging from one to ten. The example given below shows an example of how numeral classifier is retained in the number eleven.

(5) A Nissi example:

Numeral classifier for roads; *ba*

laum 'Road'

laum ba-kin (one) 'One road'

laum ba-riaŋ (ten) 'Ten roads'

laum ba-riaŋ-le-ba-kin 'Road, NUMCLF + ten+ 'in addition to' + NUMCLF +one'

'Eleven roads'

Therefore, numeral classifiers for numerals above ten can be constructed but the use is restricted till number ten.

During rapid speech often referent nouns are omitted. It is then that by looking closely at the numeral classifier one can trace the referent noun. Numeral classifiers are used as reference tracking device. Numerals suffixed with numeral classifiers, without an accompanying noun, are one of the anaphoric devices in the language to maintain constant reference in discourse. (Zavala, 2000; 120)

For example; In Nissi language to answer a question like "how long did you sleep?"
(7).

> *no   jupgu   jup' ţu-nə?*
>
> 2SG   how much   sleep-interrogative
>
> "How long did you sleep?"

The answer to the above question would comprise of only a numeral phrase like:
(8)

> *jup⎵-kin-go*
>
> NUMCLF-(night)-one-infinitive marker
>
> "One night"

When the word for night is omitted in discourse situations the referent noun can be traced by looking at the classifier slot before the numeral, which is *jup*? The root morpheme for 'sleep' is *jup*, it is also a numeral classifier for the word *aju,* which means 'night'. Therefore, '*aju jup-kin*' means 'one night'.

A special feature of Apatani: language is that they have two ways of counting objects. The *Apatani Dictionary, First edition* (2005) lists the two variations in the numerals as

SET A and SET B. However the numeral classificatory suffixes do not undergo any kind of change in these two sets. The two separate ways of counting numerals is usually in accordance with the change in discourse situations. It needs a special mention here because it is attached to numeral classifiers. And a non-native speaker would be confused to see the two sets of numeral system.

Both the sets (A) and (B) are used in daily discourse. The set (A) numerals are used when one has to answer questions regarding the quantity of an object in quantifying phrases like "how many eggs, paper sheets etc. are there?" The set (B) is used when one is counting objects in general.

(9). NUMCLF for logs, firewood, spherical objects;

	Set A	Set B	
jàsaŋ	bu-e	bu-kũ	(one)
	bu-ɲe	bu-ɲi	(two)
	bu-hẽ	bu-hĩ	(three)
	bu-pe	bu-pi	(four)
	bu-ŋoe	bu-ŋo	(five)
	bu-kʰe	bu-kʰɯ	(six)
	bu-kʰanue	bu-kanu	(seven)
	bu-piɲe	bu-piɲi	(eight)
	bu-kʰwahe	bu-kʰwa	(nine)
	bu-ƚʲẽ	bu - ƚʲã	(ten)
firewood	NUMCLF(long, spherical)-numerals	NUMCLF(long, spherical)-numerals	

III.3. 'A reduced paradigm of numeral classifiers': The Classificatory Prefixes.

The classifiers in Tani languages are always immediately affixed to the numerals. These represent the general numeral classificatory affixes for inanimates. Zavala (2000) classifies these classificatory affixes as 'A reduced paradigm of numeral classifiers'. These numeral classifiers never occur as separate lexemes as are the characteristic of sortal numeral classifiers. Rather the numeral classificatory affixes are prefixed to the numerals in the noun (+numeral) phrase in Tani languages. In my study I have used both the terms numeral classificatory prefixes and numeral classifier morphemes interchangeably. Nonetheless, both numeral classificatory affixes and sortal classifiers function as nominal individuating morphemes.

III.4. Origin of Numeral Classifiers of Tani Languages.

Grinevald (2000; 83) commenting on the origin of classifiers pointed out that Sino-Tibetan languages which have a predilection for noun compounding have developed classifiers from compounding constructions through the use of class terms. Class terms are nouns for objects like people, tree, fruit, leaves etc. that are often used to form compounds in these language. These class terms sometimes function as classifiers (Delaney, 438,39). These reduplicated lexemes in due course of time go through phonological erosion processes and get grammaticalized as classificatory suffixes.

The list of numeral classifiers in Tani languages shows ample evidences of the fact that they have been derived from various nouns and adjectives and also verb roots of their respective languages. The origin of classifiers is easily identifiable. It can be illustrated with instances from Hills Miri and Galo and Apatani languages in the following sub-sections 3.A, 3.B and 3.C.

4.A. Numeral classifiers derived from Nouns.

(10). A Hills Miri example:

pɯp pɯ-ken

egg   NUMCLF (round)-one

'One egg.'

The morpheme *pɯ-* denoting numeral classifier for all the circular objects has been derived by the noun *pɯp*, which means 'egg'.

(11). Similarly in Galo the noun moon can take more than one NUMCLF morphemes. The difference lies in how one perceives the noun moon.

polo   pɯː-ken

moon   NUMCLF-(round object)-one

"One moon"

The native speaker here will refer to the moon that he can see at the time of reference or might refer to the particular moon in the sky. Here we see that numeral classifiers serve pragmatic functions.

(12). In the below example the native speaker will use the numeral classifier morpheme solely for counting purposes in phrases like '. Ten moons ago...' or 'ten months ago'.

poːl   bar-ken

moon   NUMCLF (flat, circular)-one

"One moon"

A similar example can be given for the word *tɯsɯ* in Hills Miri which means traditional necklace which can take can take both the numeral classifiers *so -* and *pɯ-. so -* has been derived from the noun *oso* which means ' rope'. This way the classificatory prefixes copy an inherent semantic property of the head noun. Given below are some examples.

(13)

oso   *so-ken*

rope	NUMCLF-(long, slender, loops, garland)- one

' One rope'.

(14) a)

ʈuɪsɯ	*so - ken*
necklace	NUMCLF-(long, slender, loops, garland)-one

' Two necklaces.'

b)

ʈuɪsɯ	*pɯ-ɲi*
beads	NUMCLF-(round)-two

' Two beads'

For more examples on numeral classifiers of Tani languages please refer to the data in the Appendix II.

4.B. Numeral classifiers derived from adjectives

The Hills Miri language, numeral classifier morpheme *ʈak-* has been derived from the adjective *aʈak ajjap* or *aʈak ajjəp* which has attributives [+flat], [+hard surface], [+long] and [+thick]. It is important to note that the classifier morphemes undergo various phonological changes with change of numerals.

(15).

kiʈap ⁊	*ʈak-ken*
book	NUMCLF-(flat)-one

"One book"

There was variation among speakers in giving the numeral classifier for the borrowed word *ki ṭap*, which means, 'book'. For example, in 15, another numeral classifier *ḍa-* a numeral classifier for "bundle of sheets, paper" has been used.

(16).

ki ṭap	*ḍa-ken*
Book	NUMCLFL (bundle of sheets) –one
	"One book"

The examples can be explained by understanding the difference in semantic perception of the informants, as some of them have perceived the "book" as 'bundle of papers' and some others as the book having a flat shape. The numeral classifier *ḍa-* is often used with numerals when counting 'leaves' as well.

As discussed earlier in the previous chapter, the numeral classifier morphemes are affected by the numerals that they are affixed to. In the Galo language, the native speakers obligatorily follow a rule of using the vowel [a] in counting nouns and use them only in case of numerals seven and nine. For example, the NUMCL morpheme *puu-* is replaced by the morpheme *ap*, which means "an object which has circular shape". This method of using the root morpheme before numeral seven and sometimes nine is a special feature of Galo counting system. This morpheme also provides yet another source for the classifiers for round objects.

4. C. Numeral classifiers derived from the Verb roots.

There are instances in Tani languages where the numeral classifier morphemes have been derived by the verb root. Given below are some of the illustrations.

(17) a. In Apatani language the numeral classifier for 'bundle of firewood' *ra-* has been derived from the verb 'ra-ṭo' that means to command someone' to tie up something.'

·*ra-to*

to tie-IMP

'Tie it (firewood) up.'

The form of numeral classifier derived from the verb root will be as given below.

jasaŋ   ·*ra-kʰu* (One)

·*ra-ɲi* (Two)

·*ra-hĩ* (three)

Firewood NUMCLF (firewood)-numerals

b. Similarly the numeral classifier for 'bundle of paddy seedlings' is derived by the verb root *ŋa-* which implies 'to bind up objects (that are scattered around) into a bundle.'
(18).

ŋa   *to*

ᒥ 'to bind into bundle'   imperative

' Tie or bind into one bundle."

Hence the numeral classifier for "bundle of paddy seedlings" will be 'ŋa-ĕ(one bundle of paddy seedlings),ŋa-ɲc(two bundle of paddy seedlings)....'and so on.

In Tagin language a similar example for a 'bundle of firewood will be:

(19). Numeral classifier for bundle of firewood:

ɯsɯŋ   *rɯ-kcn* (one) "one bundle of firewood."

ɯsɯŋ   *rɯŋ-ɲi* (two) "two bundle of firewood".

Firewood   NUMCLF (bundle of firewood)- numerals

"(Tie up) two bundles of firewood.'

There is also a special type of numeral classifier in Tagin for 'something that is wrapped up' or 'tied up' and which is kept hanging on the wall or in a typical tribal houses '...

hung on top of a fireplace....' The verb root is _puṭṭ_ which means, "to tie up." From the verb root is derived pusum i.e. "something that is tied up" or 'wrapped up' in a gunny bag or in banana leaves. Reduplicating the second syllable of the new word with a different range of meaning we derive the numeral classifier _sum-_.

(20). Tagin example;

      cji   pusum   sum-ji-go   _apə-pa_

    Cloth   Tied up NUMCL-two- object marker NUMCL-two-indefinite pronoun

4. D. MORPHOLOGICAL TYPE OF CLASSIFIERS

There are instances of more than one morphological type of numeral classifiers in Tani languages used with the same noun. Aikhenvald (2000) lists two possibilities that are relevant for the data on numeral classifier morphemes of Tani language. They are:

    a) On the semantics of the classifier.

    b) Depending on the numerals.

The table listed below gives instances of numeral classifiers, used with more than one-referent nouns according to the way the referent noun is perceived by the native speaker.

TABLE III.1. NUMERAL CLASSIFIERS OF TANI LANGUAGES

Sr. No	APATANI	GALO (ADI)	HILLS MIRI	NISSI	TAGIN	SEMANTIC FEATURES AND CONCEPTS THEY COVER
1	_pu-_	_puɯ-_	_puɯ-_	_puɯ-_	_puɯ-_	Round, circular, hollow objects E.g. eggs, oranges etc...
2	_ṭak-_	_ṭak-_	_ṭak-_	_ṭaʔ-_ _ṭa-_	_ṭak-_	Flat, rectangular, thicker surface.e.g; wooden planks, plates.
3.	_bar-_ _ṭa_	_bor-_ _bar-_	_bor-_	_bər-_	_bur-_	Flat, sheet like, very thin surface. E.g.. papers, notes of rupees.

4	ce-	ḍap'-	ḍab-	j a ?p'-	ḍab'-	Bundle of sheets, bundle of leaves.e.g books, and bundle of rupee notes.
5	pe- p'e-	cir-	cir-	cer-	cir- cer-	Round (small), flat disc like objects. Also for small sized round objects. E.g. Coins, beads, seeds etc.
6	so-	j o:- so:- ho:-	s o- su:-	so:-	so- su:-	Long, slender objects like pencils, pen, and ropes.
7	po-	po:-	po:-	po:-	po:-	Logs, timbers, which are cut from the trees and are large in size.
8	bu-		bu-			Thicker spherical objects like bamboo poles, small sized logs.
9	ḍor	ḍor-	ḍor-	ḍər	ḍor-	Numeral classifier for animals.
10	b'ar- bə-	rum-	rum-	rum-	rum-	Numeral classifier for clothes, layers of clothes.
11	so-	jo:- so:- ho:-	so:-	so-	so-	Garlands, necklace, loops made by tying the threads.
12	p'u-	pum-	pum-	pum-	puŋ-	Bunch of keys, bunch of flowers.
13	b'a-	ba-	ba-	ba-		Numeral classifier for roads.
14	k'o-	ḍa:-	ḍa-	ḍa:-	ḍa:-	Long logs, wood, sticks small in size.

