

# **NEPALESE LINGUISTICS**

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Tribhuvan University  
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NUMERAL CHANGE AND DECAY IN BANTAWA RAI

Jadranka Gvozdanovic, University of Amsterdam/University of Kiel

Bantawa is the biggest Rai language, spoken in the east of Nepal. It is one of the Tibeto-Burman languages whose structure is in the process of loss due to contacts with Indo-European. The loss emerges the most clearly in the numeral systems.

The loss of the Bantawa numerals can be illustrated by two cases from Bhojpur (the original Bantawa area), collected in September 1983 within the framework of the Linguistic Survey of the Lesser Known Languages of Nepal. In the panchayats Annapurna and Chhinamakhu, informants from the elder generation were investigated, aged 71 and 66, respectively, and they appeared to have preserved only the following Bantawa numerals.

la. Annapurna,	lb. Chhinamakhu,	
Bhojpur	Bhojpur	
1 /ɛḳtai/	/ɛḳtak/ - /ɛḳpok/	(Notes on the pronunciation:
2 /hɛapok/	/hɛapok/	/e/ and /o/ are pronounced as
3 /sumkapok/	/sumkapok/	slightly more open in closed
4 /reṭkapok/	-	syllables; all voiceless stops
5 -	-	are unreleased in the syllable-
6 -	-	final position. Retroflexion
7 -	-	is indicated by means of a dot
8 -	/reṭkapok/	under a dental consonant.)
9 -	-	
10 -	-	
20 -	-	
100 -	-	

What do these forms show us ? Whereas the forms for 'one', 'two' and 'three' are practically identical, the form for 'four' in the Annapurna dialect of speaker 1a equals the form for 'eight' in the Chhinamakhu dialect of speaker 1b, whereas a form for 'four' is lacking in the latter system.

A younger speaker from Chhinamakhu, aged 35 and taken as a representative of the younger generation, appeared to count in Bantawa only up to 'three'. When I asked him about the form /retkapok/, he told me he knew that it existed, but that he would not use it himself. He thought that its meaning was 'four'.

Is the original Bantawa meaning of /retkapok/ then 'four' or 'eight' ? Only comparative evidence can shed more light on that matter.

2a.	Lakshmipur,	Dhunge Sarang,	Durdimba,	Siklewa,
1	/ɛktak/	/ɛkta/	/ɛkbok/	/ɛkbok/
2	/husat/	/husat/	/husat/	/husat/
3	/sumka/	/sumka/	/sumka/	/sumka/
4	-	/caroṭa/	-	/car/
5	-	-	/ɛkchuk/	/ɛkchuk/
6	-	-	-	/cho/
7	-	-	-	/sat/
8	/retka/	/retka/	/retkabok/	/retkabok/
9	-	-	-	-
10	-	-	/huachuk/	/huachuk/
20	-	-	-	-
100	/ɛksoe/	-	/bhung/	/toppabhung/

2b.	Cilingdin,	Lungrupa,	Kobna,	Kharkagan,	Ranitar,
	Panchthar	Panchthar	Jhapa	Taplejung	Panchthar
1	/əḳta/	/əḳta/	/əḳta/	/əḳtat/	/əḳta/
2	/ḥaata/	/ḥaata/	/ḥaata/	/ḥasat/	/ḥaata/
3	/sumḳata/	/sumḳatat/	/sumḳata/	/sumḳatat/	/sumḳatat/
4	/retḳata/	/retḳatat/	/retḳata/	/retkaota/	/retḳatat/
5	/pancḳata/	/əḳchuk/	/əḳchuk/	/əḳchuk/	/əḳchuk/ (/chuk/ = 'hand')
6	-	/bhankachuk/	-	/əḳchukəḳta/	/bhankachuk/
7	-	-	-	-	/bhanḥuchuk/
8	-	-	-	-	/bhansumchuk/
9	-	-	-	-	/bhanreṭchuk/
10	-	/ḥaachuk/	-	-	/ḥaachuk/
20	-	/reṭkachuk/	-	-	/reṭkachuk/
100	-	/ətopchuk/-	-	-	/topchuk/-/əḳbhung/
		/əḳbhung/			

The Bantawa dialects mentioned under 2a illustrate the fact that the form based on /retka/ for 'eight' occurs only if the Bantawa form for 'four' is missing.

The dialects mentioned under 2b, on the other hand, illustrate the fact that the form based on /retka/ is used for 'four' in the systems which either lack a Bantawa form for 'eight' and fully or partially also other numerals higher than 'five', or which do have a form for 'eight', but one based on 'five' as the basic building block, as illustrated by the Ranitar system presented above.

On the basis of these data, either a shift of the form based on /retka/ from 'four' onto 'eight', or from 'eight' onto 'four' may have occurred. As

to the latter possibility, the fact that a form for 'four' can be missing even if /retka/ is used for 'eight' (as e.g. in Lakshmipur in Ilam and Durdimba in Panchthar) shows that such a shift is by no means an automatic one.

As 'four' conceptually equals 'one half of eight', the shift between 'four' and 'eight' must have been a conceptual one. In whatever direction it took place, we can hypothesize that it occurred within a general replacement of a numeral conceptual building block by another numeral conceptual building block, either equalling one half of the original one (in that case,  $8 \rightarrow 4$ ), or twice the original one (in that case,  $4 \rightarrow 8$ ).

The numeral conceptual building blocks found in Tibeto-Burman are quinary (i.e. based on 'five'), decimal (i.e. based on 'ten') and vigesimal (i.e. based on 'twenty'), as established by Benedict (1972: 93f.).

What kind of evidence do we have for Bantawa ?

The Panchthar, Jhapa and Taplejung examples presented above illustrate the conceptual building block based on 'five', reflected as such in the numeral forms and their derivation. The form for 'five' is in those dialects /əkchuk/, meaning 'one hand', obviously not an original numeral form, as will be illustrated under 3 below. There is consequently a reason to consider the possibility of the quinary building block as not being the original one in Bantawa.

As to the remaining possibilities, the decimal system is the most widely spread one in Tibeto-Burman, and it may be considered the or at least an original one. For Bantawa, there is also one attestation of the decimal system from Chungbang in the Dhankuta district. Even though several forms differ, the basic ones and the building principle of the Chungbang Bantawa dialect appear to be comparable e.g. with that of Lhasa Tibetan, thus exhibiting original traits.

3. Bantawa Rai,                   Lhasa Tibetan,  
    Chungbang,                   Shigatse,



Dhankuta	Tibet	
1 /əḳte/	/ciq̄/	(In Tibetan, (̄) denotes the high tone,
2 /h̄usak/	/N̄ii/	and (of) the low tone, as a vowel or sonorant
3 /sumka/	/sūm̄/	feature.)
4 /goda/	/sī/	
5 /nasi/	/Nā/	
6 /phansi/	/thug/	
7 /epci/	/düün̄/	
8 /ṭupci/	/k̄ēē/	
9 /nusi/	/qu/	
10 /əḳbom/	/cū/	
20 /h̄usabom/	/N̄isū/	
100 /əḳbobom/	/kā/	

Even though the Bantawa and Lhasa Tibetan decimal systems do not show it, comparative evidence based on Rai decimal systems does point to /reṭka/ as originally meaning 'eight', as can be illustrated by the following Mewahang and Kulung Rai examples.

4. Mewahang Rai,	Kulung Rai,
Sishuwakha,	Gudel,
Sangkhuwasabha	Solukhumbu
1 /obo/	/ibum/
2 /hukubo/	/nicci/
3 /sumkubo/	/supci/
4 /likubo/	/licci/
5 /ngakbo/	/ngacii/

6 /ṭukubo/	/tupci/
7 /nukubo/	-
8 /rekubo/	/retci/
9 /bankkubo/	/nuci/
10 /upong/	/boci/
Mewahang Rai,	Kulung Rai,
Sishuwakha,	Gudel,
Sangkhuwasabha	Solukhumbu
20 /hukup/	-
100 -	-

Finally, let me mention that in the recent campaign of the Linguistic Survey of the Lesser Known Languages of Nepal, a vigesimal Bantawa system with /retka/ for 'eight' has been attested as well, as shown by the following examples.

5. Bantawa Rai

Sarangdanda,

Panchthar

- 1 /ɛkta/
- 2 /husat/
- 3 /sumka/
- 4 /bhanka/
- 5 /hanka/
- 6 /minka/
- 7 /sanka/
- 8 /retka/

- 9 /nanka/
- 10 /nanta/
- 20 /ekbhung/
- 100 /hankabhok/

As to the geographical distribution, the quinary and vigesimal systems are found in the easternmost districts of Nepal: Panchthar, Jhapa and Taplejung. Next to it, there is the decimal attestation from the Dhankuta district. In the remaining areas, either the first three numeral forms have been preserved, or a situation illustrated by the Bhojpur examples in example 1, on the basis of which no original system can be reconstructed.

As to the attested forms, only in the same easternmost districts do the forms based on /chuk/, the work for 'hand', occur in the meaning of 'five'. It follows from the remaining examples that the original form for 'five' is /nga/, possibly rendered as we can now conclude that the numeral conceptual building block based on 'five' is an innovation in Bantawa, attested for the easternmost districts. This innovation equalled reanalysis of the original building block, which may have been of two types, either decimal or vigesimal.

It is in the course of reanalysis in terms of a quinary system that /retka/ must have been shifted from 'eight' onto 'four'. And it is on the basis of comparative evidence clear that there must have been a shift of /retka/ from 'eight' onto 'four' and not vice versa.

Now we are able to interpret the Bhojpur examples presented under 1 as presenting different stages of the same shift of the form based on /retka/ from 'eight' onto 'four', even though there is no other overt indication of a quinary system. Given the fact that the forms based on /chuk/ are relatively well preserved under decay circumstances in the eastern areas, it is possible to assume that they would have been preserved in Bhojpur as well if they had ever been developed there.

Without a general quinary reanalysis, the shift of the form based on

/retka/ from 'eight' onto 'four' must have been just a stage in the Bantawa numeral decay in Bhojpur.

How could the quinary reanalysis be fully carried out and at least partly persist in the easternmost districts of Nepal ?

In these areas, Bantawa and other Rai speakers came due to migrations in the past two centuries. And it is there that Bantawa was and is used as the common language among the Rais, especially in trade. This obviously gave support to language preservation and development, rather than decay.

In support of the sociolinguistic motivation of the relative Bantawa numeral preservation in the areas where it was apparently necessary for the Rais to preserve their ethnic individuality as compared with the original Limbu inhabitants, let me mention a Sangpang Rai questionnaire filled out in the Rabi panchayat in Panchthar for the Linguistic Survey of the Lesser Known Languages of Nepal. Sangpang is a Rai language originally attested in Bhojpur and Khotang and presumably only due to migrations in the areas farther to the east. From the Rabi panchayat in Panchthar, well known for its strong Bantawa community, we have a Sangpang attestation in which all of the numeral forms have been taken over from Bantawa as follows.

6. Sangpang Rai,

Rabi,

Panchthar

1 /əkboḳ/

2 /huwaboḳ/

3 /sumkaboḳ/

4 /retkaboḳ/

5 /əkchuk/

6 -

7 -

8 -  
9 -  
10 -  
20 -  
100 -

These forms are systematically distinguished from the Sangpang forms attested in Khotang, which may be considered the original ones.

7. Sangpang Rai

Kharpa,

Khotang

1 /itta/  
2 /hisabo/  
3 /sumkabo/  
4 /dhumkabo/  
5 -  
6 -  
7 -  
8 -  
9 -  
10 -  
20 -  
100 -

After the reanalysis which was supported by local communication needs among the Rais in the newly migrated areas, replacement by the Nepali forms

has set in in the relatively recent times, due to country-wide communication needs.

In the first stage of the replacement by the Nepali forms, the counting goes up to 'five' and stops then, even if the form for 'five' is a Nepali borrowing, such as in Cilingdin in Panchthar mentioned under 2 above. This reflects the conceptual building block of the Bantawa system and its relative persistence, even under circumstances of language decay.

Reference:

Benedict, Paul K. 1972. Sino-Tibetan, a conspectus (Princeton-Cambridge studies in Chinese linguistics 11). Cambridge: Cambridge University Press.

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I am thankful to Dr. A.K. Weidert and Prof. Dr. W. Winter for their discussion of the problems tackled in the paper.

The Limbu s-final and t-final verb roots,  
after Michailovsky 1979 and Weidert 1982<sup>1</sup>

R.K. Sprigg

0. Taplejung and Panthar dialects

I had originally chosen Taplejung as the most suitable place in Limbuan for a research programme into the phonetics and phonology of Limbu planned for the early part of 1956 in order to concentrate on a northern dialect; but I chanced to meet a young Limbu author and poet, Kajiman Kandangwa, who persuaded me to go to Panthar instead, where I could count on help from his friends in studying the language as spoken in the eastern part of the Limbu area, towards Ilam. Through Kandangwa I came to make the acquaintance of the Chief Magistrate of Ilam, Kharga Bahadur Nembang (or Nembahang), better known at that time as Ilam Double Subbah, who offered me his hospitality at the village of Sartap, in the Panthar area of the District then known as Dhankuta, and arranged for one of his relations, the late Randhoj Nembang, to come over each day from the neighbouring village of Imbung (or Yongbong), and patiently instruct me in the pronunciation of Limbu, which he knew how to write in the script of the Limbus, the Kiranti script (cf. Sprigg 1959).

Double Subbah's prestige and support were a big advantage to me, and gave my phonological analysis of the verb in the Panthar dialect of Limbu a flying start; but I have since learnt, from the work of Michailovsky (1979) and Weidert (1982), that, if I had gone to Taplejung as originally planned, I should have found the dialects of that northern and north-eastern area of Limbuan, the Tamur Khola dialects, more regular in the phonetic exponency of their phonological categories, and therefore probably more conservative, than the Panthar dialect, on which I had spent four or five weeks in January and February, 1956 (for an account of part of the data collected at that time, short-quantity verbs, see Sprigg 1966).

1. s-final roots, velar

The comparative irregularity in the Panthar dialect that I have referred

to in section (0) above can be readily seen in certain phonetic features of the root and suffix in two sub-categories, the velar sub-categories, of a type of verb root that can conveniently be termed s-final. Indeed the irregularity is such that, at first sight, 's-final' must seem to be a misnomer for these Panthar sub-categories because the final part of the root syllable and the initial part of the suffix in the following examples, [-kh- -(k)kh- - kh-], do not contain any sound resembling [s] or [ʃ], an alveolar or an alveolo-palatal fricative; on the contrary, those sequences of sounds are velar throughout, ending in a voiceless aspirated plosive, which is preceded by either (i) a long vowel, as in [-V:jg-], (ii) a voiceless velar plosive, as in [-V(k)kh-], with the first [k] bracketed to show that [-kkh-] occurs only in slow-tempo utterances, (iii) a short vowel and voiced velar nasal, as in [-VNkh-], and (iv) a long vowel and voiced velar nasal, as in [-V:Nkh-]; e.g. (column 1: imperative ([-E])); column 2: 3rd-person object ([-u-/-U-]); column 3: 1st-person past ([-aN]))

i.	[tSi:khE	?a:khu?	la:khaN]
ii.	[HI(k)khE	kEIE(k)khu?	IE(k)khaN]
iii.	[HINKhE	HINKhUN:	tsUNKhaN ]
iv.	[mEdHa:NkhEnnE	kEge:Nkhu:	lo:NkhaN ]
i.	cool it	he pulls it out	I danced
ii.	rock it	you turn it over	(he) turned me over
iii.	rear him	I brought him up	I wrestled
iv.	do not weigh it	you prevented it	I told my name.

In the above examples the suffix is vowel-initial, [-E], [-u-]/[-U-], and [-aN], whence the term vowel-initial junction; the roots at (ii) and (iii) belong, respectively, to the root classes 11 and 12 of Sprigg 1966 (437), which is an analysis of short-quantity verb lexical items only, and does not, therefore, include long-quantity verbs such as those at (i) and (iv).



Prompted by the velarity that is such a prominent feature of the junction of root final and suffix initial in velar-final roots such as these I put them into a prosodic class that I termed *k* (Sprigg 1966, 448-9, but exemplified there only from short-quantity roots, as in (ii) and (iii) above), and thereby separated them from the *s* category of final that I was setting up to deal with the syntagmatic relations of sibilants in roots containing bilabial and 'tongue-front' consonants.<sup>2</sup> To some extent my reason for keeping the velar type phonologically separate, even though I had realized that these velar-final roots were complementarily distributed in relation to the bilabial-final and 'tongue-front'-final roots, was that the difference between the velars and the two latter was phonetically so great that I felt it would be rather extreme to put them into the same phonological class. It was not until recently that I learnt, from Michailovsky 1979, of the *s* suffix (Michailovsky prefers to treat -S as a suffix 'attached to Limbu verbal roots' (1)) embracing tongue-back (or velar) root finals equally with 'tongue-front' and bilabial, as transitive versus the intransitive function of his postfinal  $\emptyset$  (1979, 3, 15-19; of the prosodic class *z* of Sprigg 1966, 448-9), and versus his T-suffix verbs too (1979, 22-4). In a prosodic analysis such as this, congruence of the phonological with the grammatical level should be allowed to over-ride a difference at the phonetic level, however great that phonetic difference may appear to be.