The table lists the major semantic categories of numeral classifiers. The table also compares the similarities and differences of numeral classifiers morphemes in the five languages.

The numeral classifiers morphemes in (6) and (11) have same phonological realizations and are homophonous but as it is depicted in the table, they relate to different semantic features. It is also important to note here that the numeral classifiers for Galo have three variants [so], [ho] and [jo]. The distribution of these variants is socio-cultural, regional and dialectal amongst the sub groups of Pugos, Lare and Karka of Galo community

Depending on what semantic features the speakers are focusing on, each of these classifiers could be acceptable. As we are aware of the fact that the choice to be made as to which classifier should co-occur with a given head noun must be accompanied by contextual information and understanding the perception of the individual speakers.

(21). For example in Galo numeral classifiers for small, circular objects like beads, coins, disc like objects etc is *cir-* .

murko	(coin)
murko	*cir-ken* (one) "one coin"
murko	*cir-ɲi* (two) "two coins"
murko	*acir-kanɯ* (seven) "seven coins"
coin	NUMCLF (small, circular)-numeral

(22) .The use of numeral classifier *cir-* can be extended to refer to little chicks:

roː	(chick)
roː	cir-ken(one) "one chick"
roː	cir-ɲi (two) "two chicks"
Chick	NUMCLF (small, circular)-numerals

Looking at the data one can explain the inclusion of terms for small chicks in the semantic category of small and circular objects. *cir-* functions as a diminutive in this particular example. But it does not entail that all small animals must be in this set. The semantic domain also includes flatness [disc like] features under *cir-* (which have features [circular],[disc like],[small size]) which is a contrastive feature if we take into

consideration the round shape of the chicks. The use of the numeral classifier morpheme has also been extended to an animate object.

Mountains and hills are perceived as circular in shape. Also these "have prominently curved exterior'. In Hills Miri and also other Tani languages the hills and mountains take the classifier *pɯ-*.

(23) *moḍi pɯ-ken* ' One hill.'

The classifier *pɯ -* is used for classifying objects like television and vehicles in some languages.

There are also instances of change in the forms of numeral classifiers due to change in numerals.

(24). Here is a Galo example.

Objects like paper, a single sheet, which have very thin surface, it will take the NUMCLF *bor-*:

poṭa (paper)

poṭa   bor-ken (one) "one paper"

poṭa   bor-ɲi (two) "two papers"

poṭa   bor-rum (three) "three papers"

poṭa   bor-pi (four) "four papers"

poṭa   bor-ɲo (five) "five papers"

poṭa   bor-kə (six) "six papers"

poṭa   abor-kanɯ (seven) "seven papers"

Paper   NUMCLF (single sheet, thin, flat)-numerals

The morpheme *abor* means 'leaves' in Galo. It is important to note here that there is a rule of well-formed ness constraint on numeral classifiers, which are prefixed to the numeral seven. As mentioned earlier in the chapter, Galo classificatory suffixes have vowel insertion [a] before it is prefixed to the numeral *kanɯ* (seven). This method of counting

helps to trace the origin of the numeral classifier morpheme. This is a recurrent phenomenon found only in Galo counting system. It is followed obligatorily in numeral classifier counting by the native speakers of Galo.

The languages also have classifiers for hollow category container like pipe like objects with a hollow interior. Given below is a Galo example.

(25). Numeral classifier for ladles made of bamboos:

Bamboo mugs and cylindrical jars are of two types.

    a. cylindrical jars for temporary purposes;

poka   *uḍu*   *ḍu:-ken (one)*

                    ḍu:-ɲi (two)

local beer jar   NUMCLF(cylindrical,temporary jars)-numerals

    b. The second type of long cylindrical jars made of bamboos is used to preserve food or valuable items. These ladles are varnished and art work is engraved on the surface;

ḍumi   *po:-ken (one)*

                    po: -ɲi (two)

cylindrical jar   NUMCLF (cylindrical)-numerals

Objects are also classified according to the arrangement category like " pleats or folds."

(26). Numeral classifiers for clothes in Galo:

eji   *rum-ken (one)*

         rum-ɲi (two)

Cloth   NUMCLF (folded clothes)-numerals

The NUMCL is *rum-* is derived from the word *arum* which means '...layers of clothes...'.But if we are counting an individual item of clothing like a shirt then the numerals will take *bor-* as NUMCL which is [flat],[thin] and [circular].

In a similar way in a Nissi example there different ways a woven handbag are classified.

(27). Numeral classifier for bags;

    a. Borrowed word for bag.

muna   na:-kin(one)

na:-ɲi (two)

Bag   NUMCLF(bag)-numerals

    b. Bag, which is folded and kept, does not take any classifiers. It is '*cuk*

akin' that is 'one bag'.

    c. When someone is carrying the bag NUMCLF *ku-* is used;

cuk   *ku-kin(one)*

ku-ɲi (two)

k-um (three)

bag   NUMCLF(bag)-numerals

Entities in the world are left open to be classified in innumerable ways, which the speakers of the languages will employ to count a noun. However this comparative study motivates in understanding that noun categorization is semantically motivated rather than arbitrary.

Numeral classifier choices seem to be highly dependent on visualizing ability. That is how speakers can mentally view and manipulate a noun is a crucial and deciding factor in selecting a NUMCLF to use out of a multitude of candidates.(Kyoko 2000; 236).

Analysis along these lines elucidates that these general and probably universal categories are defined in a culture specific way. (Berlin, 1968: 35). Boundaries between the individual semantic domains are rather fluid (Rosch, 1978:36; 1977: 4, 15,18,21.). Craig (1986) on the

basis of proto- type theory claims rightly that 'categories...should be described as having fuzzy edges and graded membership.'

4.E. Numeral Classifiers for Humans Based on Gender

Even though Tani languages do not overtly mark gender there exists numeral classifier for humans based on gender differences. But the numeral classifier for masculine and feminine gender of humans is no longer used in daily discourse. Though it's proto-forms seems to exist in folksongs. In my fieldwork for Hill Miri, I have come across only two numeral classifiers, classifying humans according to gender.

(28). Hills Miri example;

a.)

ɲil   bo-ken

man   NUMCLF (human, male)-one

"one man"

b)

ɲim   ne -ken

woman   NUMCLF (human, female)-one

CL (human, female)-one

In the examples for Galo and Tagin we find examples for numeral classifiers for woman.

(29). Galo example;

ɲimə (wife)

ɲimə mə-ken (one) "one wife"

ɲimə mə-ɲi (two) "two wives"

(30). Numeral classifier of woman in Tagin.:

ɲime   ne-ken "One woman"

It is interesting to note that there are classifiers for females in general. In the Galo example to use classifiers for women was also extended to make plural forms for 'wife'. The informant explained that a particular male used these classificatory suffixes to refer to his wives in a particular context. That is if he is talking about his 'one wife' or 'two wives' etc.... Considering the fact that polygamy is practiced in this society it is not unusual to use numeral classifiers for female. Contextual information is therefore needed to understand why a classifier is used with a given head noun.

Other languages like Apatani and Nissi have lost the numeral classifier morpheme for humans based on gender. The informants could not give an equivalent morpheme to denote numeral classifiers for human. Also important to note here is that the informants did not have a separate numeral classifier for humans in general. But new classificatory affixes were constructed in the quantifying phrases.

III.5. Role of Reduplication Process in Numeral Classifier Construction.

Tani languages employ certain word formation processes such as reduplication to form classificatory prefixes that were prefixed to the numerals and which function like numeral classifiers. These numeral classifiers like morphemes are formed by partially reduplicating the initial or last syllable of the count noun. In my research data it has been observed that use of these particular morphemes cannot be extended to any other count nouns. They are lexically specific. That is, it occurs only with only those count nouns from which it has been derived. This is the reason why I have treated them separately in this section. In the theory of Classifiers these morphemes are known as partial repeaters, which are used as numeral classifiers (Aikhenvald, 2000; 361). Partial repeater construction is a source for the large number of classifier like morphemes in Tani languages, which are used as noun categorization devices. This phenomenon is very widespread and appears in all the Tani languages. Because of their occurrence in large numbers in numeral phrases, their inclusion and analysis was indispensable.

Given below are some observations made on the Tani Numeral classifiers.

- They are very recurrent and very rampant phenomenon, which are shared across the five languages of the Tani group. There use is frequent in sentences in the past tense.

- These are not classifiers by the strict sense of the term. But they occupy the empty classifier slot, which are prefixed to the numerals in the NP and function like numeral classifiers. They have a fixed slot and like other established classifiers cannot be attached with any other constituent other than the numerals.

- The question that needs to be studied is will this classifier like morphemes eventually get grammaticalized into classificatory prefixes. Aikhenvald (2000; 397) explains that repetition of a constituent of a constituent is a syntactic and a pragmatic device for emphasis. This issue needs further insights and intensive investigation.

- These classificatory prefixes are obligatorily used like numeral classificatory suffixes in quantifying phrases. Their omission in the quantifying phrases leads to ungrammaticality.

- The competence of a native speaker in his or her language is determined by how well a person can assign these morphemes in quantifying phrases. The child from the moment he or she begins to use their native language learns to use this classifier like construction.

Some nouns do not take numeral classifiers. But when the speakers want to emphasis on particular semantic features of the noun or want to specify the head noun, than the last syllable of the head noun is partially reduplicated. The reduplicated morpheme is affixed to the numerals and these functions as numeral classificatory suffixes.

Following are various illustrations from different languages under Tani group.

5.A. Apatani examples:

(31). NUMCLF, pots, saucepan, etc.

	Set		Set B
puɪcaŋ	*caŋ - Pẽ*		*caŋ-Pã* (ten)
saucepan	NUMCLF(saucepan,pots)-numerals	NUMCLF(saucepan,pots)-numerals

"Ten saucepans."

(32). NUMCLF for bundle of vegetables, paddy seedlings;

hamaŋ	*gaje*	*ga-kʰɪ̃* (one)
green leafy vegetables	bundle	NUMCLF (bundle of vegetables)- one

' one bundle of vegetables.'

(33). NUMCLF for speech, sentence and talks.

aguŋ	*gu-ŋe*	*kum*	*lɯ-ʈo*	*gu-ɲi*	*lɯ-yo.*
mouth/language	NUMCLF -one	Once	Verb- IMP	NUMCLF-two	Verb- NEG
	(speech, talk)		'to say'		'to say'

" Say it (talks) once, don't say twice."

(34). NUMCLF for nights.

aijo	*jo - Pã* (ten
nights	NUMCLF(nights)-numerals

' Ten nights'

(35) NUMCLF for bangles.

kobiã	*ko-kʰɪ̃*
bangle	NUMCLF- one

"One bangle."

(36).NUMCLF for days.

	Set A	Set B

alo	*lo-pi*	*lɔ pĩ*
day	NUMCLF(days) -four	NUMCLF(days)- four

' Four Days'

5.B.   Galo (Adil) Examples.

(37). Numeral classifier for years;

aɲɯ	*ɲɯː-ken*	*(one)*
	ɲɯː-ɲi	*(two)*
	aɲɯ-kanɯ	(seven)
year	NUMCLF(years)	numerals

(38). Numeral classifier for bananas;

kopak	*paː-ken(one)*
	paː-ɲi (two)
banana	NUMCLF(banana)-numerals

(39). Numeral classifier for shelter of hen;

porok	*pɯʈʈɯr*	*ʈɯr-ken(one)*
		ʈɯr-ɲi (two)
hen	house	NUMCLF(house)-numerals

(40). Numeral classifier for counting footsteps taken;

koba	*baː-ken(one)*
	baː-ɲi (two)
Footsteps	NUMCLF (footsteps)-numerals

(41). Numeral classifiers for a portion of meat ;

a. *solə*	*ləː-kən(one)*
	ləː-ɲi (two)

hips of the cattle   NUMCLF(hips)-numerals

b. *arba*   *ba-ken(one)*

ba-ɲi (two)

thighs   NUMCLF(thighs of the animal)-numerals

5.C. Hills Miri examples:

(42).   *suɯnə   nek-ken*

tree   NUMCLF(tree)-one

"One tree"

(43).   *uɯɲi   ɲi-ken*

season   NUMCLF(season)-one

"One season"

(44). . *u   u-ken*

punch   NUMCLF(punch)-one

"One punch"

(45). *suɯluɯg   luɯg - ɲi*

Shirt   NUMCLF (shirt)-numerals

"one shirt"

(46). *muɯna   naŋ-ken*

bag   NUMCLF(bag)-one

"One bag"

5.D. Nissi examples

(47). Numeral classifier for years;

aɲəŋ   nəŋ-kin (one)

nəŋ-ɲi (two)

year   NUMCLF(year)-numerals

(48). Numeral classifier for nights;

aju   *jup-kin (One)*

jub- iɲi (Two)

Night   NUMCLF(night)-numerals

(49). Numeral classifier for spears

naŋkio   *kio-kin(one)*

kio-ɲi (two)

spears   NUMCLF(spears)-numerals

(50). Numeral classifiers for holes made by the rats.;

kubuŋ   uŋ   *uŋ-kin(one)*

uŋ-iɲi(two)

um (three)

uŋ-pʰi(four)

rat   hole   NUMCLF(hole)-numerals

5.E. Tagin examples:

(51). Numeral classifier for carry-baskets:

egen   *geŋ-ken*

carry-basket   NUMCLF(carry basket)-one

"One carry- basket (made of bamboo)"

(52). Numeral classifier for steps:

kuɽ   *kuɽ-ken*

step   NUMCLF(steps)-one

" one step"

(53). Numeral classifiers for mugs made by cutting the bamboos:

uɖuŋ   *ɖuŋ-ɲi*

bamboo mug   NUMCLF(bamboo mug)-two

"Two bamboo mugs"

(54). Numeral classifiers for ladle to filter wine;:

laɟuk   *ɟuk-ken*

ladle   NUMCLF(ladle)-one

"One ladle."

The various examples show how quantification and enumeration is constructed in Tani languages. The languages employ morphological processes of-

i.   Partial reduplication

ii.   Pre-fixation of their sources i.e., nouns, adjectives and the verb roots to the numerals.

III.6. Grammaticalization of Numeral Classificatory Prefixes in Tani languages:

As pointed out by Grinevald (2000), grammaticalization is a path from an open set of lexical morphemes to a reduced paradigm of grammaticalized suffixes (in the case of Tani languages it's a prefix.).

Tani languages employ numeral classificatory affixes to (in a way) mark plurality for inanimate objects. Numeral classificatory prefixes affixed to numerals form paradigm with three members; inanimates, animals, and humans. A particular set of numeral classifiers are used with only certain kind of members. This grouping and regrouping of categories in the outside world is internalized by a child and the process starts when the child starts using his or her language.

• Each classificatory prefixes copy an inherent semantic property of the nouns. Almost all the numeral classificatory affixes are partially reduplicated syllables of

their sources, which are nouns, adjectives and verb roots in their respective languages. These are also known as repeaters.

- Through time these morphemes underwent phonological erosion. Originally bysyllabic these morphemes become monosyllabic. In the case of Tani numeral classificatory prefixes a partial reduplication of the last or initial (in some cases) syllable of either the noun or adjective or the verb root takes place. And they always are prefixed to the numerals that follow the noun head.

- Eventually this morpheme goes through semantic generalization. For example the NUMCLF *cir-* is used for small, flat, circular inanimate objects like beads, coins, disc-like objects etc. Through semantic generalization it also encompasses the semantic range of diminutives as in the case of Galo examples (21), (22) to count chicks. This is a departure from the usual perception of the speakers because firstly it doesn't meet the [disc-like] semantic feature of the category and secondly, it is used as a classifier to count an animate object.

- The use of numeral classificatory suffixes in quantifying expressions is obligatory. Their omission in quantifying phrases leads to ungrammaticality and incompleteness of meaning. This feature satisfies the most important condition on grammaticalization of classificatory suffixes, as Lehman (1995) points out is the "obligatoriness of the morphemes in particular morpho syntactic contexts", in this particular case, in the context of quantification.

- The NUMCLF for counting four legged animals is *ɖor-*. Earlier NUMCLF *ɖor-* was used for all the animals in general and its use is still very rampant. But in languages like Tagin and Hill Miri there is a new reclassification of members that takes this particular classifier. Or perhaps the semantic range that this classifier covers is getting reclassified. There is change in inclusion and exclusion of members to which the numeral classificatory prefixes can be attached. For example, according to some informants, pigs and dogs in Hills Miri could not take the NUMCLF *ɖor-*. Same was the case in Tagin languages. The physical property, size played an important role in reassigning the NUMCLF morphemes to these animals. Animals, which are small in size usually, did not take *ɖor-* morpheme in quantifying phrases.

We can assume that this morpheme is still undergoing grammaticalization process. Because there has been an ongoing process of reduction of members to which the NUMCLF can be affixed to.

- The set of fourteen numeral classifiers are shared across the five languages under study. These classificatory suffixes have become grammaticalized suffixes, which are attached to numerals in quantifying phrases to serve morpho- syntactic functions.

The following arguments support the claim that the numeral classificatory affixes are undergoing the process of grammaticalization.

III.7. Mensural Classifiers

Mensural classifiers describe the ways referents can be measured. Measure words are used in Tani language to count mass nouns. In most numeral classifier languages mensurative and collective terms share morpho-syntactic properties with classifiers (c.f. Greenberg 1972, 1978). But even though there is always lexical selection between Nouns and mensurative, the type of lexical selection is not necessarily classificatory. Their basic use is to quantify the noun not classification. Mensurative of Tani languages appear as separate lexemes. They do not appear in the same slot as classifiers in the noun phrase.

Every language will have mensurative because every language has mass nouns. Mensurative denote, the type of arrangements of the figures or objects.

Examples from Nissi:

A special measure word used for counting traditional necklaces.

(55). *ɲalap* - Unit for five in a group.

Unit for seven in a group.

Unit for ten in a group.

The informants used the same units to group the numbers. The difference was mainly cited as regional variation. The people from the high mountains used *ɲalap* to group a particular

set of numbers from those of plain area Nissi. But both regions used it for the purpose of counting traditional necklaces made of beads.

The examples of 'handful' are typical measure quantity terms.

(56).*ga?cam*   "A grasp of x..." Unit for measuring mass noun like hair.

(57). *sini jumbaŋ-go*   "A handful of x." The unit for measuring mass noun in a small amount likes salt and sugar.

(58).

<div style="text-align:center">

kiḍi   rab-ɲi

land   Unit to measure plots of land-two

"two plots of land."

</div>

Examples from Hills Miri;

A special system of counting and distributing meat of mithun (cattle) as a bride price during marriages is follwed in all the Tani languages.. The meat are stuck on sticks and distributed accordingly.

(59). *gagla*   "Unit for three in a group."

(60). *ɲilap*   "Unit for three in a group."

(61). *buuli*   "Unit for four in a group."

Example from Galo;

(62). *aɟu*   "Unit for Four in a group."

There are several other mensural classifiers used. Some are borrowed from the Assamese like Kilo for "one kg of rice."

(63). In Hills Miri in a sentence like "I shall give you one bag of salt";

<div style="text-align:center">

ŋo   nom   al-lo-kə   munuŋ -go   ji-mpe

1SG   2SG   salt   bag   give   FUT

A "bag of x" i.e. munuŋ -go is used as a measure word

</div>

(63). In Apatani we have NUMCLF for "plate of rice" which can also be used as measure units.

		Set A	Set B
apiɲ	pakŭ	pur-ẽ (one)	purkʰŭ̃ (one)
Cooked rice	bowl	NUMCLF (plate of rice) - one	NUMCLF (plate of rice) - one

' (Serve) two bowls of rice.'

Conclusion

Tani Numeral classifiers or the Tani numeral classificatory suffixes are a dynamic system. A very good evidence of this claim is the occurrence of large set of reduplicated prefixes that are attached to numerals in numeral noun phrases which are lexical specific but which functions like numeral classifiers, that is to classify and quantify the referent nouns. Further research has to be made on the topic to investigate the possibilities of, whether these morphemes are a creation of new set of numeral classifiers, which are going through process of grammaticalization. I have discussed this issue in the section III.5 and II.6. There is lack of classificatory prefixes for some words are due to loss of richness of inventories for loan words rather than that of loss of classifier construction itself. For example in the case of numeral classifiers for human based on genders (see III. 3.5). The chapter throws light over how quantification and enumeration is constructed in the Tani languages. The data analyses have given ample evidences of the sources of numerical classificatory suffixes in Tani languages. The findings show that cultural and social knowledge often overrules the formal and semantic factors (see section III.3.D)

CHAPTER FOUR: CONCLUSION

In sum, the study has shown that the different languages under Tani group are structurally homogeneous. The consolidated phonetic chart representing the consonants of all the five languages and the vowel chart show that the languages more or less share the same sound systems. At a closer look, the differences lie in the phonological realization of the individual lexical entries. Tani languages are not tonal languages. But it was found that Apatani was found to be an exception as it found to be a tonal language. In this way, each language has a special feature, which is used more often in one language then the other. For example palatalization and vowel nasalization is a special feature of Apatani. Glottal is used frequently in Nissi. It is these special features, which gives different sound systems to the individual languages. The morpho-syntactic features are shared across all the five languages. The basic word order, case markings and other grammatical categories are same across all the five languages. The knowledge of one linguistic phenomenon can be used to understand the linguistic phenomena of the other related languages. The languages have rich and developed system of aspectual markers, constituent-final particles coding functions related to epistemological status (such as evidentiality), discourse and pragmatic status, modality and other related functions. The underlying grammar amongst all these languages is same. The study has helped immensely in realizing the similarities and dissimilarities between these languages. The study has also triggered a further interest in specific areas of research. One such unique phenomenon was the existence of Numeral classifier system. The study on numeral classifiers helped in categorizing Tani languages as classifier languages.

The study has shown that Tani numeral classifiers share several of the prototypical features of classifier systems as those well known in Southeast Asian languages. The Tani numeral classifiers can be categorized as the classificatory prefixes. They are 'a reduced paradigm of numeral classifiers (Zavala, 2000)'. They never occur as independent morphemes but appear as affixed to the numerals in Noun (+ numeral) phrase. They are not attached to the noun head but are prefixed to the numerals that

follow the noun. As the classificatory prefixes of Tani numeral classifiers copy an inherent semantic property of the head noun, so they function as individuating device. Tani languages have both grammaticalized sets of classificatory suffixes, which are established sets, and there are also large sets of prefixes attached to numerals which functions like classifiers. The principle of categorization exploited by Tani classifiers is based on the physical properties of the head noun; Shape, Dimensionality, and Directionality: Horizontal, flat or vertical, Size (it is rarely employed as an independent parameter), Consistency (flexible, rigid) and arrangement. All of these are the physical and prototypical properties that the referent noun exhibits. Numeral classifiers of Tani languages are usually of open set. Tani numeral classificatory suffixes exist for three members; animates (humans), animals and inanimates. Tani Numeral classifiers or the Tani numeral classificatory suffixes are a dynamic system. A very good evidence of this claim is occurrence of large set of reduplicated prefixes that are attached to numerals in numeral noun phrases which are lexical specific but which have functions of numeral classifiers.. Further research has to be made on the topic to investigate the possibilities of if these morphemes as a creation of new classifiers, which are going through process of grammaticalization. Lack of classificatory prefixes for some words was found like those in the case of numeral classifiers for humans based on genders in some languages and also for certain loan words. There was also distinction made in the use of lexicon, those that are used by the priest and those that were used by the commoners. However this topic has not been discussed in the study.

The research topic was an ambitious attempt. Firstly, the grammar itself has and enormous and exhaustive area of research dealing with different levels of linguistic analysis i.e. phonology, syntax, morphology and semantics. Secondly, the data were collected from five different languages. Fortunately due to typological homogeneity coexisting between these different languages, it was not a difficult task to study the similarities and dissimilarities in the grammatical features. In order to be as concise as possible I have listed only the most distinguishing grammatical features of these languages. Evidently some topics have been ignored. I have not discussed the subject so fully as it deserves. But however I hope that I have made some progress in it. The

research study dealing with a short grammatical sketch will help to explain the basic structure of the grammar underlying all the five languages. It could perhaps help in explaining the grammar of other related languages under Tani groups.