A more important influence on my analysis at that time, though, was the undue significance that I attached to a speciously orthodox example in my data of a [-ks/S] root, in such forms as [thokSE] 'make (him) fight' [thOkSaN] '(he) made me fight' (Sprigg 1966, root class 14 (437)). I now believe this lexical item to be an inter-dialectal loan; but at that time, in my ignorance of the northern Limbu dialects, I felt justified in accepting it as an example, the only velar example, of the *s* prosodic type of final, and therefore classified it prosodically as -Ks (449-50). That decision forced me to classify the quite numerous examples of [-(k)kh-], etc. (Sprigg 1966, root class 11 (437); e.g. (ii) above) otherwise than

as s-final; but in this article I propose to treat the thOkS/s- lexical item as lying outside what one might call 'original' Panthar Limbu; in which case it should not be allowed to dictate the prosodic and phonematic analysis of the main stratum of that dialect.

2. s-final roots, (a) bilabial cluster, (b) single alveolar and alveolo-palatal, (c) 'tongue-front', both single and cluster

If, then, I treat the [thOkS/S-] verb lexical item as an unassimilated loan from another dialect, it is in the other three phonetic sub-categories of s-final verbs, the bilabial-cluster, the alveolar and alveolo-palatal, and what I have termed the 'tongue-front', especially the two former, that the phonetic justification for the syntagmatic term s is to be found, because the root classes belonging to the two former categories all have either an alveolar or an alveolo-palatal fricative ([s, S]), according to environment, in vowel-initial junction, the junction of the root with a vowel-initial suffix, (a) [-ps/S-] and [-ms/S-], (b) [-V:s/S-, -Vs:/S:-], and (c) fricative ([ -s/S-]) as a component of a voiceless alveolar or alveolo-palatal (aspirated) affricate, [-tsh-]/ [-tSh-] , [-(t)tsh-] /[-(t)tSh-], and [-ntsh-] / [-NtSh-] ; e.g. (col. 1: imperative ( [-E])); col. 2: 3rd-person object ([ -u-, -U-]); col. 3: 1st-person past ( [-aN] ))

a.	i.	[mEgHi:pSEnnE	kEHa:psu:	kha:psaN]
	ii.	[?ipSE	thapsUN?	khEpsaN ]
	iii.	[ti:mSE	ti:msu?]	-
	iv.	[tUmSE	kE?amsu?	tEmsaN ]
	i.	do not be mean	you made him cry	I yawned
	ii.	sleep	I throw him (wrestling)	he heard me
	iii.	smoke (meat)	he smokes (meat)	-
	iv.	join --- together	you warm it	he caught me.

The roots at (ii) and (iv) belong, respectively, to the classes 18 and 17 of Sprigg 1966, 437, in which long-quantity verb lexical items, such as those at (i) and (iii), are distinguished but not analysed (433-6).

- |    |     |               |                 |                 |
|----|-----|---------------|-----------------|-----------------|
| b. | i.  | [jo:SE        | kEjo:su?        | jo:saN]         |
|    | ii. | [lES:E        | lEs:u?]         |                 |
|    | i.  | satisfy (him) | you satisfy him | he satisfied me |
|    | ii. | know it       | he knows it.    |                 |

The root at (ii) is an example of root class 19 of Sprigg 1966 (437), classified as s-final on pp. 448-9.

- |    |      |                    |                  |                    |
|----|------|--------------------|------------------|--------------------|
| c. | i.   | [mEbHe:tShEnnE     | phE:tshUN?       | (nTNwA) phe:tshaN] |
|    | ii.  | [phɔ(t)tShE        | kE:phO(t)tshu?   | phɔ(t)tshaN]       |
|    | iii. | [PENtShE           | nOntshu?]        | -                  |
|    | i.   | do not forget it   | I squash it flat | I forgot           |
|    | ii.  | employ him         | you employ him   | he employed me     |
|    | iii. | put a finish on it | he keeps it by   | -                  |

There are no long-quantity examples of [-NtSh/-ntsh] in my data; the roots at (ii) and (iii) are examples, respectively, of root classes 9 and 10 of Sprigg 1966 (437), but with a change of translation from 'bevel' to 'put a smooth finish on', the sense of the Nepali verb मर्तनु

### 3. Tamur Khola root-final -S and S-cluster verbs

Michailovsky 1979 does not go into phonetic detail; but the seven types of 'final consonants or clusters' -S, -PS, -TS, -KS, -MS, -NS, and NS, in a complete list of twenty-two (2), seems closely to resemble the seven Panthar s finals exemplified in (1)-(2) above; e.g. CI:KS, A:KS, LA:KS, LEKS, HINS, HA:PS, TUMS, PHOTS, NONS (15, 17-19, 22-4, 26; 'cool, uproot, dance, turn over, rear, cause to weep, assemble (a fire), hire, keep leftovers'). In view of the suspect status of [thOks/S-] in the Panthar dialect, discussed at (1) above, it is interesting to note 'THOKS "incite to fight"' among his examples.

Michailovsky's examples are drawn from the Tamur Khola dialects only; Weidert's, on the other hand, include both Tamur Khola and Panthar; e.g.

P.	cakkhE?,	thE:khE?,	sɔNgHE?	} ?ipsE?, ?aapsE?, tEmsE?, seesE?
T.K.	caksE?,	thE:ksE?,	sɔNsE?	

glossed, respectively, as (Sg. Impv.) wear, tear, sell, sleep, winnow, catch, urinate.

#### 4. Phonetic development of the Panthar root-final velars

Weidert's Tamur Khola examples, when compared with my Panthar examples, show a noteworthy alternation between a sequence of either a velar plosive (voiceless) or a velar nasal (voiced) and [s] in the former dialect with a sequence of either a velar stop (voiceless), though only in slow tempo, or a velar nasal (voiced) and an aspirated velar plosive (voiceless in my material, [-Nkh], but voiced in Weidert's, -NgH):

	i	ii	iii	iv
T. K.:	-Vks-	-V:ks-	-VNs-	
P.:	[-V(k)kh-]	[-V:kh-]	[-VNkh-]	[-V:Nkh-]

(Tamur Khola phonetic formulae abstracted from Weidert 1982 (5)).

I have observed a very similar alternation to that shown in columns (i) and (ii) above not between two different dialects of one language but within a single dialect, the Balti dialect of Tibetan. In Balti conditional forms (in [-na]) a velar or a uvular s-cluster verb has alternative final sequences [-ks] and [-kh], or [-Ks] or [-K], e.g.

[JIksna]/[JIKhna] 'jigs-na if he is afraid  
 [SaKsna]/[SaKna] gshegs-na if he goes (hon.), (Sprigg 1967, 196-7); the alternatives were equally acceptable to my informant.

The type of alternation in the Balti is different from the Limbu because it is consonant-initial ([n-]) where the Limbu is vowel-initial ([E], [u-]/[U-], [a-]) in the examples at (1) above; but, even so, I believe the process of phonetic development to have been the same. One possibility,

supported by a comparison of sex and septem in Latin with hex and hepta in Greek (and षष् (sas) and सप्त (Sapta) in Sanskrit) is that the change could have been direct, from local friction at the alveolus ([s]) to cavity friction, the voiceless resonance of the oral and pharyngeal cavities as a whole ([h]) through the process of lowering the highest point of the tongue raised, the blade, from the proximity of the alveolus to the position of the appropriate vowel.<sup>3</sup>

On the other hand the velar contact present in [-kh] suggests that the aspiration (cavity friction) might well have developed via velar local friction ([x]), replacing the alveolus as the point of fricative approximation:

[-ks] > [-kx] > [-kh]

(for examples of [-(k)kh] and [-kh] see section (1), i-ii, above).

In slow-tempo utterances in the Panthar dialect there is, in short-quantity lexical items, the possibility of what appears, at first sight, to be a sequence of velar stop and velar plosive ([-kkh-], of. (1) above); but [-kkh-] is better regarded as an aspirated long plosive ([-k:h-]), balancing the short vowel of short-quantity lexical items such as these (but the plosive is short in fast-tempo utterances: [-kh-]).

To support this interpretation of [-kkh-] as [-k:h-] when preceded by a short vowel I would cite the root-final [-s:]/[-S:] of (2.b) above, corresponding to the [-ss]/[-SS] of Sprigg 1966, root class 19 (436-7), e.g. (vowel-initial junction).

[lES:E	lEs:UN:	KElEs:u?]
know it	I knew it	you know it;

the length of consonant is invariably associated with shortness of vowel, and is better symbolized as [-s:]. In corresponding long-quantity lexical items the consonant is short ([s/S]) in association with length of vowel; e.g.

[m :SE	m sUN?	kEm :su?
get him drunk	I get him drunk	you get him drunk.

Root-final [-V:Nkh] and [-VNkh] cannot be accounted for by exactly the same process: While a development of [s] to [h] is as possible for these nasal finals as for the plosive type, it leaves the velar voiceless plosive as an intruder. A phonetically similar voiceless velar plosive can be observed from some English-speakers intruding in the pronunciation of Kingston, for example, as [kINKstən] rather than [kINStən]. In both the Limbu and the English the intruding velar plosive shares voicelessness with the following sound, [s] in English, and [h] \*[s] in Limbu, and its velarity with the preceding sound, together with its oral occlusion feature. I therefore see the process as something like the following:

\*[-Ns]            \*[-Nks]            [-Nkh].

(for examples see (1), iii-iv above).

I would account for the development of the root-final tongue-front nasal and (aspirated) affricate cluster, [-ntsh]/[-NtSh], from a presumed earlier \*[-ns]/[-NS], in much the same way as I have done for the corresponding velar nasal and (aspirated) plosive clusters through an intrusive alveolar or alveolo-palatal plosive ([t]/[t]). Here again English supplies something of parallel in the pronunciation of words such as lunch and branch with a final nasal-and-affricate cluster ([-ntS]) rather than a nasal-and-fricative cluster ([-nS]), in which what I take to be an intrusive plosive ([t]) shares its voicing feature, voicelessness, with the following sound, but its place of articulation, alveolar, and its oral occlusion with the preceding sound; from the sequence of plosive and fricative an affricate has developed:

*[-ns]	*[-nts]	[-ntsh]
**[-N̄s]	*[-N̄tS]	[-N̄tSh]

(for examples see (2), b, iii, above).

In this type of root final the aspiration feature ( h ) cannot be treated as a development from local friction at the alveolus, because

alveolar local friction remains, in the junction, as the fricative element of the affricate. This aspiration feature is quite striking, because aspirated affricates ([tsh, tSh]) do not otherwise occur in Limbu. I would explain it as an automatic accompaniment of the voicelessness feature, as opposed to the non-aspiration that accompanies voice and affrication in intraverbal junction ([-dz-], alternating with voicelessness, [-ts-], in word-initial position); e.g.

[mEdza:tEnnE          tsa:ma?]<sup>4</sup>

please do not eat      to eat

(cf. also, for plosives, the alternation of [p] with [b], [t] with [d], and [k] with [g]; e.g.

[p-]	[pi(:)RE]	[t-]	[t (:)j
[-b-]	[mE:bi(:)REnnE]	[-d-]	[mE:do:jEnnE]
[k-]	[kENE]		
[-g-]	[mE:gENEnnE]		

give it, do not give it; dig it, do not dig it; fall, do not fall.

The same explanation and also stand for the remaining tongue-front finals, whether short ([-tsh]/[-tSh]) or long ([-ts:h]/[-tS:h]) affricates: the aspiration automatically accompanies the voicelessness. The length of the closure feature, which I had formerly treated as a difference between and affricate in long-quantity syllables ([-V:tsh]/[-V:tSh]) and a sequence of occlusive and affricate in short-quantity syllables, the occlusive being present only in slow-tempo utterances, [-V(t)tsh]/[-V(t)tSh], I now treat a difference in the length of the affricate, balancing a difference in vowel length, long vowel and short affricate versus short vowel and long affricate (but short in fast tempo):

long quantity:	[-V:tsh]	or	[-V:tSh]
short quantity:	[-Vts(:)h]	or	[-VtS(:)h]

(for examples see (2), b, i-ii above).

5. The s term of the final prosodic system phonetic exponents.

The purpose of the s term of the three-term final prosodic system, s, t, and z, is to associate, syntagmatically, the two different types of friction, (voiceless) alveolar or alveolo-palatal local friction, on the one hand, and (voiceless) cavity friction (or aspiration), on the other, with the appropriate preceding place of articulation, (i) bilabial, (ii) tongue-front, and (iii) velar, and with the appropriate one of four different manners of articulation, plosive, nasal, vocalic, taking into account differences in tempo. In order to admit the complementarily distributed Panthar velar root finals, in [-kh], [- (k)kh], and [-Nkh], at (1), together with the tongue-front root finals in [-tsh/-tSh], [-(t)tsh/-(t)tSh], and [-ntsh/-NtSh], at (2.c), which share the aspiration feature with them, into the same prosodic class, s-final, as the bilabial-and-fricative cluster root finals, in [-ps/S] and [-ms/S], at (2.a), and the single alveolar- or alveolo-palatal-fricative root finals, in [-s/S] and [-s:/S:], at (2.b),<sup>5</sup> separate statements of phonetic exponency are needed, one for each of the four phonetically different sets of syntagmatic relationships. These four complementarily distributed groups of associated phonetic features can be symbolized, from imperative and other such vowel-junction forms, as:

i.	[s/S]	with	[p	as in [-ps/S]
			[m	[-ms/S]
			[V	[-Vs:/S:]
ii.	[s:/S:]			
	[s/S]		[V:]	[-V:s/S]



[(t)t/(t)t] as in [-(t)tsh/(t)tSh]

iii. [sh/Sh] with

[ nt/Nt ]	[ -ntsh/NtSh ]
[ (k)k ]	[ -(k)kh ]

iv. [h]

[ Nk ]	[ -Nkh ],
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in which [ (k) ] and [ (t) ] are confined both to short-quantity lexical items and to slow tempo; for examples see, for (i), (2.a) above, for (ii), (2.b) above, for (iii), (2.c) above, and, for (iv), (1) above (cf. also root classes 18, 17, 19, 9, 10, 11, and 12 of Sprigg 1966, 437, and, for the s term of the final system, 448-9).

6. The t term of the final prosodic system: phonetic exponents.

The prosodic function of the t term, the second of the three terms comprised in the final system, is to associate root-final non-aspirated dentality, whether voiceless or voiced, with such preceding place-of-articulation features within the root final as labiality, velarity, and (in short-quantity lexical items, and only in slow tempo) dentality, and with such manner-of-articulation as occlusion and nasality, and also to associate a root-final voiced alveolar tap [ ( R ) ] with a preceding vocalic articulation. The three complementarily distributed sets of features concerned in these syntagmatic relationships can be symbolized phonetically as follows, from imperative and other such vowel-junction forms:

i. [t] with	[	[p]	as in [-pt]
		[(t)]	[-(t)t]
		[V / V:]	[-Vt / -V:t]
		[k]	[-kt]

ii.	[d]	-	[m]	[-md]
			[n]	[-nd]
iii.	[R]		[V(:)//[V: ]	[-V(:)R]/[-V:R]; e.g.

(s = short quantity; l = long quantity)

i.	s:	[tSEptE	mE(t)tE	thOktE]
	l:	[li:ptE	pa:tE	tho:ktE]
ii.	s:	[jEmdE	phEndE]	-
	l:	-	thO:ndE]	-
iii.	s:		[piRE]	
	l:		[po:RE]	

(i) cut it, say it, fight; be heavy, speak to (him), cook it;  
(ii) tattoo him, untie it; mend (clothes); (iii) give it (to **him**); grow;  
(cf. also root classes 2, 4, 6, 16, 8, and 22 of Sprigg 1966, 437, and, for the t term of the final system 448-9, with this difference: I have re-classified root class 22 as t rather than as z). There are no examples of a root-final [Nd] in my material; but Michailovsky 1979 gives a single example (obscene): CANT, as against seventeen examples of -NT, but none of -MT. My example [jEmdE] contains the only root in [-md] in my material.

#### 7. The z term of the final prosodic system: phonetic exponents.

To the third, and last, term of the final system I have, for want of a better, assigned the letter z, the initial letter of zero. The purpose of this type of prosodic piece is to associate single consonant sounds with a preceding vowel (the majority of the phonetic exponents of both s and t, on the other hand, are consonant clusters; cf. (5) and (6) above). These consonant sounds are, in imperative forms, and therefore in vowel-initial junction, two of them plosive, bilabial and velar, one of them an alveolar

flap, and two of them nasal; there is also a syllabic vowel as a root-final possibility accompanied, in slow tempo, by a non-syllabic voiced front spread vowel, but coalescing with the vowel of the suffix syllable in the types of vowel junction stated below. The nasals are necessarily voiced, for voiceless nasals do not occur in Limbu; the plosives, on the other hand, and the flap type too in the formal scatter of certain lexical items (those of root class 5 of Sprigg 1966, 437; those of root class 7 have voice in all junction contexts), alternate in voicing between voice in vowel-initial junction and voicelessness in consonant-initial junction and in interverbal junction; i.e. they share the voice feature with a following vowel but are otherwise voiceless; e.g. (i) vowel-initial junction, (ii)-(iv) consonant-initial junction, (v) interverbal junction,

	i	ii	iii	iv	v	
[b]	[jEbE	jEpma	?ajEpSi?	jEppa?	kEjEp]	[p/pp]
	[Ha:bE	Ha:pma	?aHa:pSi?	Ha:pa?	kEHa:p]	[p]
[g]	[lagE	lakma	?alakSi?	lakka?	kElak]	[k/kk]
	[pe:gE	pe:kma	?abe:kSi?	pe:ka?	kEbe:k]	[k]
[R]	[SERE	SEpma	?aSE(t)tShi?	SEtta?	KE:SEt]	[p/(t)t/tt/t]
	[je:RE	je:pma	?aje:tShi?	je:ta?	kEe:t]	[p/t]

stand	to stand	we two stand	I stand	you stand
cry	to cry	we two cry	I cry	you cry
lick it	to lick	it licks us two	it licks me	it licks you
go away	to go	we two go	I go	you go
kill it	to kill	it kills us two	it kills me	it kills you
laugh	to laugh	we two laugh	I laugh	you laugh

(the short-quantity examples represent root classes 1, 3, and 5 in Sprigg 1966, 437).

The 1st-person subject or object examples in column (iv), in which voicelessness ([p, k, t]) precedes a vowel, appear to run counter to the examples in column (i), in which it is voice ([b, g, R]) that precedes a vowel; but it seems from comparison with the behaviour of open-syllable roots in this type of junction that it is to be regarded as consonant-initial junction: the initial consonant of the suffix (1st-person subject or 1st-person object) is [ʔ] in such examples as [wA:ʔaʔ, Si:ʔaʔ], 'I sit', 'I die'. Occasionally I have observed a glottal plosive in this type of junction even when the root is a closed syllable; e.g. [thUmm ʔah], usually [thUmmaʔ], 'I am strong', [lamm ʔah], usually [lammaʔ], 'I ---' obscene. It seems clear, therefore, from internal evidence, that forms such as [jEppaʔ] and [Ha:paʔ] above have developed from \*[jEpʔah] and \*[Ha:pʔah], in which the root-final stop was not only in junction with a suffix-initial consonant but shared voicelessness with it (cf. also Weidert 1982 for comparative evidence from other dialects: 'the vowel /-a/ is followed by a glottal stop in the Pantharay dialect, whereas it is preceded by glottal stop in most of the Tamor Khola dialects - - -

Pantharay [kENaʔ] = kEN-aʔ, vs.

Tamor Khola [kENʔa] = kEN-a.

In the Hangpang dialect of Tamor Khola the glottal stop gets further weakened and assimilates loosely to the velar nasal, =[kEN-ʔa] =[kENNa].'  
(8).

For the predominantly plosive types of final shown above, voice and voicelessness are a function of type of junction, and, therefore, in complementary distribution; but the remaining types of z-final root have a constant voicing feature, voice, in consonant-initial and interverbal junction as well as in vowel-initial junction; e.g.

[ m ]	[ lEmE	lEmma	?alEmSi?	lEmma?	kE1Em ]	
[ N ]	[ kJENE	kENma	?agENSi?	kjENNa?	kEgEN ]	
[ R ]	[ tARE	tc'mma	?ad'NtShi?	tc'anna?	kjE:dcn ]	[ m/N/n ]
[ V(j) ]	[ tO(j)E	tO:ma?	?adc?esu?]			v:
[ Vj ]	[ tOjE	tO:ma?	?adO:su?]			v:
	[ wAjE	wA:ma?	?awA:Si?	wA:?a?	kEwA:?	
[ j ]	[ tJeh	ta:ma(?)	?ada:Si?	ta:?a?	kEda:]	
-	[ jEh	ju:ma	?aju:Si?	ju:?a?	kEju:]	
-	[ tSEh	tSa:ma?	?adza:su?]			
-	[ SE	Si:ma	?aSi:Si?	Si:?a?	kESi:?	

be lazy	to be lazy	we two are lazy	I am lazy	you are lazy
fall down	to fall	we two fall	I fall	you fall
scold him	to scold	he scolds us two	he scolds me	he scolds you
dig	to dig	we two dig it		
sew it	to sew	we two sew it		
stay	to stay	we two stay	I stay	you stay
come here	to come	we two come	I come	you come
come down	to come down	we two come down	I come down	you come down
eat it	to eat	we two eat it		
die	to die	we two die	I die	you die

(the verb lexical items of lines 1-4 are examples of the root classes 15, 13, 7, and 21 of Sprigg 1966, 437). The verb in line 6, [w -/wA:], had also been included there as an example of root class 20; but I now realize that it should have been treated as a long-quantity root, and as not comparable, therefore, with the other roots of p. 437, which were intended to be short-quantity only. The same correction applies to the various examples of [t -/t :-] on p. 436, where it is incorrectly given as an example of the s (short) term of the quantity system; it ought to have been classified as l (long).

I have thought it advisable to give seven sets of examples of the open-syllable type of lexical item, on lines 4-10, in order to account for a wide degree of phonetic variation in their vowel-junction forms (col. (i)). All the other types of junction (cols. (ii)-(v)) show length of vowel ([-O:], [-A:] etc.), as one would expect in a long-quantity root; but the examples in col. (i) show shortness of vowel, at one extreme, and, at the other extreme, co-alescence with the vowel of the suffix, resulting in a monosyllable.

Instead of a detailed fourfold prosodic statement I will briefly state the phonetic facts on which such a statement would be based:

i. where the lexical item has lip-rounding (and therefore backness) as a vowel feature in junction of types (ii)-(v), consonant-initial and interverbal, the vowel is syllabic in vowel-initial junction (col. (i), though short, as in lines 4-5 ([tO:-/tO-], [tO:-/tO-]), unless

ii. the lexical item has syllable-initial lip-spreading ([j-]), in which case it coalesces, as in line 8 ([ju:-/j-], not \*jujE ); but

iii. if the lexical item has lip-spreading (and therefore frontness) as a vowel feature in junction of types (ii)-(v), it is either non-syllabic front spread, as in the dental-initial lexical item of line 7 ([tj-]) in type-(i) junction, or it coalesces with the vowel of the suffix, in a monosyllable, as in lines 9-10, containing [tSE] and [[SE], presumably from \*[tsaE] and \*[SiE], unless

iv. that lexical item has lip-rounding ([w-]) as a syllable-initial feature (and therefore backness, [A:/], as a vowel feature), in which case its vowel is syllabic, as in line 6; for \*[wjE] is an impossibility.

8. Revision of Sprigg 1966 as regards the s and t terms of the final system (448-9).

In Sprigg 1966 (which deals only with short-quantity lexical items in detail) I stated a prosodic system of four terms, s, t, z, and k, the final system, in order to deal with syntagmatic relations among consonants in root-final clusters and between single consonants and vowels (448-9). The presumed phonetic development of \*[-ks] and \*[-Ns] to [-(k)kh] and [-Nkh] in the Panthar dialect, discussed in (3)-(4) above in comparison with the Tamur Kholā dialects, has decided me in favour of reducing the membership of that system from four to three by absorbing the former k term, appropriate to root classes 11 and 12 (p. 437), e.g. [-(k)kh] and [-Nkh], in the s term. This re-classification has meant changing the phonetic exponency of the s term, in (b) above, in order to accommodate the complementarily distributed velars, at (iv), as fellow members with the bilabial clusters [-ps] and [-ms], (root classes 18 and 17), at (i), and, at (iii), the tongue-front finals, e.g. [-(t)tsh/- (t)tSh] and [-ntsh/-NtSh] (root classes 9 and 10).

This revision will mean that the phonematic units K and N of my former statement, Kk and Nk, will now be re-classified as Ks and Ns; but the phonetic exponents of each of these two phonematic units will remain the same:

K: voicelessness + occlusion ([k']; slow-tempo only)

N: voice + nasality ([N]); e.g.

K: [HI(K)khE] N: [HINKhE] ('rock it', 'rear him'; root classes 11 and 12 respectively).

The phonematic units -Ts and -Ns of Sprigg 1966 (449), and their phonetic exponents, remain as stated there, except that the phonetic exponent ascribed to -T, voicelessness + occlusion ([t']), must be stated

as limited to slow-tempo utterances. The phonematic units -Ps and -Ms, and their phonetic exponents, remain as stated (450).

A second, and consequent, change in Sprigg 1966 (448-9) will be the removal of root class 14, stated there as -Ks, e.g. [ mE:tHOkSEnnE ] 'do not make --- fight', from the s term of the final system to a subsidiary system, on the grounds that it is a loan from a Tamur Khola dialect (cf. (1) above).

A further revision concerns the root class which is given in Sprigg 1966 as 23 (437). This root class was grouped there, prosodically, with 21 and 22 (as g, from glottal), on the grounds that all three were united by the glottal feature ligamental phonation, alternating with glottal plosion; e.g. (i) vowel-initial junction, (ii) consonant-initial junction:

	i		ii	
[ - <sup>ˊ</sup> VS ]	[ mE:b <sup>ˊ</sup> SEnnE ]	[ pE? <sup>ˊ</sup> əma ]	[ -V? <sup>ˊ</sup> ə ]	
[ - <sup>ˊ</sup> V:S ]	[ mE?? <sup>ˊ</sup> O:SEnnE ]	[ ? <sup>ˊ</sup> O:ma ]	[ - <sup>ˊ</sup> V:] ]	

do not get sick to vomit

This root class is suspect: (i) it is supported by only two members, the two exemplified above, and (ii) the former may have been confused with another, and phonetically similar, verb for 'vomit':

[ pe?ma ] to get sick, [ pe<sup>ˊ</sup>Rah ] he got sick

Chemjong 2018 V.S. symbolizes both verbs as long-quantity;

पे-मत pe:ma 'to vomit'; अ-मत a.ma 'to eject from the mouth', with past tense forms:

पेसु pesu and अ-सु a:su (cf. also Michailovsky 1979: PES itr. 'vomit'(23)).



These two lexical items, therefore, should probably be treated as errors, or perhaps assigned to an onomatopoea sub-category, in which case the number of root classes given in Sprigg 1966 (437) will be reduced from twenty-three to twenty-two.

A third revision concerns the root class 22 of Sprigg 1966 (437): [piRE] 'give it'; there I classified it as z (448-9) on the grounds that it was of the 'single-final-consonant' type. These phonetic grounds, however, are not decisive: a single root-final consonant ([s/S], [s:/S:]) has been admitted as an exponent of the s term of the final system (at (2.b) and (5.ii) above), e.g. [jo:SE] 'satisfy him', [lES:E] 'know it'; a single root-final [t] has also been admitted as an exponent of the t term of that system (at (6.1) above), e.g. (fast-tempo) [mEtE] 'say (it)', [pa:tE] 'speak to (him)'; and, in anticipation of this revision, I have included there, in sub-section (iii), the example referred to above, [piRE] 'give it' (root class 22), with [po:RE] added as a corresponding long-quantity example. In vowel-initial junction an alveolar tap ([R]) occurs in the exponency of both terms, z and t; so it becomes necessary to take into account consonant-initial junction and interverbal junction as well; e.g. (i. z term, ii. t term).

i.	[R]	[SERE	SEpma	?aSE(t)tShi?	Setta?	KE:SEt]	[ p/(t)t/tt/t]
		[je:RE	ja:pma	?aje:tShi?	je:ta?	kEe:t]	[ p/t]
		[tARE	tOmma	?adɔNtShi?	t nna?	kjE:dɔn]	[m/N/nn/n]
ii.		[piRE	pi:mah	?abi(?)Si?	pi??a?	kE:bi?]	[V(:)/(?)/??/?]
		[po:RE	po:ma	?abo:Si?	po:?a?	kEbo(:)?]	[V:/?]

i. kill it, to kill, it kills us two, it kills me, it kills you; laugh, to laugh, we two laugh, I laugh, you laugh; scold (him), to scold, he scolds us two, he scolds me, he scolds you; ii. give him it, to give, he

gives it to us two, he gives it to you; grow, to grow, we two grow,  
I grow, you grow.

The range of phonetic forms at (ii) shows that this type of root, number 22 of Sprigg 1966 (437), can usefully be associated, as the contrasting t-final type of root, with the [s/S] and [s:/S:] types of s root (root no.19), and with the vowel-final type of z root [V(:)] (root no.21), together with no.20, [V(:)], its corresponding long-quantity root, incorrectly classified there as short-quantity (436-7); e.g. (l = long quantity; s = short quantity)

l s	[s/S]	[jo:SE	jo:ma	ajo:Si?	jo:?a?	kEjo(:)?]	[V:/V]
z	[Vj]	[tOjE	tO:ma	?adO:su	wA:?a?	kEwA(:)?]	
t	[R]	[pE:RE	pE:ma	?abE:Si?	DE:?a?	kEbE:]	
s s	[s:/S:]	[lES:E	lE:ma?	?alE:Si?			[V.]
z	[V(j)]	[tO:ma?	o?ad	?əsu?			[V(:)]
t	[R]	[piRE	pi:mah	?abi?Si?	pi??a?	kE:bi?]	[V:/V?]

l s satisfy him, to satisfy, he satisfies us two, he satisfies me, he satisfies you;

z sew it, to sew, we two sew it; I sit, you sit:

t fly, to fly, we two fly, I fly, you fly:

s s know it, to know, we two know it;

z dig it, to dig, we two dig it;

t give it, to give, he gives us two, he gives me, he gives you.

The odd man out in the short-quantity set of examples is the s-final set, which is distinguished by (i) clear phonation for the vowel (versus ligamental phonation), and by (ii) length of consonant ([S:/s:]) in vowel-initial junction (it would, in any case, be impossible for the z-final and t-final examples to follow it in this length feature; for, in the nature of things, a non-syllabic vowel or a tap cannot be long). It is possible that the [S:/s:] might have developed simply to balance the shortness of the preceding vowel, or it might have developed from a sequence

of fricative and glottal plosive (\*[s?]), corresponding to the suggested development of the long nasals [n: N: m:] (fellow continuants of [S:/s:]) in what I have ascribed to glottal-plosive junction forms (1st-person subject or object grammatical forms) from \*[n? N? m?]; e.g.

-Ts	-Ns	-Ks	- <u>Ns</u>	-Ps	-Ms
[phɔnna?	-	HINNa?	HINNa?	?imma?	tEmma?]

he employs me, he rocks me, he rears me, I sleep, he seizes me  
(Sprigg 1966, 442).

9. Thees-final type of root, and its phonematic system

The upshot of the revision of the s term of the final system is that it now comprises a set of seven phonematic units, three of which are symbolized by P; T, and K, three with the nasal symbols M, N, and N, and one, following Michailovsky 1979 (2), with the symbol Ø; they occur in both short-quantity and long-quantity lexical items, except for N, which is confined to short-quantity lexical items:

short:	Ps	Ms	Ts	Ns	Ks	<u>Ns</u>	Øs
long:	Ps	Ms	Ts	-	Ks	<u>Ns</u>	Øs; e.g.

(as in vowel-initial junction, 1st-person subject or object)

[?ips-	nams-	ph0(t)tsh-	nOntsh-	HI(k)kh-	sONkh-	lEs:-]
[Ha:ps-	ti:ms-	phE:tsh-	-	li:kh-	tha:Nkh-	jo:s-]

sleep, smell, employ, store up, rock, sell, know, make cry, smoke (meat, etc.), squash flat, train, weigh, satisfy.