I sincerely hope that this small effort triggers further interest on the topic, and someone with better abilities and time pursue the inquiry further and do full justice to the subject. Lastly I would like to conclude by quoting Keith Allan,

"That the languages should classify entities along similar lines is not surprising if one takes the view that human perceptions are generally similar, and that they stimulate cognitive classification of the world which is reflected by linguistic categories and classes."

APPENDIX I

A HILL MIRI SENTENCES.

1.
bɯ	alnicirəm	so	aː-ḍo.
3PSG	daily	here	"to come"- PERF

He comes here daily.

2.
ɲi	al-bo		ḍuɲi-polo-əm	kum-do.
Man	good- 'wala' particle, Nominalizer		sun moon ACC	"to pray" - PERF

Good people worship God.

3.
ḍuɲi-nə	east-lokkə	calen-ḍo	west-lo	poga-ḍo.
Sun participle suffix	east - from	to comes out- to be	west- in	"to set"- PERF

The sun comes out from the east and sets in the west.

4.
bɯ-k	Dilli	innam	pol	bar-pinə	ne-ba.
3SG.NOM	Delhi	Vp "go"	month	NUMCLF(moon)-four	Completive aspect

He went to madras four months back.

5.
sirum sir	bul	nanogor bol	ḍo-ḍo.
nowadays	3PL	Naharlagun in LOC	"to stay"- PERF

They now live in naharlagun.

6.
ŋo	praiɟ -əm	paː - pa.
1PSG	prize ACC	" to get"- PST

I got the prize.

7.
ŋo	so	lok	mɯɲi kɯɲi	aː-pa.
1PSG	here	in	long ago	"to come" Past

I came here once long ago.

8.
bɯ	alin-nə	aː-re.
3PSG	tommorow- definitive	"to come"- future (MOD)

He will come tommorow.

58

9.

kolej-ə	humbar okkə	rirop-re.
College- DEF	Monday from	"to start"- future (MOD)

College will start on Monday.

10.

ŋo	june so -ne	kolej	inrop-re.
1PSG	june here- PP	college	" to join"- furure (MOD)

I am going to join college in june.

11.

bul	dilli hokkə	aː-pa
3PL	Delhi from	" to come"- Past

They have come from delhi.

12.

pulis-ə	doco-bo-əm	noṭu-pa
police - Spec	"to steal"- Nominalizer- ACC	" to catch"- past.

The policeman caught the thief.

13.

meri	piṭər-ne	kiṭap- əm	kaṭom-re.
Mary	Peter- ACC	book - SPEC	" to show"- future

Mary will snow Peter the book.

14.

ram- na	ṭicar-ə
Ram is	teacher- DET

Ram is a teacher.

15.

ram	ticar	ri-pa
Ram	teacher	" to do" past

Ram was a teacher.

16.

bɯ	alin-roːnə	ɲib	ri-re.
3PSG	tomorrow- day after tommorow	priest	"to do" future

He will be a priest.

17.

ɲi-ə	kano	ḍo.
Man -	hungry	" to be"

The man is hungry.

18.

bɯ   siṭṭi   bor-ken-go   hep-pa.

3PSG   letter NUMCLF- one- quantifier suffix   " to write" past.

He wrote a letter.

19.

bɯ   ɟug -lɯ   ɖo-ɖo

3PSG   " to run"- continuous Aspect

He is running. (the event is taking place at the time of speech)

20.

bɯ   hel   ɖo ɖo

She   " to write"   Continuous aspect

She is writing.

21.

bɯ   siṭi   heb - bə   ɖo.

3PSG   letter   " to write"- habitual aspect

He writes letter.

22.

bɯ   ṭɯ- bə   ɖo.

3PSG   Vp " to drink"- habitual aspect.

He drinks. (habitually)

23.

bɯ   kam-əm   ri-pin- ɖo

she   work ACC   Vp " to do" competive aspect.

She has finished working.

24.

bɯ   ɯsɯk   sil   ɖo-ɖo

He   cough   punctual aspect.

He is coughing.

25.

siṭa   ṭugu-əm   baga -pa.

sita   mango- ACC   buy   past

Sita bought mangoes.

26.

ŋul	ɲija- ol		sinima	kaː-pa.
1PL	Priya LOC		cinema	" to see" past

We watched the movie in priya.

27.

john	ŋok	aɟin.
john	my	friend

John is my friend.

28.

bul	kukɯ	pələ	ḍo ra-ḍo
1PSG	behind	direction	Present continuos.

They are behind the curtains.

29.

pəṭa -nə	namə	muṭu	ḍo ḍo.
Bird- SPEC	house	above	" to be".

The bird is on the roof.

30.

si	ik -ṭulu	si	ɲar	kai	ḍo.
these	dogs plural suffix	these	intensifier	big	" to be"

These dogs are too big.

31.

pici uḍu - gid -əm			hərkak -ṭo
vessels mugs plural suffix- ACC			"to wash" IMP

Wash the vessels.

B. TAGIN SENTENCES.

32.

anə	ŋom	rumbin	ṭaŋ-ɲi- go		ɟi-pe
mother	me	earing	NUMCLF- two-object marker		Vr " to give"-past

Mother gave me two earings.

33.

u	ŋa	u-ŋi-go		nak-pe
3PSG	me	NUMCLF(punch)- two- object marker		Vr " to hit"- past

He hit me two punches.

34.

nam-lo	kubuŋ	uŋruŋ	ruŋ-ɲi-go	me-pe
House- PP	mouse	hole	NUMCLF-two- object marker	Vr " to make"- past

The rats have made two holes in the house.

35.

eji	pusum	sum-ɲi-go	apə-pa
cloth	wrapped up	NUMCLF-two- object marker	Vr " to keep"- past

Two gunny bags full of clothes.

36.

ŋa	ambin	acukgo	bɯglɯg	ɟi- to
me	Rice	some	Vr " to carry"	Vr " to give"- IMP

Bring me some rice.

37.

ŋo	nam-lo	ɯɲi	kani-go	do-do.
my	house PP	people	seven- object marker	Vr " to be"- Present

There are seven people in my house.

38.

mɯŋuŋ-ə	rɯŋo	əŋ-do
all	farm	Vr "to go"- Present

All have gone to the farm.

39.

ŋo	nam	namtə	korak	do
My	house	big	Intensifier	Vr " to be"

My house is very big.

40.

no	sa	təŋ-re
2PSG	tea	Vr " to drink"- MOD

Will you have tea?

41.

ŋo	ato	ɲiŋ	əriŋ-go-la- akkə	do-pe
My	grandfather	wife	10- addition-6	Vr- past

My grandfather had sixteen wives.

42.

ɲibu	nam	mɯnə	dobə	ə:	lɯɲi-go	lagi-re
Priest	house	Vr " to make"	case	Bamboo	200	Vr " want"- MOD

We will need 200 bamboos to make hut for the priest

NISSI SENTENCES.

43

bulu-ə	ḍilli	bulugə	aː-pa
3PSG	delhi	pp	Come-PST

They have come from delhi.

44.

ŋo	pen	-logə	ki-pa
1SG	Pen	INSTRU	Write-PST

He wrote with a pen.

45.

nam-si	dərək pa
House- DET	ADJ clean- PST

This house is clean

46.

mɯ	nam-am	məka-ḍo
3SG	House-ACC	Clean- present

.He is cleaning the house.

47.

piṭar	kiṭa-ham	kaṭa-rine
peter	Book ACC	See- FUT

Peter will show the book.

APATANI EXAMPLES

48.

ŋo	ṭabiŋ pa	kebi-ḍu
1SG	Tabin for	Write- CONTI

I am writing for Tabin.

49.

jahi	lo	ṭace-ṭo
axe	INSTRU	Cut-IMP

Chop with the axe.

50.

mo	skul	iŋ-ḍa
3PSG	School	go- PST

He went to school.

Appendix 2

NUMERAL CLASSIFIERS OF TANI LANGUAGES

A. Apatani Numeral Classifiers.

Numerals in Apatani

	SET A	SET B
One	*akko, konə, koŋ*	*kʰɯ̃*
Two	*aɲe*	*aɲi*
Three	*hiŋe*	*hiɲ*
Four	*pi*	*piⁱe*
Five	*yaŋoe*	*yaŋo*
Six	*kʰɯye*	*kʰɯ*
Seven	*kanue*	*kani*
Eight	*piɲe*	*piɲi*
Nine	*kʰwae*	*kʰwa*
Ten	*aⁱẽ*	*aⁱã*

1. NUMCLF for logs, firewood, spherical objects;

	Set A		Set B	
jasaŋ	*bu-e*		*bu-kɯ̃*	(one)
	bu-ɲe		*bu-ɲi*	(two)
	bu-hẽ		*bu-hɯ̃*	(three)
	bu-pe		*bu-pi*	(four)
	bu-ŋoe		*bu-ŋo*	(five)
	bu-kʰe		*bu-kʰɯ*	(six)
	bu-kʰanue		*bu-kanu*	(seven)
	bu-piɲe		*bu-piɲi*	(eight)
	bu-kʰwahe		*bu-kʰwa*	(nine)
	bu-ⁱẽ		*bu - ⁱã*	(ten)

| Firewood | NUMCLF(long, spherical)-numerals | NUMCLF(long, spherical)-numerals |

2. NUMCLF for money notes, flat objects.

	Set A	Set B
.tɯɯkʰo	bar-e (one)	bar-kʰũ (one)
	bar-ɲe (two)	bar-ɲi (two)
money(notes)	NUMCLF(flat, thin)-numeral	NUMCLF(flat, thin)-numerals

3. NUMCLF for flowers;

	Set A	Set B
apum	biaŋ-ẽ	biaŋ - kʰũ (one)
	biaŋ-ɲe	biaŋ - ɲi (two)
	biaŋ-hiẽ	biaŋ - hĩ (three)
	biam-pe	biaŋ - pi (four)
	biaŋ-ŋoe	biaŋ- ŋo (five)
	biaŋ-he	biaŋ- kʰɯ (six)
	biaŋ-kʰane	biaŋ - kanu (seven)
	biaŋ-piɲe	biaŋ- piɲi (eight)
	biaŋ-kʰwoe	biaŋ - kʰwa (nine)
	biaŋ-lʲẽ	biaŋ- lʲã (ten)
flowers	CL(flowers)-numerals	CL(flowers)-numerals

4. NUMCLF for pots, saucepan etc..;

	Set	Set B
pɯɯcaŋ	caŋ-ẽ	caŋ -kʰũ (one)
	caŋ -ɲe	caŋ -ɲi (two)
	caŋ - hiẽ	caŋ -hĩ (three)
	c aŋ - pe	caŋ -pi (four)
	caŋ - ŋoe	caŋ -ŋo (five)
	caŋ -kʰe	caŋ -kʰɯ (six)
	caŋ -kanoe	caŋ -kanu (seven)

caŋ - pipe   caŋ -pipni (eight)

caŋ -kʰwoe   caŋ -kʰwa (nine)

caŋ - Pẽ   caŋ-Pã̃   (ten)

saucepan   CL(saucepan,pots)-numerals   CL(saucepan,pots)-numerals

5.NUMCLF for clothes;

	Set A	Set B
puPẽ tarɯ	bər-ẽ	bər-kʰũ̃(one)
	bər-pe	bər-pi (two)
	bər-hiẽ	bər- hĩ̃ (three)
	bər-pe	bər-pi (four)
	bər-ŋo	bər-ŋo (five)
clothes shirts	CL(clothes)-numerals	CL(clothes)-numerals

6.NUMCLF for footsteps(for example; I reached him by taking two footsteps towards him.);

	Set A	Set B
ḍã̃nɯ	ḍa-ye	ḍa-kʰũ̃ (one)
	ḍa-pẽ	ḍa-pi (two)
	ḍa-hiẽ	ḍa-hĩ̃ (three)
	ḍa-pe	ḍa-pi (four)
footsteps	CL(footsteps)-numerals	CL(footsteps)-numerals