10. -Ms, -Ns, and -Ns, and nasality

The examples of -Ms, -Ns, and -Ns roots that were given at (8) above each have a cluster for their phonetic exponents in the Panthar dialect. This type of exponent is appropriate to junction in which there is an initial vowel in the suffix, which is the case for grammatical forms such as the imperative, the 3rd-person object (present or past), and 1st-person intransitive past ([-E, -u?/-UN?, -aN]); e.g. (imperative)

short: [mE:namSEnnE, nONtShE, sONkhE]; long: [ti:mSE, tha:NkhE]  
do not stink, save them up, sell it; smoke it, weigh it.

This type of junction was chosen to illustrate the cluster possibility; but there are other types of junction in which the phonetic exponents of -Ms, -Ns, and -Ns are not a cluster but a single sound, as in the following examples, which are taken from (i) interverbal junction (word-final), (ii) suffix-initial nasal-consonant junction ([m-]), (iii) suffix-initial plosive-consonant junction ([b-]; interrogative), and suffix-initial fricative-consonant junction ([S-/s-]; dual): (cols. one, three, and four contain s(hort-quantity) roots, and cols. two and five l(ong-quantity)

	-Mss	-Msl	-Nss	-Ns	-Nsl
i.	[kjE:dEm			kjEHIN	kElo:N]
ii.	[tEmma?	ti:mma	pEmma	HINma(?)	lo:Nma]
iii.	[kjE:dEmbi			kjEHINbi	kElo:Nbi]
iv.	[?adEmSi?	?adi:msu?	?abEntshu?	?aHINSi?	?alo:NSi?]

- i. he seizes you, he rears you, you give your name
- ii. to seize, to smoke, to put a good finish on, to rear, to give one's name.
- iii. does he seize you, does he rear you, do you give your name
- iv. he seizes us two, we two smoke it, we two put a good finish on it, he rears us two, we two gave our names.

Regardless of whether the phonetic exponency of each of these three finals, Ms, Ns, and Ns, is a cluster or a single sound, that exponency invariably contains nasality as one of its features; so the choice of the symbols M; N; and N is appropriate.

11. -Ps, -Ts, and -Ks, and their plosion/nasality alternation

One might expect a comparable state of affairs to be also true of

-Ps, -Ts, and -Ks, that all three would have plosion, or, where appropriate, affrication, as part of their phonetic exponency in all their forms, even if they too had sometimes a cluster as phonetic exponent (as in (1), (2), and (5) above) and sometimes a single sound. This is what the examples so far given suggest; e.g. (s = short quantity; l = long quantity)

	-Pss	-Psl	-Tss	-Tsl	-Kss	-Ksl
i.	[?ipSE	Ha:pSE	phO(t)ShE	phE:tShE	HI(k)khE	li:khE]

go to sleep, make --- cry, employ him, squash it flat, rock it, train him; but these examples do not give a complete picture: -Ps, -Ts, and -Ks are not as consistent, in this respect, as -Ms, -Ns, and -Ns; for they alternate in phonetic exponency between the plosion and affrication exemplified above and the nasality to be observed in the following examples: ((ii) nasal-initial consonant junction ([m-]), (iii) plosive-initial consonant junction ([b-]), (iv) fricative-initial consonant junction ([S-]), (v) interverbal junction; cols. 1, 3, 5: short-quantity roots; cols. 2, 4, 6: long-quantity roots)

	-Pss	-Psl	-Tss	-Tsl	-Kss	-Ksl
[?imma?	Ha:mma	phOmma	phE:mma	HINma?	li:Nma]	
[?imbi	kEHa:mbi	kEphOmbi	kEphE:mbi	kEHINbi	kjEli:Nbi]	
[?a?imSi?	?aHa:mSi?	?apHONtShi?	?apHe:NtShi?	?aHINSi?	?ali:NSi?]	
[HEn ?im	kEHa:m	kEphOn	kEphE:n	kjE:HIN	kjEli:N]	
[m]	[m]	[m/N/n]	[m/N/n]	[N]	[N]	

to sleep, to make --- cry, to employ, to squash flat, to rock, to train; does he sleep, does he make you cry, does he employ you, does he squash you flat, does he rock you, does he train you; we two sleep, he makes us both cry, he employs us two, he squashes us two flat, he rocks us two, he trains you; he sleeps, he makes you cry, he employs you, he flattens you, he rocks you, he trains you.

Weidert 1982 classifies these -Ps, -Ts, and -Ks roots of mine as

'nasal verb' ('/-m/, /-n/, /-n/, /N/'; 5, 9), and accounts for the plosion or affrication in vowel-initial junction as a development from an earlier nasal: 'The stem-final nasal consonant that shows up in the A quotation from changes to its homorganic voiceless stop counterpart when fused with -s-. What can be suspected at this moment is that an original fusion of two suffixes lies at the bottom of the seemingly unorthodox change from nasal to stop. The assumption of an ordered sequence of the same two suffixes where -t/d- is followed by -s- is most natural' (11).

The main obstacle to a 'fusion of suffixes' solution is that, if a t suffix is in systemic contrast with a s suffix, each suffix having a conflicting role in the morphology, it is difficult to conceive of the two as combining within a single root. Weidert is aware of this difficulty: he commends one of a number of tentative solutions as 'advantageous in the sense that a clashing together of two infixes as surmised above is avoided' (13) and as having the advantage of not having to postulate two juxtaposed proto-suffixes in verb classes (1) and (4) e.g. for '(1)', '-a(a)N-t-s, and for '(4)', '-a(a)m-t-s' (12); but, after considerable discussion, he decides in favour of treating these roots in which plosion and affrication alternate with nasality as having substituted plosion/affrication for nasality in certain of their forms as a result of introducing a -t- suffix: 'the a priori assumption of allowing a proto-suffix system containing the minimal elements  $\emptyset$  (zero), \*-t-, \*-s-, and \*-t-s-' (15).

My own view is the reverse of this: instead of postulating that such roots as these have been moving from nasality towards a mixture of nasality and plosion I take the -Ps, -Ts, and -Ks roots to have moved from complete, or near-complete, plosion/affrication to the current mixture: plosion/affrication maintained in vowel-initial junction, but superseded by nasality in consonant-initial junction and in interverbal (or word-final junction).

12. The s-final phonematic system and Tibeto-Burman comparison

Support for identifying the sort of s-final root considered in (10) above as being classifiable as -Ps, -Ts, and -Ks rather than, following Weidert 1982, as '-m-t-s', '-n-t-s', and '-N-t-s' (12, 16-18) comes from comparison with Burmese and Tibetan:

-Ps and Burmese	-p,	Tibetan	-b (s)
-Ms	-m,		-m
-Ts			-d (?from *-ds)
-Ns			-n
-Ks	-k;		-g (s)
-Ns	-n,		-n (s)
-Øs	-V,		-V (s); e.g.

	Limbu		Burmese		Tibetan
	<u>'ips</u>	sleep		<u>'ip</u>	<u>?yib</u> hide one's self (Benedict 1972, 36)
	<u>hèps</u>	wear			<u>?'kheb/khebs</u> spread over
	<u>yups</u>	tighten		<u>rup</u> take in (but contrariwise)	
	<u>cups</u>	assemble		<u>chum</u>	<u>'dzom(s)</u>
	<u>nams</u>	smell		<u>nam</u> : smell of	<u>mnam</u> smell of
	<u>tèms</u>	catch			<u>'tham</u> seize
	<u>pòts</u>	start, keep on		<u>?pru</u> do, perform	<u>spyod</u> perform, use
	<u>nòns</u>	keep by		<u>nho</u> add	<u>snon</u> add
	<u>'èks</u>	break		<u>'ak</u> crack open	
	<u>phòòks</u>	break (tr.)		<u>phok</u> burst	<u>'big(s) / 'bug(s)</u> break into
	<u>sòns</u>	sell		<u>chon</u> conduct business	<u>'tshon / btsons</u> sell
	<u>thuñs</u>	make --- drink			<u>'thuñ / 'thuñs</u> drink
	<u>sees</u>	make water		<u>se</u> : urine	
	<u>yoos</u>	satisfy		<u>rai</u> be satisfied	
	<u>nees</u>	lie down			(b) <u>sñe(s)</u> ,

The cognates are not numerous; but I believe them to be enough to justify such finals as -Ps, -Ts, and -Ks as distinct from -Ms, -Ns, and -Ns.

13. Presumed development of nasality in -Ps, -Ts, and -Ks roots.

In the examples at line (ii) of (11) above it would be possible to account for the single nasal, [m], which is the phonetic exponent of -Ps and -Ts, and [N], as the phonetic exponent of -Ks, as an aspect of the nasal type of junction: since nasality also occurs as an initial feature of the suffix lexical item ([m-, n-]), presumed root-final \*[-ps], \*[-ts], of plosion-and-friction cluster, perhaps through some such process as that shown below, whereby [-s-] develops into a voiceless nasal ([m, N]) before being voiced to [m] and [N]:

i.  $\left. \begin{array}{l} *[-ps\ m-] \\ *[-ts\ m-] \end{array} \right\} > [-p\underline{m}m-] > [-\underline{m}m-] > [-mm-]$

ii. \*[-ks n-]  $[-k\underline{N}n-] > [-\underline{N}n-] > [-Nn-]$ ; for examples of (i) see line (ii) of (11) above; and for (ii) cf. the following:

-Ps	-Ts	-Kss	-Ksl
[tho:mnE	phɔnnE	pONnE	khe:NnE

I watch for you, I employ you, I lift you up, I tie you up.

This explanation cannot, however, serve for types of junction such as those shown at lines (iii) and (iv) of (11) above, in which there is a suffix-initial consonant other than a nasal, either, at (iii), a plosive ([b-]), or, at (iv), a fricative ([S-]); so I can only suggest, here, that the features of the nasality type of junction (line (ii) might have been extended by analogy to all consonant-initial types of junction, e.g. lines (iii) and (iv). Once the cluster type of exponency had ceased to be a possibility in consonant-initial junction, the choice must have lain between a single stop or plosive, [p t k], and a single nasal,



[m n N]; and the choice of the nasal might, perhaps, have been reinforced by the nasality that would be familiar in that type of junction as part of the phonetic exponency of -Ms, -Ns, and -Ns (cf. (10) above). In fact, roots of the three types -Ps, -Ts, and -Ks (root classes 18, 9, and 11 of Sprigg 1966, 437) seem well on the way to being absorbed, respectively, into the -Ms, -Ns, and -Ns classes (root classes 17, 10, and 12); for it is only in the type of junction in which the suffix is vowel-initial that plosion survives as one of their exponents, with the result that there are phonetic criteria for distinguishing -Ps, -Ts, and -Ks roots from -Ms, -Ns, and -Ns, respectively, only in vowel-initial junction.

Even in word-final position (and, therefore, in interverbal junction) it is nasality, not plosion, that has been chosen for the phonetic exponents of -Ps, -Ts, and -Ks, [m n N], as at line (v) of (11) above, just as it is for -Ms, -Ns, and -Ns, as in line (i) of (10) above.

It is significant that a cluster cannot occur in word-final position in present-day Panthar Limbu, but only a single consonant, either (i) stop ([p k t ?]), as for -Pz and -Pt, for -Kz and -Kt, for -tz and -tt, and for -Øt and -Øz (symbolized as -Rzg and -Yzg in Sprigg 1966, 450), or (ii) nasal ([m N n]), as for -Ps, -Ms, -Mz, and -mt, for -Ks, -Ns, and -Nz, and for -Ts, -Ns, -nz, and -nt.

It is not unreasonable to suppose that Limbu formerly had consonant clusters in verb roots in word-final position, because consonant clusters are attested in the same circumstances in the Balti dialect of Tibetan, e.g.

[mI Ips] will not hide, [mI JIks] will not fear (yib, 'jigs)

In current Limbu, however, the choice, for the phonetic exponency of -Ps, -Ts, and -Ks in interverbal junction lies between a single plosive and a

single nasal; and, if I am correct in assuming that nasality had previously developed as the appropriate phonetic exponent for junction with a consonant-initial suffix in all circumstances ([-mb- -ms- -mS-]), etc.; (11) above, lines (ii) - (iv)), then that nasality would clearly have been a more appropriate feature than plosion for replacing an earlier cluster in interverbal junction too.

14. The t-final type of root, and its phonematic system.

It would be reasonable to expect that the seven-term phonematic system attributed to the s member of the three-term final system (s, t, z), namely P, K, T, M, N, N, and  $\emptyset$  (as in (8) - (11) above), should be matched by a seven-term phonematic system for the t member of the final system too. There is no difficulty in identifying six members, P, K, t, n, m, and  $\emptyset$ ; e.g. ((i) short-quantity, (ii) long-quantity; vowel-initial junction ([-E]))

	Pt	Kt	tt	mt	nt	$\emptyset$ t
i.	[tSEptE	thOktE	mEttE	jEmdE	phEndE	piRE]
ii.	[kho:ptE	la:ktE	?u tE	-	wA:ndE	pE:RE]

i. cut it, fight him, speak to him, tattoo him, untie it, give it;  
 ii. grasp it, tread on it, call him, rock him, fly; but there is no good candidate for the role of example of a seventh class, 'Nt, corresponding to the Ns of the s-final phonematic system, with junction features \*[-Nd], corresponding to the [-md] and [-nd] of the mt and nt examples above. There is, however, a poor candidate for a seventh such root class, a solitary example, in the verb lexical item in the following two words:

[HEn SE:Nk] he pants            [mESE:NktEnnE] do not pant.

The forms of this verb do not, however, make it a strong candidate for a further category, -Nt, because the root-final [-Nk] and [-Nkt-] of these two words do not conform strictly to the pattern

set by the -nt and the -mt classes, [nd-] and [-md-] (root classes 8 and 16 of Sprigg 1966, 437: e.g.

[kE:phEn] he unties you [mE:jEmdEnnE] do not tattoo him; which would require \*[HEn SE:N] and \*[mESE:NdEnnE]. Even if these words were treated as deriving their voiceless velar stops [-k] and [-k-] in something like the intrusive manner of [-k-] in the pronunciation of the English example Kingston as [kINKstɔn] referred to in (4) above, they would still be at odds with the -nt and -mt classes.

Alternatively, and probably better, the exceptional forms [SE:Nk] and [-SE:Nkt-] could be treated as onomatopoeic, and assigned to a sub-system isolated from the majority pattern of the language. In that case there will not be a correspondence in number between the seven root classes belonging to the s-final type and the six root classes of the t-final type in the Panthar dialect. It is worth noting, at this point, in support of this onomatopoeia treatment, that there is no seventh, or -Nd-, member of the t/d cluster type in Weidert 1982 (5, 9) either, and that, although Michailovsky 1979 distinguishes a NT root class (2, 16), he gives only one example of this class, an obscenity.

In the Panthar dialect the nasal terms -N, -M, and -N are less well represented in terms of lexical items than -T, -P, and -K in both t and s types of final: in the s type there are no examples of -N in long-quantity lexical items, and in the t type there are no -N lexical items, not even an obscenity, and only one example of -M, as against thirteen -Ms lexical items (and five -Mz lexical items; cf. (16) below). Further, in the z type of final (at (16) below), -N, -M, and -N are confined to short-quantity lexical items; and, even so, there are only lexical items serving as examples of -Nz. It seems reasonable, therefore, to treat the discrepancy in numbers between the six-term t-final

phonematic system and and the seven-term s-final phonematic system (and the seven-term z-final phonematic system, at (16) below) as fortuitous.

15. The t-final phonematic system and Tibeto-Burman comparison.

The number of examples of t-final cognates that I have been able to find for comparison with Burmese and Tibetan includes:

	Limbu	Burmese	Tibetan
<u>liipt-</u>	heavy	<u>le:</u>	<u>ljid-</u> heavyness
<u>'ept-</u>	fan	<u>yap</u> fan (n.)	(g.) <u>yab-</u> fanning
<u>cept-</u>	cut		<u>bcad</u> (perf.) cut
<u>khakt-</u>	get hard	<u>khak</u> difficult	<u>khag-</u> difficult
<u>makt-</u>	dream	<u>mak</u>	<u>rmañ-</u>
<u>lookt-</u>	run	? <u>rok</u> arrive, reach	<u>rgyug</u> run
<u>mutt-</u>	blow	<u>mhut</u>	<u>'bud</u>
<u>putt</u>	clench fist	<u>put</u> slap	
<u>caatt-</u>	play		<u>rtsed</u>
<u>khuunt-</u>	steal	<u>khuni</u>	<u>rkun-</u> theft
<u>pir-</u>	give	<u>pe:</u>	<u>sbyin</u>
<u>pèèr-</u>	fly	<u>pyam</u>	'byer' disperse in flight (Benedict 1972, 83, 166)
<u>phir-</u>	tread on	<u>phi</u> crush	? <u>'phyi</u> blot out
<u>nèr-</u>	be in dilemma		<u>mnar</u> be tormented
<u>har-</u>	bite	<u>hap</u>	<u>hab</u> mouthful
<u>'èr-</u>	get chapped		<u>'gas</u> chap
<u>kar-</u>	crack		" crack
<u>poor-</u>	grow		? <u>'bo(s)</u>

16. The z-final type of root, and its phonematic system.

The seven-term phonematic system of the s-final and the six-term, or, perhaps, seven-term system of the t-final types of root have been stated in (9) and (14) above; before proceeding to a brief study of

Michailovsky's -?R roots it is first necessary to state the phonematic system of the z terms of the final prosodic system, and give examples (the phonetic criteria of the z term were stated at (7) above).