7. NUMCLF for animals:

	Set A	Set B
	ḍor- ẽ	ḍor-kʰũ̃
	ḍor-pe	ḍor-pi
	ḍor-hiẽ	ḍor-hĩ̃
	ḍor -pe	ḍor-pi

ḍor-ŋoe	*ḍor-ŋo*
ḍor-kʰe	*ḍor-kʰɯ*
ḍor-kanue	*ḍor-kanu*
ḍor-piɲe	*ḍor-piɲi*
ḍor-kʰwoe	*ḍor-kʰwa*
ḍor-lʲẽ	*ḍor-lʲã̃*
CL(animals)-numerals	CL(animals)-numerals

8.NUMCLF for sticks;

	Set A	*Set B*
paʔɲi	*po-jẽ*	*po-kʰũ̃ (one)*
	po-ɲe	*po-ɲi (two)*
	po-hẽ	*po-hĩ̃ (three)*
	po-pe	*po-pi (four)*
	po-ŋoe	*po-ɲo (five)*
	po-pʰe	*po-kʰɯ (six)*
	po-kanue	*po-kanu (seven)*
Stick	CL(stick)-numeral	CL(stick)-numeral

9. NUMCLF for bundle of firewood:

Set A	Set B
ra-e	*ra- kʰũ̃ (one)*
ra-ɲe	*ra-ɲi (two)*
ra-hẽ	*ra-hĩ̃ (three)*
ra-pẽ	*ra- pi (four)*
ra-ŋoe	*ra-ŋo (five)*
ra-kʰe	*ra- kʰɯ (six)*

ra-kanue	*ra- kanu (seven)*
ra-piɲe	*ra- piɲi (eight)*
ra-kʰwoe	*ra-kʰwa (nine)*
ra-ʔè	*ra- ʔã (ten)*
CL(bundle of firewood)-numerals	CL(bundle of firewood)-numerals

10. NUMCLF for vehicles;

Set B

ʈrək	*ʈar- kʰũ (one)*
	ʈar-ɲi (two)
	ʈar- hi (three)
	ʈar-pi (four)
	ʈar-ŋo (five)
	ʈar- kʰɯ (six)
	ʈar-kʰanu (seven)
	ʈar-piɲi (eight)
	ʈar-kʰwa (nine)
	ʈar-ʔã (ten)
truck	CL(truck)-numerals

11.NUMCLF for bundle of vegetables, paddy seedlings;

Set B

hamaŋ	*gaje*	*ga-kʰũ(one)*
		ga-ɲi (two)
		ga-hĩ (three)
		ga-pi (four)
		ga-ŋo (five)
		ga-kʰɯ (six)

ga-kanu (seven)

ga-piɲi (eight)

ga-kʰwa (nine)

ga-lʲã̃ (ten)

leafy vegeatable bundle   CL (bundle of vegetables)-numerals

12. NUMCLF for paddy fields, rice fields etc...;

	Set A	Set B
aɟi	*ga-re*	*ga-rkʰɯ̃ (one)*
	gar-ɲe	*gar-ɲi (two)*
fields(rice, paddy)	CL(fields)-numerals	CL(fields)-numerals

13.NUMCL for speech, sentence and talks;

It can be illustrated by an Apatani sentence-

aguŋ	*gu-ŋe*	kum	lɯ-ʈo	gu-ɲi	lɯ-yo.
language	NUMCL(language,speech,talks)-one	once	Verb- IMP	NUMCL-two	Verb- NEG
			'to say'		'to say'

" Say it(utterances) once, don't say twice."

14. NUMCLF for nights;

	Set B	
aijo	*jo-kɯ̃*	*(one)*
	jo-ɲi	*(two)*
	jo-hɯ̃	*(three)*
	jo-pi	*(four)*
	jo-ŋo	*(five)*
	jo-kʰɯ	*(six)*
	j-kanu	*(seven)*
	jo-piɲi	*(eight)*

jo-kʰwã(nine)

jo - ł'ã̃   (ten)

nights   CL(nights)-numerals

15. NUMCLF for liquid things served in bamboo ladles;

	Set A	Set B
yaɟu	*ɟu-ɟe*	*ɟu-kʰɯ̃ (one)*
	ɟu-ɲie	*ɟu-ɲi (Two)*
	ɟu-hẽ	*ɟɟu-hɯ̃ (three)*
	ɟu-pe	*ɟu-pi (Four)*
	ɟu-ŋoe	*ɟ u-ŋo (five)*
bamboo ladle	CL(bamboo ladles)-numerals	CL(bamboo ladles)-numerals

16. NUMCLF for bangles;

	Set A	Set B
kobiaŋ	*ko-ye*	*ko-kʰɯ̃ (one)*
	ko-ɲẽ	*ko-ɲi (two)*
	ko-hẽ	*ko-hɯ̃ (three)*
	ko-pe	*ko-pi (four)*
	ko-ŋoe	*ko-ŋo (five)*
	ko-kʰe	*ko-kʰɯ (six)*
	ko-kanue	*ko-kanu(seven)*
	ko-piɲe	*ko-piɲi (eight)*
bangle	CL(bangles)-numerals	CL(bangles)-numerals

17. NUMCLF for a sheaf of thread or bundle of thread;

	Set A	
ʈaŋo	*hor-e*	*(one)*
	hor-ɲe	*(two)*
	hor-hẽ	*(three)*
	ho r-pe	*(four)*
	hor-ŋoe	*(five)*
	hor-kʰɯ	*(six)*
	hor-kanue	*(seven)*
	hor- piɲe	*(eight)*
	hor-kʰwoe	*(nine)*
	hor-ʈʰẽ	*(ten)*
thread	CL(bundle of thread)-numerals	

18. NUMCLF for ropes;

	Set A	Set B
a. *jaso*	*so-je*	*so-kʰɯ̃ (one)*
	so-ɲe	*so-ɲi (two)*
cane rope	CL(rope)-numerals	CL(rope)-numerals

19. NUMCLF for fish is same as that of ropes;

	Set A	Set B
ŋi	*so-je*	*so-kʰɯ̃ (one)*
	so-ɲe	*so-ɲĩ (two)*
fish	CL-numerals	CL-numerals

20. NUMCLF for leaves:

	Set A	Set B
anɯ	*ʈa-je*	*ʈa-kʰɯ̃(one)*

	ṭa-ɲie	*ṭa-ɲi* (two)
	ṭa-he	*ṭa-hĩ* (three)
leaves	CL(leaves)-numerals	CL(leaves)-numerals

21. NUMCLF for papers, flat materials;

	Set A	Set B
pəṭa	*ṭa-je*	*ṭakʰũ* (one)
	ṭa-ɲie	*ṭa-ɲĩ* (two)
paper	CL(flat,sheet like objects)-numerals	CL(flat,sheetlike objects)-numerals

22. NUMCLF for fruits, round objects (eggs, round shaped fruits, pebbles etc.);

	Set A	Set B
puɯp	*pu-je*	*pu-ʰũ* (one)
	pu-ɲe	*pu-ɲi* (two)
	pu-hiẽ	*pu-hĩ* (three)
eggs	CL(round objects)-numerals	CL(round objects)-numerals

23. NUMCLF for bunch of keys, flowers:

	Set A	Set B
sabbe	*pju-ŋe*	*pju-kʰũ* (one)
	pju-ɲe	*pju-ɲi* (two)
	pju-hiẽ	*pju-hĩ* (three)
key	CL(bunch of keys)-numerals	CL(bunch of keys)-numerals

24. NUMCLF for years;

	Set A	Set B
aɲaŋ	*ɲaŋ-e*	*ɲaŋ-kʰũ* (one)
	ɲaŋ-ɲe	*ɲaŋ-ɲi* (two)

	ɲaŋ-hie	*ɲaŋ- hĩ̃* *(three)*
year	CL(years)-numerals	CL(years)-numerals

25. NUMCLF for "plate of rice";

		Set A	Set B
a. *apiɲ*	*pakũ̃*	*pur-ẽ*	*purkʰũ̃ (one)*
		pur-ɲe	*pur-ɲĩ̃* *(two)*
Cooked rice	bowl	CL (plate of rice)-numerals	CL (plate of rice)-numerals

"(Serve) two bowls of rice."

b. NUMCLF for plate of rice;

	Set B
paka	*koʔ-kʰũ̃ (one)*
	koʔ-ɲi *(two)*
plate of rice	CL(plate)-numerals

26. NUMCLF for long, slender and cylindrical object(pencil,pen):

	Set B
kolo m	*so -kʰũ̃ (one)*
	so-ɲi *(two)*
Pen	CL(long,cylindrical,slender)-numerals

27. NUMCLF for garland:

	Set A
ʈasaŋ	*so-je*

so-ɲe

so-hiẽ

so-pe

traditional necklace   CL(garland)-numerals

28. NUMCLF for bundle or a sheaf of paddy seedlings, grass, flower;

Set A	Set B
ŋa- kʰe	*ŋa- kʰɯ (six)*
ŋa- kanue	*ŋa- kanu (seven)*
CL(a bundle of grass, seedlings), -numerals	CL-numerals

29. NUMCLF for beads, smaller circular objects like seeds etc.:

	Set A	Set B
ṭasaŋ	*pe r-e*	*per-kʰ ɯ̃ (one)*
	per-ɲẽ	*per-ɲĩ (two)*
bead	CL(circular object, small size) numerals	CL-numerals

31. NUMCLF for days;

	Set A	Set B
alo	*lo-ye*	*lo-kʰ ɯ̃ (one)*
	lo-ɲe	*l o-ɲi (two)*
	lo-he	*lo-hĩ (three)*
	lo-pẽ	*lo-pi (four)*
day	CL(days)-numeral	CL(days)-numerals

32. NUMCLF for mugs made of bamboos:

	Set A	Set B
suḍu	*ḍu-j e*	*ḍu-kʰ ɯ̃(one)*

	ɖu-ɲe	*ɖu-ɲɪ (two)*
bamboo mugs	CL(mugs) –numerals	CL(mugs) -numerals

31.NUMCLF for seasons:

	Set A	Set B
mʲoɖu	*roɲe*	*roŋkʰɪ̃*
	roɲẽ	*roɲi*
	rohiẽ	*rohĩ*
season	CL(seasons)-numerals	CL(seasons)-numerals

32. NUMCLF for roads;

	Set A	Set B
lenɖa	*bʲa-je*	*bʲa-kʰɪ̃ (one)*
	bʲa-ɲe	*bʲa-ɲi (two)*
road	CL(road)- numerals.	CL (road)-numerals

33. NUMCLF for punches;

	Set A	Set B
kʰɯnɯ̃	*u-je*	*u-kʰɪ̃ (one)*
	u-ɲe	*u-ɲi (two)*
punch	CL(punch)- numerals	CL(punch)-numerals

IV.2. Galo numeral classifiers.

Numerals in Galo

1	*aken*
2	*aɲi*
3	*aum*
4	*appi*

5	*aŋo*
6	*akkə*
7	*kanə*
8	*pinə*
9	*kona*
10	*ɯrɯ*

Numeral Classifiers

1. Numeral classifier for round, circular, spherical objects;

   a. pɯp   pɯ-ken   (one)

        pɯ-ɲi   (two)

        pɯ-um   (three)

        pɯ-pi   (four)

        pɯ-ŋo   (five)

        pɯk-ke   (six)

        pɯ)apˈ- kanɯ   (seven)

        pɯ- piːni   (eight)

        (pɯp) apˈ - kona (nine)

        pɯp- pɯri   (ten)

   "egg" CL(round)-numerals

   b. polo   pɯː-ken

   Moon   CL (round object)-one

   "One moon"

The native speaker here will refer to the moon that he can see right at that moment or will be referring to one particular moon in the sky.

   b. . poːl   bar-ken

   Moon   CL (flat, circular)-one

   "One moon"

2. Numeral classifier for a low stool used for sitting;

pira   ṭak-ken

low stool   CL(rectangular,flat,thick)-one

" one stool"

Here the reference is made to the surface plane of the wood rather than the whole furniture itself.