The z term's phonematic system also comprises seven units; they are, in relation to the quantity system:

Short: Pz Kz tz nz Mz Nz Øz

Long:: Pz Kz tz - - - Øz; e.g.

as in a dual for; cg. (7) above)

	-Pz	-Kz	-tz	nz	Mz	Nz	-Øz
s:	[-jEp-	-lak-	-SE(t)t-	-lm-	-lEm-	-gEN-	-d <sup>o</sup> ?ə-] -d <sup>o</sup> Nt-
i:	[-Hā:p-	-be:k-	-je:t-	-	-	-	-do:-]
s:	stand, lick, kill, scold, laze, fall, dig						
i:	cry, go, laugh						

17. The z-final phonematic system and Tibeto-Burman comparison.

	Limbu	Burmese	Tibetan
<u>rep</u>	stand	<u>rap</u>	
<u>lep</u>	plait	? <u>lip</u> curl	<u>sle</u>
<u>pak</u>	scoop	<u>pak</u>	
<u>lak</u>	lick	<u>lyak</u>	<u>ldag</u>
<u>thak</u>	weave		<u>'thag</u>
<u>rut</u>	bring down	<u>rhut</u> put down	
<u>set</u>	kill	<u>sat</u>	<u>bsad/gsod</u>
<u>veet</u>	laugh	<u>ray</u>	<u>bgad</u>
<u>waat</u>	wear, put on	<u>wat</u>	<u>'god</u> adorn
<u>lin</u>	estice	? <u>lim</u> delude	
<u>thi</u>	drink		<u>'thuñ</u>
<u>si:</u>	die	<u>se</u>	<u>shi/'chi</u>
<u>hi:</u>	carry		<u>'khur</u>
<u>g'</u>	dig	<u>tū</u>	? <u>'dul</u> till (Benedict 1972, 62)
<u>ca:</u>	eat	<u>ca:</u>	<u>za/bza'</u>

18. T clusters and -?R (Michailovsky 1979)

Michailovsky is puzzled by his 'roots in -R and -?R, which in some cases seem to be related to -T and -N' (1979, 3).<sup>6</sup> In fact, in nine instances out of thirteen in his Appendix he has treated -?R as a honorary member, as it were, of what he terms the 'T-allofam' (20, 23).<sup>7</sup> His section 'Families with  $\emptyset$ - and T-allofams (or two T-allofams)', for example, includes

$\emptyset$ : T $\emptyset$ sew,	THA keep (composition only)
T: T $\emptyset$ ? R have sth. sewn for so.,	THA? R put aside.

The roots -?R of Michailovsky's analysis are given more than honorary -T status in my analysis: in (14) above they appear as fully-fledged members of the t class of final, their phonematic unit being  $\emptyset$ ; e.g. (short-quantity) [p<sub>1</sub>R-] give, (long-quantity) [pE:R-] 'fly'. This means that I classify the Panthar-dialect root [tha?R-] 'keep', corresponding to Michailovsky's THA?R, as - $\emptyset$ t, or, rather, since it is short-quantity, as - $\emptyset$ ts. There is no root in my data corresponding to his THA; but, if there were, I should expect to classify it prosodically as z-final, with  $\emptyset$  as its phonematic unit, i.e. as - $\emptyset$ z, in accordance with my classification of [t $\emptyset$ j-/t $\emptyset$ :-] as - $\emptyset$ z in (16) above. The relationship of THA versus THA?R would then be one of z versus t, corresponding closely to Michailovsky's intuition. Indeed, superficial changes in his symbolization can make the relationship even clearer: (i) Michailovsky 1979 treats open-syllable roots, such as THA and T, as having 'final consonant  $\emptyset$ ' (2); but this  $\emptyset$  is not overtly symbolized in his roots; if it were to be, THA and T $\emptyset$  would be symbolized as THA $\emptyset$  and T $\emptyset$ ; (ii) his root-final '?' in '-?R' is in complementary distribution with - $\emptyset$ , the former being followed only by 'R', and the latter being never followed by any other symbol; so '-?R' could be re-symbolized as - $\emptyset$ R; (iii) 'R' in the proposed - $\emptyset$ R is in complementary distribution with 'T', as in -PT, -TT, -KT, -MT, -NT, and -NT; it could therefore be re-symbolized as T, whence - $\emptyset$ T, a change that is, in any case, advisable on account of the honorary 'T-allofam' status of -R that I have referred to above, with the

advantage that THA $\emptyset$  and T $\emptyset$  would appear in opposition to THAT $\emptyset$ T and T $\emptyset$ T (and '-?R' in Michailovsky's 'complete list of final consonants or clusters' would need to give place to  $\_ \emptyset$ T); (iv) this  $\_ \emptyset$ T derived from '-D?R' is confined to short-quantity syllables; the complementarily distributed long-quantity final consonant symbolized as 'R' (Michailovsky 1979, 2) in '-:R', would also need to be re-symbolized as  $\_ \emptyset$ T, and could be distinguished from the short-quantity  $\_ \emptyset$ T by using Muchailovsky's long-quantity symbol ':', whence  $\_ : \emptyset$ T versus  $\_ \emptyset$ T, e.g. MA:R and TE?R (Michailovsky 1979, 17, 16) re-symbolized as MA: $\emptyset$ T and TE $\emptyset$ T; (v) Michailovsky's ' $\emptyset$ -allofam' is not overtly symbolized: 'HA:P itr. "weep" is the  $\emptyset$ -allofam (in spite of its final -P) of the family HA:P/HA:PT/HA:PS' (2); but if HA:P were to be overtly symbolized as an example of the  $\emptyset$ -allofam, that 'fam' would appear as HA:P $\emptyset$ /HA:PT/HA:PS; correspondingly, his open-syllable roots THA and T , for which I have proposed, at (1), that the ' $\_ \emptyset$  consonant' be overtly symbolized, whence THA $\emptyset$  and T $\emptyset$ , would then have to be re-symbolized as THA $\emptyset\emptyset$  and T $\emptyset\emptyset$  (versus THA $\emptyset$ T and T $\emptyset$ T). The former  $\emptyset$  of  $\_ \emptyset\emptyset$  in, for example, T $\emptyset\emptyset$  would be in phonological contrast with such other final consonants as -P, -T, -M, -N, and  $\_ N$ , while the latter  $\emptyset$  of  $\_ \emptyset\emptyset$  would be in allo-fam (morphological) contrast with -T and -S. As one would expect in an article directed towards the allo-fam relationships, all the open-syllable roots in Michailovsky 1979 are also examples of  $\emptyset$ -allofam, and could, therefore, be symbolized with  $\_ \emptyset\emptyset$ ; but not all  $\_ \emptyset$  verbs in Limbu are  $\emptyset$ -allofam 'transitives are in all minority among verbs with  $\emptyset$ -postfinal that have T- or S-allofams, not among all verbs with  $\emptyset$ -postfinal' (5). There might, then, be an advantage, for easy reference, in using a different symbol for the allofam from the postfinal,  $\emptyset$  for one of them, perhaps, and Q, Z, X, or some other unneeded letter of the alphabet, for the other.

Such Panthar z-final roots as [Si:-] die, [ph0:-] knit, [t $\acute{O}$ (:)-] dig, and [m0(:)-] dig, for example, could be put into Michailovsky's ' $\emptyset$ -post-final' class but not into his  $\emptyset$ -allofam class, as SI: $\emptyset$ , PH $\emptyset$ : $\emptyset$ , T $\emptyset$ , and  $\mathcal{M}\mathcal{Z}$ , but not as SI: $\emptyset\emptyset$ , etc. His grouping of roots by 'family' has no

relevance to these four, and other such non- $\emptyset$ -/T-/S-fam roots; they are non-fam.

19. Long quantity and short quantity in  $-\emptyset z$  roots.

In Sprigg 1966 I made the mistake of classifying the root [tOj-/tO:-] 'sew' (Michailovsky's T $\circ$ ) and [wAj-/wA:-] 'be' as short-quantity (436, 437), through giving undue importance, as a phonetic criterion, to the marked shortness of vowel that I had observed in certain of their forms; I now realize that this shortness is confined to the type of junction in which the suffix has a (syllabic or non-syllabic) initial vowel ([-O(j)-, -Aj-]; Sprigg 1966, 436; cf. (7) above). I also now find that, in its re-considered role as a long-quantity root, [tOj-/tO:-], contrasts, in quantity, with the short-quantity root [tO(j)-/tO(:)-] 'dig', mainly through a difference in phonation, 'normal' versus ligamental phonation; and so does [mOj-/mO:-] 'get drunk' with [mO(j)-/mO(:)-] 'dig':

	vowel-initial junction	consonant-initial junction
l:	[tOjE      tOjUN?      ?adO:su?      tO:ma?]	
s:	[t <sup>o</sup> O(j)E      tO <sup>o</sup> ?əjUN?      ?adO <sup>o</sup> ?əsu?      t <sup>o</sup> O:ma?]	
l:	sew it, I sew it, we two sew it, to sew	
s:	dig it, I dig it, we two dig it, to dig	

The above two, [t<sup>o</sup>O(j)-/t<sup>o</sup>O(:)-] and [m<sup>o</sup>Oj-/m<sup>o</sup>O(:)-], are, in fact, the only short-quantity examples of this, the  $-\emptyset z$ , type (root class 21, Y(z), of Sprigg 1966, 449-50) in my data; but I take them to be enough to make it necessary to distinguish them, as  $-\emptyset z$ s roots, from the above long-quantity ( $-\emptyset z$ l) roots [tO(:)-] 'sew' and [mO(:)-] 'get drunk', and from quite a number of long-quantity roots corresponding to Michailovsky's  $-\emptyset$  class. If I were to follow him in using ':' to symbolize long quantity, Panthar lexical items such as [tOj-/tO:-] 'sew' and [tS-/tSa:-] 'eat' would be distinguished by this ':' symbol, as T $\circ$ :( $\emptyset$ ) and CA:( $\emptyset$ ), from T $\circ$ ( $\emptyset$ ), from 'dig' and M $\circ$ ( $\emptyset$ ) 'dig'.



Michailovsky's  $\emptyset$ -allofam and T-allofam examples may be compared, as regards quantity, as follows:

TA	come,	JU	come down,	KHE	quarrel	
TA:T	bring,	JU:T	bring down,	KHETT	quarrel over sth.	obj. (15),
KO	be burned	(17),	T $\emptyset$	sew		
-			T $\emptyset$ ?R [T $\emptyset$ T]	have so.	sewn for so.	obj. ,
THA			keep (only in composition),	KU	carry	
THA?R [THA $\emptyset$ T]			put aside,	KU:TT	have so. obj.	
					carry sth.,	
KH	worship (spirits)			CA	eat,	
KH $\emptyset$ :TT	exorcise (spirits)	from so. (obj.),		CA:TT	feed,	
SA	deliver,					
SA:TT	deliver sth. to so. (obj.)	(20).				

Michailovsky's open-syllable ( $\emptyset$ -allofam) examples are all short-quantity; so too, are three of his T-allofam examples; but the majority are long. The Panthar  $-\emptyset z$  cognates, on the contrary, are all long-quantity,  $-\emptyset z l$ , and therefore correspond in quantity to the related  $-\emptyset t$  roots: (phonetic form appropriate to junction with  $-ma$  for the  $-\emptyset z l$  roots, and to junction with  $[-E]$  for the  $-t z l$  and  $-t t l$  roots)

i.	[ta:-	ju:-	khe:-	t $\emptyset$ :-	ku:-	t $\emptyset$ sa:-]	$-\emptyset z l$
ii.	[ta:R-	ju:R-]					$-t z l$
iii.			[khe:t-		t $\emptyset$ sa:t-	sa:t-]	$-t t l$
i.	come	come down	quarrel	sew	carry eat	-	
ii.	bring	bring down					
iii.		claim		-	feed	guide.	

20.  $-\emptyset R$  and  $-S$  as T-allofam and S-allofam

$-\emptyset R$  appears again in its T-allofam role in Michailovsky's section 'Families with T- and S-allofams' (23), in which his  $-\emptyset R$  is paired, this



21. -R and -S as T-allofam and S-allofam (intransitive and transitive)

Michailovsky 1979 assigns  $\emptyset$ -allofam and S-allofam roles respectively to -R and -S in his section 'families with  $\emptyset$ - and S-allofams' (17-19); e.g.

-R( $\emptyset$ ): PER itr. fly                      SOR itr. wake up  
 -s:        PHES tr. cause to fly    SOS tr.        "        " ;

but he adds the observation: '[perhaps should be placed in A4a below]' (18), i.e. in the section entitled 'Families with T- and S-allofams', and in the sub-section entitled 'T-allofam intransitive or deponent'.

From my point of view the latter alternative is preferable. Michailovsky's 'final consonant' R would then have honorary T-allofam status; and I should find it tempting to re-symbolize his PER and SOR, for example, as PET and SOT, or, more consistently, consistently, PE $\emptyset$ T and SO $\emptyset$ T, in morphological contrast with PES and SOS (re-symbolized as PE $\emptyset$ S and SO $\emptyset$ S); but any such re-interpretation would lead to conflict with the re-symbolization of -?R as - $\emptyset$ T advocated at (18) above; e.g. T $\emptyset$ ?R and PE?R as T $\emptyset$ T and PE $\emptyset$ T. It would confound Michailovsky's short-vowel final -?R examples with his short-vowel final -R examples, with the result that his PE?R 'vomit on' (23) would be identical with his PER 'fly' (18), both being re-symbolized as PE $\emptyset$ T (this identification would not, however, apply if his 'fly' example were spelt PE:R, as it is on p. 26).

22. Quantity in -R roots (- $\emptyset$ T v. -: $\emptyset$ T)

In my Panthar material the symbolization problem does not arise, because there are only two categories, short-quantity in - $\emptyset$ t versus long-quantity, where Michailovsky has two short-quantity and one long-quantity (-?R, -R, -:R); his -?R forms regularly correspond to Panthar short-quantity forms; e.g.

TE?R take away,    THA?R put aside,    NA?R desist                      -?R  
 [te?R-                      tha?əR-] keep,                      [nE?R-] be in a dilemma, - $\emptyset$ ts;

his -R and -:R forms, on the other hand, correspond to my long-quantity -Øt (-Øt1) examples as follows:

sh.: POR, PER, HER, SER, SOR, JOR;

l.: PHI:R, MA:R, I:R, HO:R, SO:R

l.: " , " , " , " ;

e.g. [po:RE, pE:RE, He:RE; phi:Ra]; grow! fly! get dry! it shrank.

In the Panthar dialect, then, provided that long quantity were symbolized, by a colon as in Michailovsky 1979, perhaps, or by doubling the vowel symbol as in Weidert 1982, there would be no difficulty in symbolizing Michailovsky's -R and -:R roots as -:ØT; in which case his POR, PER, and PHI:R, for example, would appear as PO:ØT, PE:ØT, and PHI:ØT (or pooØt, etc.).<sup>8</sup> In this long-quantity type of root it would be possible to assign an intransitivity function to the -T as opposed to the -S.

### 23. Quantity in -S roots (-ØS v. -:ØS)o

All Michailovsky's examples of -S roots, thirty-six in number, are symbolized as short-quantity; but the ten cognate roots in my Panthar data are all long-quantity except one, [pES-], which is in any case suspect (for short-quantity -Øs roots cf. (2.b) and (8) above):

sh.: MAS, HIS, PHES, PHIS, PHES, SES, KIS, LAS, KHAS, PES, + 26

l.: " , " , " , " , " , " , " , " , " ;

sh.: " ;

e.g. [mEpHE:sjEnNE do not make ---- fly, [Se:SE] urinate!

? [pE(:)SE] get sick!

The Panthar long-quantity root [PE:R-] 'fly' is, therefore, in the same quantity category as its matching causative [phE:s-] 'make ---- fly' (they might be symbolized as PE:ØT and PHE:ØS); and so are [mɔj-] and [mɔ·S-], 'get drunk' and 'get ---- drunk' respectively (-Øz1 v. -Øs1).