3. Numeral classifier for books;

   a. kiṭapˀ   dap-ken

      book   CL(bundle of sheets)-one

b.similarly a bundle of rupee notes will have NUMCL;

   murko   dap-ken

   rupees   CL(bundle of sheets)-one

   "One bundle of notes (rupees)"

When one single rupee note is taken out from the bundle the rupee note will take NUMCL;

4. .a. murko   bar-ken

   rupee note   CL(single sheet,thin,flat)-one

   "One rupee note"

b. Objects like paper, single sheet, which have very thin surface, it will take the same NUMCL, but there will be change of vowel:

poṭa   bor -ken   (one)

      bor -ɲi   (two)

      bor -rum   (three)

      bor -pi   (four)

bor -ŋo　　(five)

bor -kə　　(Six)

abor-kanɯ　(seven)

Paper CL (single sheet, thin, flat)-numerals

The morpheme *abor* means 'leaves' in Galo.

c. The numeral classifier can be used for plates;

ṭaːli　　bor-ken (one)

　　　　bor-ɲi　(two)

plate　　CL(flat,thin)-numerals

d.　The numeral classifier can be used for fish;

ŋoi　　bar-ken(one)

　　　bar-ɲi　(two)

　　　bar-um (three)

fish　　CL(flat)-numerals

5.　Numeral classifiers for small, circular objects like beads, coins etc;

a. murko　　cir-ken (One)

　　　　　cir-ɲi　(two)

　　　　　acir -kanɯ(seven)

coin　　　CL(small, circular)-numeral

The numeral classifier *cir-* can be extended to refer to little chicks 4(b);

b. roː　　cir-ken(one)

　　　　cir-ɲi　(two)

chick　　CL (small, circular)-numerals

c. numeral classifier for beads;

tasi	tadok	cir-ken (one)
		cir -ɲi (two)
traditional necklace	beads	CL(small, circular)-numerals

6. Numeral classifier for pots, saucepan etc:

pɯci	cɯ-ken (one)
	acɯ-kanə (seven)
saucepan	CL(saucepan)-numerals

7.Numeral classifier for garland, necklace etc:

tasi	jo:-ken (one)
	jo:-ɲi (two)
	ajo- kanɯ (seven)
traditional necklace	CL(long,garland)-numerals

The morpheme *ajo is* an adjective that means 'long'.

8. Numeral classifier for speech, talks, languages:

agom	gom-ken(One)
	gom-ɲi (Two)
talks	CL(speech, languages,)-numerals

9. Numeral classifier for years;

aɲɯ	ɲɯ:-ken (one)
	ɲɯ:-ɲi (two)
	aɲɯ-kanɯ (seven)
year	CL(years) numerals

10. Numeral classifier for nights;

  ayo yoː-ken (one)

      yoː-ɲi (two)

     ayo-kanɯ (seven)

  night CL(night)-numerals

11. Numeral classifier for ladles made of bamboos:

  Bamboo mugs and cylindrical jars are of two types.

a. Cylindrical jars for temporary purposes;

  poka uɖu ɖuː-ken (one)

          ɖuː-ɲi (two)

  local beer jar CL(cylindrical,temporary jars)-numerals

b. The second type of long cylindrical jars made of bamboos is used to preserve food or valuable items. These ladles are varnished and art work is engraved on the surface;

  ɖumi   poː-ken (one)

          poː -ɲi (two)

  cylindrical jar CL (cylindrical)-numerals

12.Numeral classifier for bananas;

  kopak paː-ken(one)

       paː-ɲi (two)

  banana CL(banana)-numerals

13. Numeral classifier for long and slender objects like pen, pencil, ropes;

  kolom soː-ken(one)

      soːɲi (two)

  pen   CL(long, slender)-numerals

14. Numeral classifiers for trees;

  jɯ nə   nək-ken (one)

nə-ɲi (two)

anə-kaɲɯ (three)

tree　　　　　CL(tree)-numerals

15. Numeral classifier for logs that are felled from the trees.;

　　jiḍa　　　　ḍa -ken(one)

　　　　　　　ḍa-ɲi　(two)

　　　　　　　aḍa- kanɯ(seven)

　　logs　　　CL(long logs)-numerals

16. Numeral classifier for big logs or timber that have been collected together;

　　　　　　　poː-ken

　　　　　　　poː-ɲi

　　　　　　　apo-kanɯ

　　　　　　　CL(large logs)-numerals

17. Numeral classifiers for spear;

　　nəbɯ　　bɯ-ken (one)

　　　　　　　bɯ-ɲi　(two)

　　spear　　CL(spears)-numerals

18.Numeral classifiers for clothes:

　　eji　　rum-ken (one)

　　　　　rum-ɲi　(two)

　　cloth　CL(folded clothes)-numerals

19.Numeral classifiers for bamboo baskets and carriers;

　a.　NUMCL for empty bamboo baskets or baskets to carry rise;

　　əgə　　　gə-ken(one)

　　　　　　gə-ɲi　(two)

basket   CL(baskets)-numerals

b. NUMCL for bamboo baskets to carry firewood;

   abar   bar-ken(one)

      b ar-ɲi (two)

   basket CL(basket)-numerals

20. Numeral classifier for bamboo basket that is tied in the waist area during cultivation;

   a.NUMCL for empty basket;

     cucak   pɯ-ken(one)

              pɯ-ɲi (two)

   side basket CL(round)-numerals

c. NUMCL for basket filled with rice (used especially during distribution of rice);

     cucak   caŋ-ken(one)

              caŋ-ɲi (two)

   basket   CL(basket)-numerals

The NUMCL in 20 (c) gives an idea to a person how many baskets of rice one has emptied.

21. Numeral classifier for shelter of hen;

   porok pɯ̣t̪ɯr t̪ɯr-ken(one)

                  t̪ɯr-ɲi (two)

   hen's pen   CL(pen)-numerals

22.Numerical classifier for bunch of keys, flowers;

   cabi   pum-ken(one)

         pum-ɲi (two)

keys   CL(bunch)-numerals

The numeral classifier has been derived from the word *apum,* which means 'bunch'.

23. Numeral classifier for counting footsteps taken;

koba   baː-ken(one)

ba:-ɲi   (two)

Footsteps CL (footsteps)-numerals

24.Numeral classifiers for seedlings;

ali anə   nə-ken(one)

nə-ɲi   (two)

seedling   CL(seedling)-numerals

25.Numeral classifier for animals;

sob   dor-ken(one)

dor-ɲi   (two)

animal   CL(animal)-numeral

26.Numeral classifier for humans;

ɲimə   mə-ken(one)

mə-ɲi   (two)

wife   CL(wife)-numerals

26. Numeral classifiers for portion of meat of the sacrificed animal;

a. solə   lə :-kən(one)

lə:-ɲi   (two)

hips of the cattle   CL(hips)-numerals

b. arba   ba-ken(one)

             ba-ɲi (two)

thighs   CL(thighs of the animal)-numerals

IV.3. NISSI NUMERAL CLASSIFIERS

NUMERALS IN NISSI

1	*akiŋ*
2	*aɲi*
3	*aɯm*
4	*apʰi*
5	*aŋŋo*
6	*akke*
7	*kanɯ*
8	*pinɯ*
9	*kija*
10	*ariaŋ*

1. Numeral classifier morphemes for round, circular and spherical objects;

    pɯpʼ   pɯk-kin

                 pɯ-ɲi

                 pɯ-um

                 pɯ-pʰi

                 pɯ-ŋu

                 pɯk-ke

                 pɯk-kanu

pɯk-pinə

pɯk-kiya

pɯg-riaŋ

eggs   CL(round)- numerals

2.Numeral classifier for a low stool used for sitting purposes;

pira   t̪aʔ-kin (one)

            t̪aʔ-ɲi   (two)

            t̪aʔ-om   (three)

            t̪aʔ-pi   (four)

            t̪aʔ-ŋo   (five)

            t̪aʔ-ke   (six)

            t̪aʔ-kan(seven)

            t̪aʔ-pinɯ(eight)

            t̪aʔ-kiya (nine)

            t̪aʔ-ariaŋ (ten)

low stool   CL(rectangular, flat)-numerals

3.Numeral classifier for books;

kit̪apˀ   jaʔp-kin (One)

          jaʔp-ɲi   (two)

book   CL(bundle of papers, flat)-numerals

4.Numeral classifier for flat objects like single sheets of paper, rupee notes and leaves;

pot̪a   bər-kiŋ (one)

          bər-ɲi   (two)

paper   CL(thin single sheets, flat)-numerals

5.Numeral classifier for pots, saucepan etc:

pəcaŋ   cəŋ-ken (One)

            cəŋ-ɲi   (Two)

saucepan CL (saucepan)-numerals

6. Numeral classifier for garland, necklaces etc;

ṭasaŋ   so - kin (one)

                so-ɲi   (two)

traditional necklace CL(garland,long)-numerals

7. Numeral classifier for beads of necklace;

  a. The bigger sized beads will take *pɯk-* as NUMCL;

      ṭasaŋ   pɯk-kin (one)

                  pɯ-ɲi   (two)

      beads   CL (round)- numerals

  b. The small sized beads take *čər-* as NUMCL:

      ṭasaŋ   cər - kin (one)

                  cər-ɲi (two)

      beads   CL(small,round)-numerals

8.Numeral classifier for speeches, talks etc;

    agam   gam- kin (one)

                  gam- iɲi (two)

                  gam - um (three)

                  ga- pʰi   (four)

                  gam- ŋo (five)

gam- ke   (six)

gam- kan   (seven)

gam- pin   (eight)

gam- kija (nine)

gam- riaŋ (ten)

Talks   CL (language, speech, talks)-numerals

9. Numeral classifier for years;

ajnəŋ   nəŋ-kin (one)

             nəŋ-ɲi   (two)

year   CL(year)-numerals

10. Numeral classifier for nights;

aju   juː-kin (One)

           jub- iɲi (Two)

Night   CL(night)-numerals

11.Numeral classifier for impoverished mugs made of bamboos.

uḍuŋ   ḍuŋ-kin (one)

                 ḍu-ŋi   (two)

bamboo mugs, jars   CL(bamboo cylindrical jars)-numerals

12. Numeral classifier for mugs;

muɠ   gu-ken (one)

           gu-ɲi (two)

mug   CL((mug) –numerals

13. Numeral classifiers for bananas;

kopak   poː-ken (one)

po:-ɲi (two)

banana   CL(cylindrical)-numerals

14. Numeral classifier for long slender objects like pen,pencil,ropes ;

a. kolom   so-kin (one)

                     so-ɲi (two)

pen   CL(long,slender)-numerals

15. Numeral Classifiers for trees:

saŋnə   ne-kin (one)

                    ne-ɲi (two)

                    ne-m   (three)

                    ne-pi (four)

                    ne-ŋo (five)

tree   CL(trees)-numerals

16. Numeral classifiers stick;

a. saŋḍa   ḍa:-kin (one)

                   ḍa:-ɲi (two)

stick   CL(stick, logs)-numerals

b. Numeral classifier for firewood;

asaŋ   ḍa:-kin(one)

                   ḍa :- ɲi (two)

firewood   CL(sticks, logs)-numerals

17. Numeral classifiers for trees that are cut to obtain large sized logs like timber:

saŋpo   po-kin (one)

         po-ɲi (two)

po-m   (three)

timber   CL(large sized logs)-numerals

18. Numeral classifiers for bundle of firewood tied up together;

asaŋ   rəʔ-kin

rəʔ-iɲi

rəʔ-um

rəʔ-pʰi

firewood   CL(bundle of firewood)-numerals

19.Numeral classifiers for spears:

naŋkio   ḍa:-ken(one)

ḍa:-ɲi   (two)

spear   CL(stick)- numerals

The spear is perceived as a stick with only the pointed front made of iron.

20. Numeral classifier for clothes;

eji   rum-kin (one)

rum-iɲi(two)

rum- um (three)

rum-pʰi(four)

Cloth   CL(clothes)-numerals

21. Numeral classifiers for bamboo baskets and carriers;

a.   NUMCL for empty bamboo basket;

əgə   gə-kin (one)

gə-ɲi (two)

gǝ-um (three)

basket   CL(basket)-numerals

b. NUMCL for basket filled with dried meat especially for marriage purposes;

ǝbǝr   bǝr-kin(one)

                bǝr-ɲi (two)

                bǝr-um (three)

                bǝr-pi (four)

basket   CL(basket)-numerals

22,.Numeral classifier for bamboo basket that is tied in the waist area during cultivation;

cuca   caʔ-kin (one)

             caʔ-ɲi (two)

             caʔ-um (three)

             caʔ-pʰi (four)

             caʔ-ŋo (five)

             caʔ-kc (six)

             caʔ-kan (seven)

             caʔ-pin (eight)

             caʔ-kiya (nine)

             caʔ-ariaŋ (ten)

basket   CL(basket)-numerals

23. Numeral classifier for ladle made of bamboo to filter wine;

uɟuk   ɟuʔ-kin(one)

        ɟuʔ-iɲi (two)

        ɟuʔ-um (three)

ɟuʔ-pʰi (four)

ladle   CL(ladle)-numerals

24.. Numeral classifier for plates;

    biʔʈa   ʈa-ken(one)

               ʈa-ɲi (two)

    plate   CL(plate)-numerals

25.Numeral classifier for fish;

    ŋui   ne-ken(one)

           ne-ɲi (two)

    fish   CL(fish)-numerals

26. Numeral classifiers for punches;

    u   uŋ-kin(one)

              uː-ɲi (two)

              uː-m (three)

              uː-ŋo (four)

    punch   CL(punch)-numerals

27.Numeral classifier for bunch of keys,flowers;

    cabi   pum-ken(one)

            pum-ɲi (two)

    keys   CL(bunch)-numerals

    The noun grapes takes the numeral classifier *pum-* .

28.Numeral classifier for footsteps taken;

    aba   ba-kin(one)

              ba-ɲi (two)

ba-um(three)

ba-pi (four)

footsteps   CL(footsteps)-numerals

30.Numeral classifier for animals;

səbə   ḍərken(one)

ḍərɲi   (two)

cattle   CL(animal)-numeral

31.Numeral classifier for vehicles;

gari   ṭerṭe (big vehicles)   ṭər-kin(one)

gari   ṭərcaŋ (small vehicles)   ṭər-ɲi (two)

CL(vehicles)-numerals

32.Numeral classifier for bags;

a. Borrowed word for bag.

muna   naː-kin(one)

naː-ɲi (two)

bag   CL(bag)-numerals

b .when the bag is folded;

cuk   akin

aɲi

bag   CL(folded bag)   numerals

c. When someone is carrying the bag;

cuk   ku-kin(one)

ku-ɲi (two)

k-um (three)

bag   Cl(bag)-numerals

33. Numeral classifiers for holes made by the rats.;

kubuŋ   uŋ   uŋ-kin(one)

                  uŋ-iɲi(two)

                  um (three)

                  uŋ-p^{h}i(four)

rat   hole   CL(hole)-numerals

34. Numeral classifier for roads;

laum   ba-kin (one)

               ba-ɲi   (two)

               ba-um (three)

               ba-p^{h}i (four)

               ba-ŋu (five)

road   CL(roads)-numerals

1V. 4. Hill Miri Numeral Classifiers

Hill Miri numerals.

1	*aken*
2	*eɲi*
3	*oum*
4	*epi*
5	*aŋo*
6	*akko*

7	*konə*
8	*kanə*
9	*pinə*
10	*iri*

1) NUMCLF for round, circular objects.

A. puɯp   pɯ-ken

   egg   CL(round)-one

   "One egg"

b. ṭivi   pɯ -ken

   TV   CL(round)-one

   "One television"

c) lak?ko   pɯ-m

   bronze bangles   CL(round)-three

   "three bangles"

d) moḍi pɯ-ken

   hill   CL(round)-one

   "One hill"

Mountains and hills are perceived as circular in shape.

2)   pira   ṭəŋ-ɲi

   mini stool   CL(flat)-two

   "Two stool"

3)   saŋ ṭək-ken

bed   CL (flat)-one

"One bed"

4) kiṭap˺ ṭak-ken

    book   CL(flat)-one

    "one book"

5) a kiṭap da-ken

    book   CL (bundle of sheets) –one

    "One book"

    b. kiṭap˺ ḍab- ɲi

        book   CL(bundle)-two

        "two books"

6) a.ʈɯsɯ   *so* - ken

    necklace   CL(garland)- one

    "Two necklace"

    b.tɯsɯ   pɯ-ɲi

    beads   CL(round)-two

    "Two beads"

7) a. poṭa   bor-ken

    paper   CL(flat)-one

    "One sheet of paper"

    b. abor aːnə bor-ɲi

panna leaf   CL(flat)-two

"Two leaves"

8)   a. namt̪ə ba-ken

      road   CL(flat)-one

   "one road"

   b. namtə bə-ɲi

      road   CL(flat)- eɲi

   "Two roads"

9)   a. kolom so -ken

      pen   CL(long, slender, spherical)-one

   "One pen"

   b. oso   su-ɲi

      rope   CL(long, slender, spherical)-two

   "Two ropes"

10) a.) sɯnə   ne-ken

      tree   CL(tree)-one

   "One tree"

   b). sɯnə nɯ-ɲi

      tree   CL(tree)-two

   "Two trees"

Partial reduplication process plays an important role in numeral classifier construction.

11) nɯbu   bu- ŋo

    spears   CL(long,spherical,thicker)- five

    "Five spears"

12) a. kopak   pa-ken

    banana   CL(banana)-one

    "One banana"

    b. kopak   pe-ɲi

    banana   CL(banana)-two

    "Two bananas"

13) a. ɯɲi   ɲi-ken

    season   CL(season)-one

    "One season"

    b. ɯɲi   ɲi-ɲi

    season   CL(season)-two

    "Two seasons"

14) a.   u   u-ken

    punch   CL(punch)-one

    "One punch"

    b.   u   uː-pi

    punch   CL(punch)-four

    "Four punches"

15)   oso   so-ken

    Rope   CL(long,slender,spherical)-one

"One rope."

16) koba   baː -ken

          baː - ɲi

    steps   CL(step)-one

                  - two

"One, two steps"

17) sɯlɯg   lɯg - ɲi

            CL-two

    Shirt   CL(shirt)-numerals

18) agom   gum-kcn

          gum-ɲi

    talk   CL(talk,speech)-one

                  two

"One talk, two talks"

19) opo uduː   ḍuk-ken

                 du-ɲi

    wine bamboo mug   CL(bamboo mug)-one

                        two

"One mug of wine, two mugs of wine"

20) əgə   gək-ken (one)

                gəg-ɲi   (two)

    bamboo basket   CL(bamboo basket)-one

    'one,two rear bamboo baskets'

21) pɯci   ci- ken

    saucepan CL(vessels)-one

    "One saucepan"

22)   siḍa   ḍa-ken

      (wood, logs)   CL-one

      "One wood"

23)   cuːcak   cəŋ - ɲi

                         cəg-um

      bamboo mug   CL(bamboo mug)-two

                                      three

      "Two bamboo mugs, three bamboo mugs"

24)   ayi   yʉk-ken (one)

             yʉm-ɲi (two)

             yu ː-m   (three)

             yʉm-pi (four)

      year   CL(year)- numerals

      "One year. Two years. Three years. Four years."

25)   muna   naŋ-ken

        bag   CL(bag)-one

      "One bag"

26)   eji   rum-ken

      cloth   CL(clothes)-one

      "One cloth"

27)   ŋui   ne-ken (one)

              ne-ɲi (two)

              n-um (three)

fish   CL(fish)- numerals

"One fish. Two fishes. Three fishes."

28)   pece   bur-ɲi

       bamboo mat   CL(mat)-two

       " Two bamboo mats"

29) a. sabi   cir -ken

          Keys   CL(bunch)-one

      "One bunch of keys"

      b. opu   cir-ɲi

         flower   CL(bunch)-two

      "Two bunch of keys"

30)   so   dor-ken

       cattle   CL(animal)-one

      "One mithun"

There are also instances of numeral classifier being derived by nouns.

31) a.ɖaːɲi   ɖa-ken

       small shoot of plants   CL(small shoot)-one

       " One small shoot of the plant"

      b. ɖaːʈə   ɖa-ken (one)

        big shoot   CL(stalk)- numerals

       'One big stalk'

32). a) .poɖe poɲi   .   poː-ken

       Bundle of firewood   CL(bundle of logs)-one

"One bundle of firewood"

b). poṭə   po-ken

   timber, logs   CL(bundle of logs)-one

   'one bundle of timber (tied up).'

33). ɲil   bo-ken

   man   CL(human, male)-one

   "one man"

34). ɲim   ne -ken

   woman   CL (human, female)-one

   "One woman"

35) ɲim   ek-ṭa   a-pa.

   Woman   one-CL(person)   come-Past.

   "one woman had come"

IV. 5. TAGIN NUMERAL CLASSIFIERS

TAGIN NUMERALS

1	aken
2	aɲi
3	aum
4	api
5	aŋu
6	ake
7	kani
8	pini
9	pija
10	iriŋ

Numeral classifiers for Tagin

   1) Numeral Classifier for years:

aɲiŋ   ɲiŋ-kcn(One)

    ɲiŋ-ɲi   (Two)

    ɲiŋ-um (Three)

    ɲiŋ-pi   (Four)

    ɲiŋ-ŋu   (Five)

    ɲiŋ-ke   (Six)

    ɲiŋ-kani   (Seven)

    ɲiŋ-pini   (Eight)

    ɲiŋ-piya   (Nine)

    ɲiŋ-riŋ   (Ten)

Year   CL (year)-numerals (one to ten)

2) Numeral classifier for round, circular objects;

    a) pɯpɯ   pɯ-ŋu

       egg   CL(circular)- five

       "five eggs"

    b) pɯpɯ   pɯ-riŋ

       eggs   CL(circular)-ten

       "ten eggs"

    c) polu   pɯ-ken

       moon   CL(round)-one

       "one moon"

3) Numeral classifier for flat, rectangular and hard objects;

    a) ṭina   ṭak-kcn

       tin   CL(flat,rectangular,hard)-one

"One tin"

b) kiṭapˀ   taŋ-ɲi

"book"   CL(flat,rectangular,hard)-two

"Two books"

All the objects, which have attributes like [flat], [rectangular], [hard] for example
mirror, wooden planks etc... will take the numeral classifier *tak-*.

4) Numeral classifier for flat, thin, rectangular objects like paper, leaves etc...

a)poṭa   bur-ɲi

paper   CL(flat,rectangular,soft)-two

"Two papers"

5) Thin, long, cylindrical objects;

a) .kolom   su-pi

pen   CL(long,cylindrical,thin)-four

"Four pens"

b) . uso   so-ken

rope   CL(thin,long,cylindrical)-one

"One rope"

c)   killi   so-ken

nail   CL(thin,long,cylindrical)-one

"One nail"

d) mačis kaṭi   so-ken

match stick   CL(long,thin,cylindrical)-one

"One match stick"

6)   Numeral classifier for objects which are thick, long and hard;

a) lamda   da-ken

Iron rod   CL (long, thick, hard, cylindrical)-one

"One iron rod"

7) Numeral classifier for flat, disc like objects:

a)   poisa   čir-ken

coin   CL(flat, disc like)

"One coin"

b)   marbol   čər-ɲi

marble   CL(flat, disc like objects)-two

"Two marbles."

8) Numeral classifier for clothes:

a) eji   rum-ken

Cloth CL (cloth)-one

"One cloth"

9) Numeral classifier for four legged animals;

a) sobu   dor-ɲi

State animal called mithun   CL (animals)-two

"Two mithun"

10) Numeral classifier for handbags:

a) muna   na-ken

bag   CL(bags)-one

"One bag"

11) Numeral classifier for carry-baskets:

a). egen   geŋ-ken

    carry-basket   CL(carry basket)-one

    'One carry- basket .'