### 24. -Ø and the final system (s, t, z), and Weidert 1982.

My observations on Michailovsky 1979, and especially the morphological significance of his final consonants and clusters -R, -?R, and -S in relation to his  $\emptyset$ -, T-, and S-allofams ((18)-(23) above) largely depend on associating the three terms of my final system, s, t, and z, through a common phonematic unit - $\emptyset$ . Stated in (8) above I recall that association here: (i. long quantity, ii. short quantity)

- |     |    |          |         |        |             |           |           |          |
|-----|----|----------|---------|--------|-------------|-----------|-----------|----------|
| i.  | s: | [-s/S]   | [Se:SE  | Se:ma  | ?aSe:su?    | jo:?a?    | kEjo(:)?] | [-V:/V]  |
|     | t: | [-R]     | [pE:RE  | pE:ma  | ?abE:Si?    | PE:?a?    | kEbE:]    |          |
|     |    |          | [-Vj]   | [kujE  | ku:ma?      | ?agu:su?  | ju:?a?    | kEju:]   |
|     | z: |          | [C-]    | [tSE   | tSa:ma      | ?adza:su? | wA:?a?    | kEwA:?)  |
| ii. | s: | [-s:/S:] | [lES:E  | lE:ma? | ?alE:su?]   | -         | -         | [-V:]    |
|     | t: | [-R]     | [pI'RE  | pI:ma? | ?abi?Si?    | pi??a?    | kEbi?]    | [-V:/V?] |
|     | z: | [-V(j)]  | [tO(j)E | tO;ma? | ?adO?ə:su?] | -         | -         | [-V:/V?] |

- i. urinate, to urinate, we two urinate, he satisfies me, he satisfies you;  
fly, to fly, we two fly, I fly, you fly;  
carry it, to carry, we two carry it, I come down, you come down;  
eat it, to eat, we two eat it; I stay, you stay;
- ii. know it, to know, we two know it;  
give it, to give, he gives us two, he gives me, he gives you;  
dig, to dig, we two dig it.

As far as long-quantity roots are concerned. Weidert 1982 advances a very similar analysis:

- |  |   |       |
|--|---|-------|
| '11. -aa-s   | } | VOWEL |
| 12. -aa-t  |   |       |
| 13. -aa- $\emptyset$ ('absence ("zero") versus presence<br>(-t/d-, -s-) of suffix elements' (12) |   |       |

e.g;

inifinitive sg. impv. 1st p. sg. fut. English gloss

'11. seema?	seesE?	seesuN?	urinate
12. pEEma?	pEErE?	pEE-a	fly
13. caama?	cE?	caN?	eat (9)
14. kuuma?	kuyE?	kuyuN?	carry' (14).

It is only in vowel-initial junction that Weidert's two classes 13 and 14 differ from each other; and I have shown above (7) that they are complementarily distributed in relation to lip-rounding and lip-spreading; consequently, his two classes are equally members of my  $-\emptyset z$  class.

A dearth of material compared with my Panthar data has prevented Weidert from dealing comparably with short-quantity roots, in terms of his categories  $-s-$ ,  $-t-$ , and  $-\emptyset-$ , corresponding closely to my root-final classes  $-\emptyset s$ ,  $-\emptyset t$ , and  $-\emptyset z$  above: he has no short-quantity forms suitable for treating as  $-s-$  or as  $-\emptyset-$ , but only forms suitable for  $-t-$ ; e.g.

'(10)  $-a?-t-$  GLOTTAL' (12), e.g.

'(10) ha?ma? ha?rE? ha?ruN? bite' (9).

Because of this absence of contrasting short-quantity  $-s-$  and  $-\emptyset-$  forms he goes on, in a section on 'Reconstructed Proto-Limbu Verb Class morphology' (18), to distinguish this class sharply from his 'class 12-t':

'10	*CV[ <u>t</u> p/t/k/]s-t > CV?-d	CV?r-
12	*CVV-t	CVVr-' (18).

His classes 10 and 12 correspond to my short-quantity (s) and long-quantity (1) root-final  $-\emptyset t$  class as follows:

	Weidert	Sprigg
10	CV?r-, e.g. ha?/ha?r-	$-\emptyset ts$ , e.g. [ pi' / pi' R / pi' ?- ]
12	CVVr-, e.g. pEE/pEEr-	$-\emptyset t1$ , e.g. [ pE:/pE:R- ] ;

his class 11 merges the short- and long-quantity members of my root-final  $-\emptyset s$  class as follows:

Weidert	Sprigg
11 CVss~CVs~CVVs, e.g. see/sees-	-Øss, e.g. [lE:/lES:-]
	-Øsl, e.g. [Se:Se:s-];

and, finally, his classes 13 and 14 have no examples corresponding to the short-quantity members of my root-final -Øz class, whence the following correspondence:

Weidert	Sprigg
13 C(V)-, e.g. caa/c-	-Øzs, e.g. [t <sup>0</sup> :/t <sup>0</sup> (j)-]
14 CVV, CVy, e.g. kuu/kuy-	-Øzl, e.g. [ku:/kuj-], [tsa:tS-]

Michailovsky 1979 and Weidert 1982 have helped me to arrive at a fairly large-scale revision of my previous analysis, Sprigg 1966 (limited, for the most part, to short-quantity lexical items), through acquainting me with data from other dialects, and through a close examination of the morphological role of -s and -t.

#### NOTES

1. The revised version of a paper of the same title presented, in summary form, at the 4th Annual Conference of the Linguistic Society of Nepal, Tribhuvan University, Kathmandu, December, 1983. For specially devised symbols see Appendix I.
2. I have used 'tongue front' as a phonetic term to cover the three parts of the tongue (as active articulator) tip, blade, and front, in association, respectively, with the teeth, the alveolus, and the hard palate, as in: [t, n], in opposition to 'tongue back', or velar ([k, g, N]).
3. For 'cavity friction' see Pike 1943: 'voiceless resonance of a chamber as a whole by air going through it as through an open tube' (71); for the vowel quality cf. Sweet 1877:

'By weakening the different point and blade consonants a variety of vowels may be found, which are not included in the regular scheme of vowels. - - - A weakened [z] gives a vowel that has the effect of a very forward [eh] (I.P.A. [ə]), being in fact the "blade" vowel most nearly corresponding to [eh], and bearing the same relation to [eh] as [z] itself has to [j]' (Henderson 1971, 115).

Cf. also the alternation in Nepali between [s-] and [-H-] for the lexical item [s/HAt], e.g. [sattari] 'seventy' and [ekHattar] 'seventy-one', though, in the case of [H], the cavity friction is accompanied by, and masked by, local friction in the glottis (arytenoidal friction) and by voice (cf. Sprigg 1978, 12-15).

4. The absence of aspirated affrication as a word-initial possibility to match the word-initial non-aspirated affrication that appears in examples such as: [tsUmma?] 'I meet', [tsɔ:] '(he) ate it' (from \*[tsa:u:]), and the example [tsa:ma?] above appears to be due to the very reverse of the process by which I have sought to explain the development of aspiration within the word: an earlier word-initial aspirated (voiceless) affricate \*[tsh] would appear to have developed into a (non-aspirated) voiceless fricative ([s-]), perhaps through a weakening of the plosive element giving rise to \* [ssh] and \*[sh] as intermediate stages. Michailovsky 1979 gives six examples in which he associates his root-initial S with TS as members of a transitive-intransitive pair; e.g. 'TSUPS itr. "gather", SUPS tr. "gather"', 'TSONT itr. "fall over", SONT tr. "Fell, knock over"' (25). This would make his S- in certain lexical items a reflex of \*TSH-.

5. These two fricatives are necessarily voiceless; for voiced fricatives do not occur in Limbu, except for [z] as an occasional fast-tempo variant of the affricate [dz,] e.g. [mEza?tEnnE] 'do not feed him', 'do not play'.

6. Limbu books, in the Kiranti script, also show some confusion in spellings with r-; but in their case the confusion is with l-, e.g. sap-ra for sap-la 'book'. Probably the reason for this is that, apart from



loan-words such as ra-ja 'king', [l] and [R] are complementarily distributed: [l] is restricted to initial position in lexical items, and can occur in word-initial position; [R] is restricted to the final position in lexical items, but does not occur in word-final position; e.g. [lE:RaN] 'he stretched me', [kElE?ERu?] 'you stretch him', but [kE:lE?] 'he stretches you'. Chemjong 2018 V.S. gives only one page of entries with word-initial r.

7. 'I have adopted Jim Matisoff's "allofam" for "member of a word family", and his sign to indicate this relationship. In most of the finals - - - the formal difference between the allofams lies in the postfinal element. Thus when I refer to the Ø-, T- or S-allofam of a family, I am referring the postfinal not to the final: HA:P itr. "weep" is the Ø-allofam (in spite of its final -P) of the family HA:P/HA:PT/HA:PS; HA:PT tr. "mourn" is the T allofam of HA:P (or of the family), etc.' (2-3).

While I recognize that his fellow specialists owe a considerable debt to Matisoff for introducing the terminology of procreation into Tibeto-Burman studies, through 'tonogenetic' (Matisoff 1970) and 'the "organic" approach to linguistic comparison' (Matisoff 1974-5), he should not lead us into miscegenation: the etymological bastard 'allofam' should be replaced by some such term of pure lineage as allogene or allophyte.

8. Michailovsky has symbolized his short-quantity root PER 'fly' (18) as long-quantity (PE:R) on p. 26; the long-quantity symbolization is supported by Weidert 1982:

'12 pEEma?, pEErE?, pEE-a' (9).

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## Appendix I

Phonetic symbols specially devised as substitutes for the symbols of the International Phonetic Alphabet

ʔ	(voiceless) glottal stop or plosive
S	voiceless alveolo-palatal friction
J	voiced palato-alveolar friction
K	voiceless uvular friction
H	voiced arytenoidal (glottal) friction
R	" alveolar tap
N	" velar nasal
<u>N</u>	" palatal nasal
	voiceless velar nasal (section 13 only)
<u>m</u>	" labial nasal
E	voiced syllabic front spread vowel, half-open
ʊ	" " back rounded " , close to half-close
I	" " front spread " , " " "
O	" " back rounded " , open
A	" " " spread " , "

The 'Whodunit' or mystery/detective story is a popular form of Literature in the West and this type of thriller has produced names that are virtually household words in the English speaking world - from Sherlock Holmes to Agatha Christie. The basis of such stories is the unfolding of events and characters which lead to the identification of the actor in some crucial event - murder, theft or some other crime. The reader or listener is kept in a state of tension trying to identify this actor from various clues revealed by these events and descriptions. This tension is not just caused by a conscious battle of wits, with the reader trying to identify this participant before the identify is revealed by the author. Rather I believe it is basic to our understanding of any speech that we try to form a reasonably coherent picture of events being described by a speaker. And if a key participant is left blank then we tend to feel uncomfortable until it is filled.

The identification of participants in events being described is an important part of speech. Note that the term 'participant' does not necessarily refer to just humans - it may refer to things and even events. But by far the most important entities spoken about are in fact humans. The only major discourse type where humans tend to be in the background is scientific prose. Even here, scientific works often give quite a lot of prominence to people - discoverers, inventors and so on.

Because persons are by far the most important type of participants, what I have to say will be largely limited to humans.

In speaking about identification, it should be pointed out that identifying phrases and expressions have very different functions, according to the character of the discourse in which they are found. One major distinction is between fact and fiction. In factual discourse,

identifying expressions such as noun phrases, relative clauses, deictics etc., seek to relate participants in events to real people. Take, for example, the following:

"Joe Brown met the original owner of the Boulevard Restaurant yesterday."

Here, if this was a factual statement the phrase "the original owner of the Boulevard Restaurant" identifies a real-life person. In fiction however, the same kind of adjectival phrases and clauses are used, not to identify participants, but to create them. If the sentence given just now were from a novel, the description of the person whom Joe met would be part of the creation of a character, perhaps a major one in the story.

Although this difference in the function of a descriptive expression for fact versus fiction is a basic one, in practice it is not so important because fictional description, while not seeking to identify participants with actual persons, usually does nevertheless seek to identify these characters with a real class of people. One result, however, of the difference in function between the two discourse types is that in fiction, the physical appearance of the characters, especially the main ones, is often described in detail, whereas in biographical material there may be little or no such description. The reason for this is, as I have already mentioned, that the fiction writer is in fact creating a person, whereas the factual speaker or writer does not have to do this. If I said "The President of the U.S. is coming here tomorrow." I probably don't need to tell you that, first of all he is a man, and also an ex-film-star, tall, greying etc..

Another factor which brings factual and fictional description closer in practice, is that often in factual discourse the exact identification of participants is not of interest to the hearer. Take a news item:

"There was a fire in the President Hotel this morning.

A school boy saw the smoke as he was passing."

Here the fact that the boy was John Jones of 61a Severn St. is not really of any great interest, except perhaps to his parents and school friends.

One area where exact identification is of vital importance is the court of law. Here it is absolutely necessary to identify exactly, and without ambiguity, the participants in a criminal event - not just the Agent that committed the crime, but also the Patient.- That is, the victim must be exactly identified - in the case of a mistaken identity of the victim the case would probably fail, even if it was proved that a murder had been carried out by the accused.

So far we have been talking about identifying participants in a discourse with their real life referents - noting that this is only meaningful in factual discourse. But the term 'participant identification' is used by discourse grammarians to refer to a somewhat different, though not unrelated notion - that of identifying a participant in one clause of a discourse as being the same as a participant in or preceeding or following clause. This is what we may call cohesive identification. Note that this is not the same as identifying a real life referent.

"There was a fire at the President Hotel yesterday. A school boy saw the smoke as he was passing so he went to the fire station and informed the man on duty. Later the fire chief commended his action."

Cohesive identification is complete and unambiguous - but not real life identification -- we don't know which school boy. We need to keep in ~~mind~~ this difference or else there will be confusion.

How then in speech is identification made ?

For real-life identification the law court is the best place to start ~~case~~, as I said - identification must be exact. And here we find

identification by name, place of residence and age. There may be more than one Joe Smith in a certain country, even city, but not likely at the given address unless it is his own child - then age will identify him. The identification by name, address and age is possibly the reason why authorities are uncomfortable about nomadic gypsies who have no fixed address, name or age. Even with settled people these three means of identification has problems - hence the suggestion of number to each individual. Note that the length of description does not really give precise identification - unless it includes a completely unique feature. A bank robber could be described as about 5' 10", with dark curly hair, black beard, slight squint, broken nose - but this still could not unambiguously place him.

Simple deictics are in fact much more exact - " This man was the bank robber" - identification by direct pointing can be accepted as evidence in law.

Speech involves both types I have mentioned - real life and cohesive identification and the same constructions - relative clauses, noun phrases, pronouns etc., are used for both - hence the common failure to distinguish them. It is because of the double function of these devices, especially of pronouns, that it is impossible to give purely cohesive or syntactic rules for their use. If pronouns were only used cohesively it might be possible. But I could be sitting next to a complete stranger at a football match and say to him, without ever having spoken to him before: "He scored that beautifully, didn't he ?". However a radio announcer, describing the same game, or a reporter writing about it, cannot say this unless he has made previous statements which would allow the hearer to identify the one scoring the goal.

Is it possible then to give any rules that cover every, or almost every situation ? It is possible to find rules, but as might be expected, not in the form of formal syntactic statements. The best

approach that I have seen comes from Chafe (1976). A first attempt would be to say that a pronoun can be used to refer to a certain participant if that participant is "given". However, it is clear that given can not mean simply previously mentioned. In the example about the fire you cannot add -- "It was completely destroyed", meaning the hotel. Chafe states that an item is 'given' if the speaker can assume the participant to be in the consciousness of the hearer at the time of speaking." Perhaps it is best to call this 'immediately given' in contrast to 'previously mentioned'. This comes close to providing a rule, albeit a psychological one, which does work - as in the example of the football match, where the use of the pronoun 'he' is appropriate for the spectator but not for the commentator. That is, the speaker can assume the hearer to be conscious of something (the hearer) is looking at. However, immediate givenness, if a necessary condition, is still not a sufficient condition for the use of a pronoun form. Consider the sentence:

"Bill, Mary and Joe were late for the party. After parking the car they hurried in."

Here the third person plural pronoun can be appropriately used because Mary, Joe and Bill are immediately given - having just been named, they can be assumed to be given.

But see what happens if the group is split. We find that we cannot appropriately use a pronoun in the following situation:

i) "Bill, Joe & Mary arrived late. He hurried in while the others parked the car."