12) Numeral classifier for days:

a) alo   lo-ken (one)

        lo-ɲi   (two)

        lo-um   (three)

        lopi   (four)

  day   CL(day)- numerals

  "One day. Two days. Three days. Four days"

13) Numeral classifier for bunches of flowers;

a) apuŋ   puŋ-ɲi

   flower   CL(bunch)-two

  "Two bunches of flowers"

14) Numeral classifier for steps:

a) kuṛ   kuṛ-ken

       kuṛ-ɲi

  step   CL(steps)-one

          two

  "One step. Two steps"

15) Numeral classifier for bunch of vegeatable, crops;

a) o   ga-ken

   vegetable   CL(bunch)-one

  "One bunch of vegetables"

16) Numeral classifiers for mugs made by cutting the bamboos:

a) uɖuŋ   ɖuŋ-ɲi

  bamboo mug   CL(bamboo mug)-two

"Two bamboo mugs"

17) Numeral classifiers for ladle to filter wine;:

  laɟuk   ɟuk-ken

  ladle   CL(ladle)-one

"one ladle."

18) Numeral classifier for wooden planks;

  aɖa   ɖa-ken

  wood   CL(wood)-one

"One wood"

19) Numeral classifier :

  kopuŋ   puŋ-ɲi

  bangles   CL(bangles)-two

"one bangle."

20) Numeral classifier:

  ʈɯsi   cər-ken

  beads   CL(garland)-one

"one garland of beads"

21) Numeral classifier for logs by felling the trees ;

  ɯsɯŋ - apo   po-ken (one)

               po-ɲi   (two)

               po-um   (three)

               po-pi   (four)

po-ŋu (five)

po-ke (six)

po-kani (seven)

po-piɲi (eight)

po-kiya (nine)

po-iriŋ (ten)

Trees-logs CL(logs)-numerals(one to ten)

23) Numeral classifier for vessels:

piciŋ ciŋ-ken(one)

ciŋ-ɲi (two)

ciŋ-um (three)

vessels CL(vessels)-numerals(one to three)

" One vessel. Two vessels. Three vessels."

24) Numeral classifier for mats:

a) peceŋ bur-ken

mats CL(mat)-one

25) Numeral classifier for punches;

u: u-ɲi

punch CL(punch)-two

"Two punches"

26) Numeral classifier for holes:

uŋruŋ ruŋ-ɲi

holes made by the rats CL(hole)-two

"two holes"

27) Numeral classifier for bundle of firewood:

ɯsɯŋ   rɯ-ken

rɯŋ-ɲi

firewood   Cl(firewood)-one

Two

"One bundle of firewood. Two bundles of firewood."

28) Numeral classifier for bunch of flowers, keys etc...:

a) apuŋ   puŋ-ɲi

flower   CL(flower)-two

"Two bunches of flowers"

b) čabi   puŋ-ri

keys   CL(keys)-ten

"Ten bunches of keys"

29) Numeral classifier for fishes:

a) ŋui   ne-ken

ne-ɲi

fishes   CL(fish)-one

two

"One fish. Two fishes"

30) Numeral classifier of woman :

a) ɲime   ne-ken

Woman   CL(woman)-one

"One woman"

31) Numeral classifier for banana:

a) kopak   pe-ken (one)

pe-ɲi   (two)

pe-riŋ (ten)

banana   CL(banana)- numerals

"One banana. Two bananas. Ten bananas.

32) Numeral classifier for anything tied up in a gunny bag or in banana leaves:

    a)   pusum   sum-ken

        'something that is wrapped up'   CL(wrapped up)-one

33) Numeral Classifier for tomatoes:

    bayom   po-ken

    Tomatoes   CL (tomatoes)-one

    "One tomato."

34) Numeral classifier for packets:

    biskuṭ   pa-ken(one)

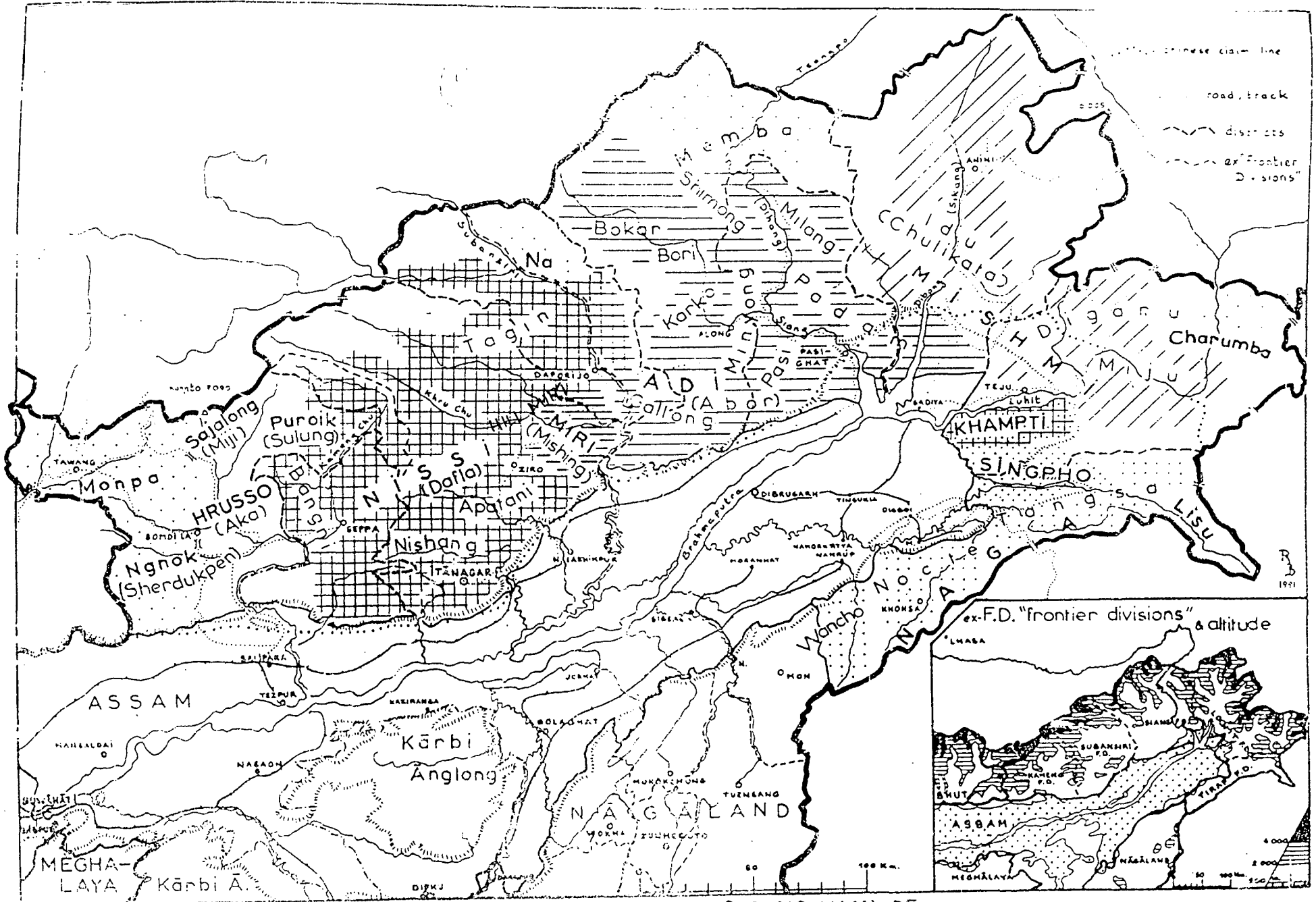   pa-ɲi   (two)

    biscuit   CL(packet)- numerals

    "Two packets of biscuits."

35) Numeral Classifier for farm:

    a) rɯŋo   rɯŋ-ɲi

      farm   CL(farm)_two

    "two farms"

MAP SHOWING GEOGRAPHICAL DISTRIBUTION OF
TANI LANGUAGES OF ARUNACHAL PRADESH.

References

Abbi, Anvita (2001), *A Manual of Linguistics Field Work and Structures of Indian Languages*, Munchem: Lincom Europa.

_____ (1999) "What is Indian in Indian Languages: A Case of Grammaticalization of Explicator Verb ' Go' ", *PILC Journal of Dravidic Studies* 1999/ 9:2. (Vol 1: 2), Pondicherry: All India Press

_____ (1992), *Reduplication in South Asian Languages: An Areal, Typological and Historical Study*, New Delhi: Allied Publishers

Adams, Karen L (1986), "The Influence of Non Austro-Asiatic Languages on Numeral Clasification in Austroasiatic"

Aikhenvald, Alexandra Y (2000), *Classifiers: A Typology of Noun Categorization Devices*, New York: Oxford University Press

Allan, Keith (1987), "Noun Classes and Categorization." (Review) 887-891.

Allan, Keith (1977), 'Classifiers'. *Language* (53: 285- 311).

Apatani Dictionary (2004), Central Gyutii Welfare Association.

Baker, Mark C, and J D Bobaljik, (2002), *Introduction to Morphology*. Rutgers: Rutgers; McGill,

Chelliah, Shobhana L (1997), *A Grammar of Meithei*, Mouton de Gruyter, New York.

Chutia, Ramchandra (2003), *The Hill Miris of Arunachal Pradesh: A Descriptive Study on Himalayan Tribe*, Spectrum Publications, Guwahati.

Dixon, R.M.W and Aikhenvald, A.Y. (1995), *The Categories of Human Languages.*

Dryer, Mathew. S (2005), 'Order of Numeral and Noun'. (14:36 362-363)

Ethnologue: Language Typology Questionnaire, *Ethnologue*, 13th Edition, Barbara F. Grimes (ed), (1996), Summer Institute of Linguistics

Grinevald, Colette (2000), "A Morphosyntactic Typology of Classifiers", in Gunter Senft (ed.), *Systems of Nominal Classification*, Cambridge Universiy Press.

Hopper, Paul J., "On Some Principles of Grammaticalization".

Inoue, Kyoko (2000), "Visualizing ability and nominal classification evidence of Cultural operation in the agreement rules of Japanese numeral classifiers", Gunter Senft (ed.), *Systems of Nominal Classification*, Cambridge Universiy Press.

Katamba, Francis (1993). *Morphology* MacMillan Press ltd

Lucy, John A (2000), "System of Nominal Classifictaion: A Concluding Discussion", Gunter Senft (ed.), *Systems of Nominal Classification*, Cambridge Universiy Press.

Matsumuto, Yo (1993). Japanese Numeral Classifiers: A Study of semantic categories and lexical organization. *Linguistics* 31: 667-713

O'Grady, William, Micheal Dobrovolsky, Mark Aronoff (eds) (1989), *Contemporary Linguistics: An Introduction,* New York: St. Martin's Press

Perkins, Revere D. (1992), *Deixis, Grammar and Culture.*

Radford, Andrew *et.al* (1999), *Linguistics: An Introduction,* Cambridge University Press.

Relations, Government of Arunachal Pradesh, Shillong.

Senft, Gunter (2000), "What Do We Really Know About Nominal Classification Systems?" in Gunter Senft (ed.), *Systems of Nominal Classification*, Cambridge Universiy Press.

Simon, I.M. (1976), *Hill Miri Language Guide*, The Director of Information and Public

Victor, Ahum (1997) Diss. 'Tangkhut Naga Grammar: a Study of Word Formation', New Delhi: CLE, JNU

Zavala, Roberto (2000), " Multiple Classifiers Systems in Akatek (Mayan)", Gunter Senft (ed.), *Systems of Nominal Classification*, Cambridge Universiy Press.

Webliography

http://www.ethnologue.com/14/show_family.asp?subid=1556

http://www.censusindia.net/cendat/language/lang-table2a.pdf

http://www.iitg.ernet.in/rcilts/apatani-htm

http://www.iitg.ernet.in/rcilts/heirarchy.htm

http://www.ethnologue.com/14/show-countryasp?name=india

http://www.latrobe.edu.au/rclt/satffpages/post.htm

http://www.mapsofindia.com/stateprofiles/arunachal pradesh/index.html

http://lloyd.emich.edu/cgi-bin/wa?A2=ind0108b &l=linguist & D=1&P=1058.

http://lloyd.emich.edu/cgi-bin/wa?A2=ind0510c&L=linguist & Ð=1 & F=&s=&P=3218-14k-LISTERV 14.4.

htt:// www.ethnologue.com

file: // g:\ Anukriti_net.htm

www.arts.gla.ac.uk/ipa/fullchart.html