But we can get away with:

ii) "Bill, Joe & Mary arrived late. She hurried in while the others parked the car."



It is clear that something more than immediate givenness is needed, such as what I have termed -'selective givenness'. A participant is selectively given when:

- i) it is immediately given.
- ii) the speaker can assume that the hearer will assign that participant, and to no other, its correct role in the event.

Really what we are saying is that the conventions of speech allow the speaker to use pronouns only if the hearer can adequately picture the event. Take the example --

"Joe and Mary were driven by Bill to the party. He parked the car while the other two went in."

There is no problem here because the hearer will automatically assume that the driver will park the car. Another interesting example --

"The porter gave Joe his bags at the hotel door. He tipped him and went up to his room."

Why is there no real problem with identification of participants in this example? It is because we know that it is travellers who tip porters and not vice versa. The pronoun is allowed because of common cultural knowledge about the behaviours of travellers and porters. Interestingly this example is more or less the equivalent of a Chinese one given by Charles Li to illustrate the occurrence of zero reference in Chinese. It would seem that similar rules to those for English pronoun usage might apply to zero references in Chinese. This is not really surprising since conventions of adequate speech are hardly limited to any one language or language family.

But what these examples show is that the appropriate use of pronouns in English and the zero reference in Chinese is, in the last resort, determined by cultural knowledge, not merely linguistic facts. I say "in the last resort," because of course many usages of pronouns can be

defined by linguistic rules, such as: -" if a participant is referred to by a nominal form in one clause it may be referred to by a pronoun (or zero) in the next clause." Such rules can explain many examples (e.g. the use of pronouns in the case of the boy and fire above) but as we have shown, it can not help with examples such as the traveller and the porter, or the football match.

Another identificational device which is also in final event culturally determined, is the use of the definite and indefinite article. As you know, the correct use of the definite article is something that many non-mothertongue English speakers find difficult. Newspapers whose English is otherwise of a high standard will often have sentences such as, "There will be eclipse of moon tonight." or "Many persons attended rally in Delhi."

The rule for the use of the definite article in English is that the speaker will use a definite article along with a Noun Phrase referring to a participant if he assumes that the hearer can identify the participant with one he has already encountered at sometime, or with a person or thing conventionally associated with such a participant. An Example:-

"A group of tourists left London by sea last month. When one of the passengers died suddenly the captain conducted the funeral." the chaplain  
\* the bishop  
a bishop

Note that the condition 'encountered at sometime' is in no way limited to the immediate discourse context. I could begin a speech to an entirely new audience with -" The rings of Saturn are believed to consist of frozen gas--" provided I assumed they knew of Saturn's rings. If I knew the audience had never heard of such rings I might begin. "The planet Saturn has rings surrounding it.....".

The difference between condition for pronoun (i.e. selective givenness) and the definite article (participant must be pre-encountered or 'old') can be seen by contrasting "Give him his dogfood now." and "Take the food out now." spoken to a child watching an actor on TV. In both cases the child could know that he is to give the food to the dog - but the first is odd because the speaker cannot assume that the dog is in the consciousness of the child. The second is perfectly allowable if feeding is a regular event at that time.

A lot more could be said about problems of identification in speech, and about 'old' and 'given' information, but I think that what I have said gives some idea of what we have to deal with if we are to discuss cohesive devices such as pronouns and articles in the most general way. That is, we have to speak in terms of rather intangible things such as 'speaker assumptions' and the 'consciousness of the hearer.'

In summary, then we have talked about 'participants' - the real or imaginary persons, things and events which play a part in situations that we want to describe in speech. We have also made a distinction between 'real life' and 'cohesive' identification, and again 'immediately given', 'selectively given' and 'old' participants. All this must be taken into account if we are to describe the conditions for determining 'whodunit'.

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# A Psychological Study of Gurung Language\*

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## Problem:

The purpose of this paper is to report the language learning, vocabulary development, communication skill, inner speech pattern, linguistic creativity, speech pathology, and dream language (imagery) of the Gurungs.

## The Gurung Language

Language as a symbol system and as a process of thinking is critically important way of handling information. The Gurungs call their language 'Tamu - Kye'. It belongs to the Bodic division of Sino-Tibetan language spoken in the central west of Nepal. The first published material on the Gurung language is by Hodgson (1847), and after him the linguistic studies on Gurungs by Hunter (1868), Beames (1868), Brandreth (1878), Konow (1967), Burton-Page (1955), Pignede (1966), Glover (1969, 1971), Hinton (1970), Glover (1970, 1972), Landon (1975), and Messerschmidt (1976) are very important.

All native Gurungs are bilinguals. They can speak Gurung as well as Nepali languages. But all the eastern Gurungs of Rumjatar are monolinguals, who speak only Nepali language. This reflects two different ways of life and world views between western native Gurungs and the eastern migrated Gurungs. ✓ Language shapes personality to some extent as G. Murphy (1947) says. However, how the Ghale Gurungs who are monolinguals and speak their original language differ from other Gurungs has yet to be investigated.

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Several researchers like Vigotsky (1962), Whorf (1956), Lenneberg (1954), Luna (1959, 1966), Berlyne (1963), Kohlberg (1968), and Brown (1963) have studied the cognitive aspect of language learning of children. In the area of language development the works of Piaget (1928, 1950, 1952), McNeill (1966), Brown (1957), and Menyuk (1963, 1964) are of considerable importance. Speech pathology like stuttering is studied by West et. al (1939); Johnson (1944, 1946), and Meltzer (1944).

Dreams often represent wish fulfillment (Freud, 1900) and have reflections about the personality of the dreamer. The language of dreams is symbolic as to Descartes (1596 - 1650) insights in geometry came to him in a series of dreams (Chaplin and Krawiec, 1963).

Sample:-

Life history of 60 Gurungs were recorded.

125 Gurung mothers were interviewed for socialization of children. 100 Gurung adults between the ages of 20 to 91 years and 30 adolescents were individually tested on the Rorschach test. The dreams of 89 Gurungs were also recorded. The subjects were drawn from Lamjung, Tanahu, Gorkha, Rumjatar, and Chitwan districts of Nepal.

Individual	N
1. Mothers' interview.	125
2. Life history record	60
3. Observation of behavior (6 months to 8 years)	86
4. Rorschach test protocols (100 adults and 30 adolescents)	130
5. Dreams	89

### Nature and the type of data sought:-

In this assessment procedure demographic records, life history, Rorschach-test responses and dreams collected and analyzed to delineate empirically the language learning and development of the Gurungs on individual basis. The child-rearing practices in Gurung culture through the interview of mothers on six drive systems (oral, excretory, sex, aggression, dependence, and achievement) were investigated. Interviews were supplemented with the objective observation of behavior of children. Investigation of socialization through child-rearing practices was adapted from Sears, Maccoby, and Levin (1957). Rorschach ink-blot test was adapted on the basis of previous researches of Hallowell (1938), Bleulers (1935), DuBois (1944), Spiro (1947), Cook (1942), Wallace (1952), Asthana (1956, 1963), Ray (1957), in various other cultures. Dream analysis technique was adapted after Hallowell (1941), Cordington (1891), Lee (1958), and Kohlberg (1966).

### Procedure:-

125 Gurung mothers were interviewed individually by the researcher himself. Similarly 130 respondents were administered Rorschach test in an experimental condition. Their dreams, life histories and demographic data were also recorded systematically.

### Results and Discussion:-

Gurung children are reared in a matrifocal environment. Mothers are the chief caretaker and disciplinarian of their children. They played a central role in the context of language learning. Demand feeding, gradual weaning and good oral socialization leads to no fixation of libidinal energy at the oral level of psychological development. They exhibit no biting, chewing, and ingesting behaviour pathology. Overt expression of aggression is extremely rare. Training in independence is greatly encouraged in this society. There seems to be much less linguistic inhibition practised relative to the expression of the affectional behavior.

Out of 86 children, 25 were studied for vocabulary development by the direct observation procedure. Mothers reported that their children had two worded vocabulary at the age of one and half years. At the two and half years' age, each baby had spoken approximately twenty different words. The range, however, was from 4 to 80 words. Infants' first words were related to parents, domestic pets, foods, furniture, and a few action concepts. The two-word phrases of Gurung children consisted of one or two subject words and a modifier or operator word. They did not utter a phrase consisted of two modifier words. Similar findings were reported by Shirley (1933) for American children. But the process of vocabulary development of Gurung children is comparatively slower than the American children. Smith (1926) also had studied general trend in vocabulary growth with age progression. Girls were more loquacious than the boys. This growth trend is consistent with Werner's (1950) hypothesis that word meanings and usage develop from the concrete toward the abstract. This is confirmed by the speech protocols obtained from the Rorschach test, their scores revealed very high concrete (form) vocabulary (77.97%) then abstract vocabulary for colour (6.13%) and movement (1.22%). They produced a large number of form responses including high poor forms ( $F^-$ ), and animism (98%). This suggests low ego-strength and control. Their productive resources of language development appear rather meagre. They showed very less creative dynamism for language due to paucity of inner resources. Their speech was highly saturated with uncontrolled emotion and more vista words (63%) showing strong feelings of inferiority. This feeling was emphasized by the sublimatory responses of religious words (54%), and Botany words (55%) indicative of their adjustment to the difficult situation. Children showed lesser whole responses due to poor gestalt. Development of perceptual experience is gradual and children showed a steady growth with age in this direction.

A composit gestalt word (W response) for an ambiguous unstructured stimulus like Rorschach card was not reported by any child at the age of 5. The unknown configuration of Rorschach blotches were too complex for Gurung children. However, the life histories revealed no speech pathology like stuttering. Perceptual clarity (icons) and communication skill develops after the age of 5. Thus the preoperational Gurung child (Piaget, 1967) develops concrete schemes in various forms of imagery. Rorschach scores revealed that the Gurung children showed no human enactive (action) images (Bruner, 1964). Their speech contains very few animistic enactive representation only. Thus their speech responses are poor in motor schemas. Dreams also reflected some psychological characteristics of their inner speech. Dreams of women and girls were realistic, predominant in the task imageries. Verb (action) imageries excelled the noun (percept) imageries. In men and boys, noun (percept) imageries were predominant. Their dreams are the concrete projections of ecological and cultural conditioning (Kroeber, 1952) and personality expression. Their dreams can be considered as a "mirror of their practical, realistic, task oriented, simple conscience" (Devereux, 1951; Eggan, 1952; and Wolff, 1952) where positive cathexis was higher than the negative.

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Khyali: A Creative Embedding of  
Linguistic Change into the Matrix  
of Limbu culture\*

Abhi Subedi

The Limbus are one of the best known tribes of Nepal. They number about 150000 and are spread on the territory situated between the river Arun and the eastern frontier comprised of the six districts known as Taplejung, Sankhuwasabha, Terathum, Panchthar and Ilam. Two hundred years ago they practically occupied the area. These days they are the minority in that area. Recently there has been a resurgence of interest in the study of the Limbu culture and language.

The Limbus occupy an important place in Nepalese history. The main reason for this position is that the Limbus have been associated with the famous Sen dynasty which was defeated by the Gorkhali soldiers of king Prithvi Narayan Shah in the eighteenth century in the process of the unification of Nepal. The most important point about the Limbus as people is that they have long resisted the cross-cultural influence for over 200 years. If we look carefully into the social structure of the Limbus and above all into their daily life and rituals we can find a unique culture and a language belonging to the Tibeto-Burman family and a corpus of mythology binding the people together. However, after centuries of cross-cultural contact the Limbus have gradually begun to accept the dominant Hindu culture. Various aspects of the dominant culture have been embedded into the matrix of the Limbu culture. We can notice this process very clearly in the linguistic assimilation. Nepali the lingua franca of the kingdom of Nepal spoken by about 52 per cent population as their first language is making its way spontaneously into the Limbu language system producing almost a code-mixed variety of Nepali, which, in other words

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reflects the changing social structure in the Limbu area under the influence of the dominant culture. This paper makes an attempt to show this process as reflected in the contextual nativization of Nepali language. A variety of social communication known as Khyali is selected for the purpose.

Rhythmic verbal repartee may be employed for pragmatic communication. A rhythmic chanting does not only serve the aesthetic purpose, but it also functions as a medium of social discourse. The verbal alliterative exchange known as khyali in Terathum and in the neighbouring districts is one such medium that serves as an effective medium of communication. Such exchange will be described first as a medium of pragmatic discourse, and secondly, and more importantly, as an indicator of spontaneous embedding of Nepali code into the paradigm of the Limbu culture.

Khyali is a Nepali word generally used to refer to amusing verbal repartee that is either chanted or said with a quick tempo or a fine modulation of voice. But the khyali that is described in this paper only covers the metrically defined verbal exchange that takes place between Limbu girls and boys prior to or even after a dance known as dhannach. Such repartee is often invented on the spot. But a skilled person can acquire a large repertoire of khyalis said on previous occasions to acquire dominance upon the partner over the exchange.

Khyali is said as an invitation by boys to girls, sometimes by a boy to a girl, for dancing the dhannach. Usually, the Limbu boys and girls meet at the end of the market day. As the market crowd thins out considerably, the lads generally approach the girls who would also be hanging around in the same anticipation, or for other reasons, and extend invitation to dance. The girls would not readily come down to the dancing ground. Such shyness or reluctance of the girls will prompt the boys to speak to them in a polite manner. The speech gradually becomes

figurative and takes the form of khyali which the lads start by invoking the spatio-temporal atmosphere. The Limbus' great respect for their women folk becomes manifest even in this social gesture. Usually, the lads and the girls meet for the first time. Naturally, thus, each party treats the other as strangers, and, by the same token, the girls tend to be more shy. Modesty is extolled as a great virtue in such exchange.

In such situation pretty long period of silence may follow, and there will be an attempt to break the silence from both parties. During such intervals the girls and boys speak to each other in Limbu language itself. So the side-talk and the very personal conversation between the female friends and the boys will take place in Limbu itself. Sometimes the two parties fail to synchronize their behaviour as they encounter each other, and such situation will be avoided after the endeavour of the boys themselves. The two parties treat each other with a great deference. They maintain a certain spatial distance or proximity which will be about five to six feet. In the initial stage even the boys try to avoid a direct eye-contact, but as for the girls they may try to avoid the eye-contact until the familiarity has increased considerably.

In the verbal game the role relation is almost equal, but usually the boys take the initiative. If the girls fall silent the boys will be at pains to break the ice. The theme of the repartee is thus a kind of persuasion or courting by the boys. This is also a way of knowing the girl in more familiar terms which eventually can also lead to marriage. Thus each dual verbal game can also be regarded as what Bales (1950, quoted by Argyle 1967) calls 'socio-emotional acts'. Usually, the sessions become pretty long. As the familiarity between the two parties increases they will experience stress caused by the efforts to accommodate themselves into a more intimate situation. In such situations they may break the repartee in Nepali and speak in Limbu

language itself. The consent of the girls is often signalled by facial expressions, pupil dilation etc. The boys will interpret the signals and lead the girls to the dancing ground.

Khyali sessions are also regarded as courting by the people of other social groups. For the Brahmins and Kshetris and even for other ethnic groups, among whom such practice is not common, the khyali and dhannach appear to be too bold, and the Limbu culture of courting women as too far-fetched gesture. But such prejudices are often the result of failing to see the nuances and the discreetness of the culture.

The khyali sessions have, however, some features of courting, but the courting, if it is that, has very unique features. Linguists have analyzed courtings among different people. The communicative significance of the various courting rituals have been presented by linguists as features of communication or 'socio-emotional' gestures. Here I would like to present a couple of examples from the study of courting as communication made by linguists to highlight upon the unique features of the khyali and its relationship with courting.

Basso (in Giglioli 1972) describes Apaches courting ritual. Among the Apaches courting may occur in any variety of settings, and any time of the day or night, observable in large gatherings - in ceremonies, wakes, and rodeos. In Apache courting silence plays a dominant role as the most important factor of communication. Conklin (Hymes 1964) describes the Hanunoo courting system, which involves the travelling of the group to other hamlets. Once they get into the house of the girl an exchange of metaphorical lyrics starts. The couples lie down next to each other for several hours and continue the serenading or even engage in sexual play. Khyali has some features of courting but it is a uniquely creative occasion. The khyali sayers draw tremendous aesthetic pleasure from the verbal game.

The khyalis often evoke the atmosphere, the season, the nature, the sun, morning breeze, the evening breeze, the rivers, rocks, jungles and the market. Khyali is an intense creation of the significance of the occasion. The khyali sessions are the semiotics of the culture of a society that is founded upon the equal rights of men and women, and the respect of the women folk. The khyali sessions are thus the meeting points of the most important aspects of the social ethos. That is why, the participants in khyali tend to be very creative on such occasion. The girls should not force to break the block laid down by the boys. So a duet ensues in persuasion of the either party's intentions in this manner:

thalthalai pani khetai bhayo  
katiramro hajur bhetai bhayo  
kagajai lekhi kasto bhandekhi  
phultiipi layanyun jyu subba sahib  
hajur subba sahib hajur saharma basne thaharma khane  
hami kunama basne dunama khane

Terraces are brimming with water  
What a chanced meeting with such lovely ladies  
Like writing on a clean sheet of paper here  
We have tucked flowers  
You are the respected gentlemen, you live in town  
And eat off large plates  
We live in far off corners and eat off leaf-lates.

The khyalis often tend to be very alliterative and rhythmic, with four to five syllables in each line, and the shortness is metrically defined. Sometimes the khyalis do not express the intention of the speaker and become a mere game of word jugglary:

dhankuta dhansar

uhi ansar

cheparako jibro

uhi manasibro etc.

The translation of the alliterative syllables will only produce a jingle almost absurd in its content. But such a jingling repartee will create a mood effective for evoking the atmosphere and enlivening the process of communication. Spatio-temporal features abound in the khyali. The syntax of the repartee is simple. The locative adjuncts are prominent like, 'over the rock', 'on the bank of the river.' 'in this beautiful evening', 'in the market place', etc. The khyali is, in other words, a polite speech full of metaphors used to evoke the intensity of the occasion. Thus the syntax of khyali is characterised by the swiftness of rhythm to synchronize with the temporal feature.

The khyali is a functional figurative speech which is closer to poetry in its structure. It is a creative discourse which hangs together by the presence of the addressors and the addressee, and the turn-taking of the communicative event. The channel of communication between the two parties is a highly figurative language, and the visually perceived body motion. The parties use linguistic and even para-linguistic codes, from the body movements, smiles, avoidance of glances and giggling and so on. The settings of the khyali are socially recognized and permitted places that could be anywhere, and the form of the message is a specially organized on-the-spot verbal repartee on a rhythmic style. The topics of the discourse are persuasion and dodging; offer of love and shyness to accept it. So, on the whole, the khyalis are such speech events as are recognized by the society as the expressions of social ethos. The most important linguistic feature of such discourse is the use of Nepali language as the medium of khyali followed by the breaks when the partners engage in conversation in Limbu language. Khyalis show the transformation of Limbu code into Nepali language on a creative occasion such as this.

dholaki baja kebongbe  
saffodik langmale thebongbe

The process of embedding is spontaneous. Nepali comes into the system as an integral part of the discourse-

lekali pani sembharklo  
dukhiko binti hembharklo

In the above example the subject nominal cluster is in Nepali and the predicate and complement in Limbu. More instances-

udeko chari pemuphala  
hekyanso age themuphala

In the khyali said by educated lads and girls, especially in the repartee of the lads even English appears in the system:

I am very sorry kathaibari  
kathaibari lekhi tahandekhi

And in the repartee of an irate lad who has not been able to convince a girl for dancing, English appears to serve the rhythmic purpose in this manner:

chainako desha communista (for communist)  
sakkiyo binti finista (for finished)

The khyalis are said in idiomatic Nepali as well. The following instances show the final embedding of Nepali into the cultural paradigm. So the following verses of khyali show a tendency to accept the culture, in this case the Hindu culture, as expressed in the Nepali idiom:

pokhari kamal dubepachi  
dhartimathi ubhepachi  
chandiko pustak thelaima  
bhet bhayo sasu melaima



chiso hai pani tato pari  
 tatohai pani rato pari  
 ratobhako chiya selaun bhanchu  
 nautunai maya khelaun bhanchu

The lotus flower having drowned into the lake  
 And having stood on the ground  
 Keeping the holy book of Chandi on the threshold  
 Met the mother-in-law in the fair  
 Changing cold water into hot water  
 Changing hot water into red water  
 Feel like cooling down the red-tea  
 Feel like playing with the new love

This is almost a literal translation which does not entirely convey the sense of the rhythmic verse.

Let us see more closely the linguistic structure of the khyalis, as represented by the following paradigm-

A linguistic configuration of switching and mixing in khyali and palam: a case of foregrounding:-

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Scale of	code-mixing	grammatical	foregrounded
mixing and		functions	features
switching			

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Text - cohesive	<u>tutuding garnutu-</u>
and coherent	<u>myangsare</u>
with Nepali	<u>yaklading gar</u>
discourse	<u>nusuhang sare</u>
	gai pali rachan

Scale of mixing and switching	code-mixing	grammatical functions	foregrounded features
	<p>sunā-sorle bachan  <u>bimanship menna</u>  <u>mansip a</u>  <u>biyagya menna so</u>  <u>angya panna</u>  gangajal bata jamma  jal pari...</p>	<p>complex sentence</p>	<p>foregrounding of the proposition by means of rhythmic alliteration</p>
Clause	<p>i. pareba ghurcha  tinaighari  dinehari <u>menchang</u>  chinaighari.</p> <p>ii. chinghari <u>saffa</u>  <u>veribari</u></p> <p>iii. athani laghar  <u>heke bhagar</u></p> <p>iv. dholakibaja <u>kebongbe</u>  <u>saffoding langmale</u>  <u>thebongbe</u></p>	<p>subor. clause</p> <p>predicate insertion</p> <p>subor. clause</p> <p>complex sentence</p>	<p>imperative (persuasion)</p> <p>advice (persuasion)</p> <p>condition (persuasion)</p> <p>interrogation (persuasion)</p>
Group	<p>sepilopata toribari  chinghari <u>saffa</u></p>	<p>NP insertion</p>	<p>temporal</p>
Word	<p>dholakibaja <u>kebongbe</u></p>	<p>re-duplication</p>	<p>lexicon (by reduplication)</p>

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Morpheme	cheparako jivro uhi manasibro	inflectional adaptation	lexicon (by hybridizing the Nepali word by adapt- ing it into Limbu phonological system
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All the underlined examples are in Limbu.

The linguistic structure of khyalis and palams can be explained on the basis of the above paradigm. However, the complete Limbu or complete Nepali texts do not necessarily have to be explained in this manner.

The linguistic features as represented in the structures along the hierarchical scale tend to suggest that the contextual nativization of Nepali embodies such mixed features as may be very instrumental in driving home the message of the addressor. The items that from the communicative point of view are very important, are foregrounded by the device known as mixing. Thus the foregrounded elements in the khyali are in Limbu code itself. The fact that the khyalis use mixing and switching as the communicative device to suit the occasion of its use underscores the tendency to assimilate Nepali in Limbu or vice-versa. The linguistic features of khyali and palam make it clear that the code-mixed variety under study is not a mere linguistic game, but a stable and constant communicative style devised by the native Limbu people, thus showing a gradual approximation of Nepali language and the Hindu culture into their linguistic and cultural system. Let us take another example here:

man mile mato, chitta mile chanai  
ramsyali jhyasang allojyasang...  
mulpani khaunki, bhal-pani khaun  
sristi gaun ki saraswoti gaun.

In this instance there is not only the embedding of Nepali language into the Limbu system but a cultural adaption as represented by the use of the Hindu goddess of learning Saraswoti in the above verse. It is important to remember here that the Nepali speaking immigrants in Limbu area were Hindus, which explains the reason for the occurrence of Hindu deities in the code-mixed varieties of khyalis and Palams.

The phenomenon of the use of Nepali code in khyali suggests a creative embedding of linguistic change in the matrix of Limbu culture. This process can be explained as a curious case of spontaneously taking language as ritual. Nepali is accepted as a cultural semiotics and is gradually embedded into the system of Limbu culture. In other words, Nepali is allowed to enter glibly into such 'socio-emotional act' as the khyali, palam and dhannach of the Limbu culture.

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Census and the Linguistic Survey of Nepal  
Perspectives on Language Use

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There is no remarkable change in the language entries of the 1981 Census of Nepal. They remain as they were in the 1971 census, except for Thakali, with a total number of 5,289 makes a surprising entry. The census again quotes language names like Bhote-Sherpa, Rai-Kirati and Satar and Santhal. This is a wrong practice and has been pointed out before (Subba 1974). Bhote-Sherpa is not one language. They are two different languages. Rai-Kirati is a covering term for several varieties of Rai speech. Satar and Santhal happen to be one language, in fact. Santhal is never used in Nepal even to describe the ethnic name. Such basic mistakes create scientific errors when the national census report could be the only authentic document for reliable reference.

The Linguistic Survey of Nepal Project during the period 1981 to 1983 completed a survey of the Eastern Development Zone in sixteen districts. One of the major tasks of the survey was to identify various language names obtained as mother tongues in the informants' data sheet on the questionnaires. This was done with a view to prepare a scientific linguistic profile of Nepal. The identification of mother tongues in the survey and the mother tongue entries in the census shows a gap which could demand our attention for a correct description of the language situation in Nepal. The present paper deals with the language situation in the most densely populated Terai districts of Morang and Jhapa out of the sixteen districts of the Eastern Development Zone of Nepal.

Jhapa in the Mechi Zone (population 932,625) has a population of 479,743. The other districts in this zone are Ilam (178,356), Panchthar (153,746) and Taplejung (120,780). The Koshi Zone has a total population

of 1,423,624, of which Morang has 534,692. The other Kozi Zone districts are Sunsari (344,594), Dhankuta (129,781), Terhathum (92,454), Sankhuwasabha (129,144) and Bhojpur (192,189).

The Linguistic Survey of Nepal recorded the following mother tongues in Morang and Jhapa.

### Morang

1. Indo Aryan:

Assamese, Bangla, Bantar, Bhojpur, Danuwar, Dusad, Gangai, Hindi, Kebrat, Khawas, Koiri, Majhi, Maithili, Marwari, Muriyari, Mushar, Muslim (Seikh), Mohamaddan, Nepali, Rajbansi, Shah, Sudi, Tajpuria, Tharu, Urdu.

2. Austo-Asiatic (Munda Group)

Satar.

3. Dravidian.

Uraon.

4. Tibeto Burman.

Kirati Group:

Bantawa Rai, Thulung Rai, Chanling Rai, Kulung Rai, Sangpang Rai, Limbu.

Tibetan Group:

Sherpa.

Others: Tamang, Magar, Newari, Dhimal, Burmese. No Gurung, No Thakali.

Jhapa:

1. Indo-Aryan:

Assamese, Bangla, Bantar, Bhojpuri, Bihari, Barei, Danuwar, Gangai, Giri, Hindi, Kanwar, Kisan, Kurmali, Kebrat, Kurmi, Kamar, Maithili, Makra, Majhi, Marwari, Miya, Mura, Mushar, Nepali, Oriya, Pyaju, Rajasthani, Rajbansi, Sadri, Tajpuria, Tati, Teli, Tharu, Urdu.

2. Austro Asiatic (Munda Group)

Satar, Munda.

3. Dravidian

Oraon, Tanil.

4. Tibeto Burman:

Kirati Group: Athpare Rai, Bantawa Rai, Chaling Rai, Dilpali Rai, Duni Rai, Kohi Rai, Kulung Rai, Lohorong Rai, Hechali Rai, Sunpang Rai, Thulung Rai, Limbu and Sunwar.

Tibetan Group: Bhotia, Sherpa, Lepcha.

Others: Tamang, Magar, Newari, Manipuri, Dhimal, Burmese.

No Gurung, No Thakali.

The question is why has the census put most of these languages under "others" and entered only a few in the mother tongue. Table 12 or can the survey establish linguistic validity for the separate identity of all recorded mother tongues?

There are extralinguistic causes for the density of population in Morang and Jhapa contributing to design linguistic mosaic in the area. Considering the pan-Nepali context, Morang and Jhapa could be described as developed districts, Mahendra Raj Marga and the link roads have made most of the village panchayats accessible by modern transport. Socio-political and economic changes have introduced rapid growth of active administration, migration, trade - commerce and industries. Native languages of the area like Rajbansi, Danuwar, Dhimal, Satar, Meche, Oraon, Tharu and many varieties of Maithili and Bhojpuri dialects have come into closer contact with languages like Nepali, Newari, Tamang, Magar, Rai, Limbu, Sunwar, Sherpa and Bhote. Bangla, Oriya, Rajasthani, Tanil, Marwadi, Hindi and Munda have been introduced during the course of trade and industrial expansion. Assamese, Burmese and Manipuri have been recorded as mother tongues by those who natively speak the Nepali language, but came into temporary contact with these languages during



the service period in army.

There also exist a large number of speech varieties in several village panchayats of these districts. They have never been noticed or recorded before. These panchayats could be located from the bottom fringe of the Chure tange to the extreme south and south east bordering Bihar and West Bengal, Bantar, Barei, Bihari, Dusad, Danuwar, Gangai, Giri, Kanwar, Khawas, Kisan, Karmali, Kebrat (Kyabrat), Kurmi, Kamar, Makra, Majhi, Muriyari, Miya, Mushar, Musalmani, Mura, Pyaju, Sardar, Shah, Sadri, Sudi, Tajpuria, Tate, Teli are the names of the mother-tongues recorded by the survey in Morang and Jhapa spoken by nearly one third of the total population.

The survey has collected the primary data as their speech samples. Correct classification, genetic relationship and skeleton grammars are also aimed at by the survey. But immediate data reveal that most of them are the dialects of Maithili, Bhojpuri and Rajbansi.

Rajbansi itself is a dialect of Bangla and is known as the northern dialect spoken by Baya Bengalese in the districts of Jalpaiguri, Siliguri and Purnia. Tajpuria and Gangai are sub-dialects of Rajbansi. They seem to have developed local and caste variations.

Mother-tongues under the labels like Pyaju, Miya, Mussalmani or Mohammadan and Sudi have been recorded. The speakers can easily be recognised as Muslims. Their speech is a mixture of Maithili and Bhojpuri. The speech variation developed due to culture and traditions between the Hindus and the Muslims. It is observed that some of the Muslim speakers have recorded Urdu as their mother-tongue. This is a cultural reaffirmation only. Going through the Urdu questionnaires it is seen that the speech does not vary except in few lexical items like Urdu recorders have given "darwaza" for "kewar"/door and "makan" for "ghar" i.e. house.

Kamar, Kebrat, Sadri, Barei, Mushar are some caste dialects of Maithili, Kurmali, Kurmi, Teli, Tali, Bantar (Sardar), Giri (Makra), Kisan (Mura) are also some of the caste dialects of Bhojpuri. In fact, all of them could be called Bihari dialects as Grierson did in the Linguistic Survey of India. He gave a broad name 'Bihari' to languages like Maithili, Bhojpuri and Magahi. May be it is not appropriate to call these dialects found in Nepal by that name.

Kanwar and Khawas bear remarkable lexical resemblance to Nepali. It is a case of speech convergence between Terai dialects and Nepali, Kanwar and Khawas claim that they are 'Ghartis' who have Nepali as their native speech. When slavery was abolished the forefathers of Kanwar of Khawas came down to Terai with a dream to start new lives. The descendents of these 'Ghartis' over a century got socially uplifted by marriage and new names and as a result of culture and language contact there gradually emerged a new speech (Weinrich).

It is also seen that the same language may be known under different labels in different places; sometimes the difference may be only in nomenclature like Bantar (Sardar), Giri (Makra), Mura (Kisan), Mohammadan (Musalman), Mohamaddan (Seikh, Musalmani), or sometimes it may be dialectal difference. In many cases the impulse is to give the name of the caste as that of speech like Teli, Tati, Mushar, Dusad, Kewat/Kebrat, Majhi, Kurmi, Shah, etc.

Diversity of dialects in Jhapa and Morang is observed as correlation between castes and dialects as seen above. Hasty conclusion can be drawn that there may exist interlanguage and intralanguage barriers in communication or all language variations can be interpreted as lack of communication. But, the study of language use shows that this is not true in multi-lingual areas like Jhapa and Morang.

Appearance or disappearance of folk speeches, hence their records in censuses or surveys are language phenomena like variation, boundary

and loyalty or fluidity.

Language boundaries are difficult to be established in language situations such as observed in Jhapa or Morang where panchayat boundaries get changed under political pressure and where language and culture contact points are extensive. Convergence or divergence features are common. Even geography of the region has changed. The notion of a large stretch of forests or big rivers is remote now when talking about intelligibility barriers. Consequently, chronological explanations regarding language boundary has become impossible now. People having varieties of speeches in Jhapa and Morang could not have lived together without talking to each other. People continue to use their own language and as the need arises they pick up other language. Grassroot bilingualism developed in many villages even in genuine multilingual settings.

When languages come into contact varieties are sure to occur. Variations develop two ways when different languages diverge or converge. Geography, context, social structure, ethnicity, role of sex, are other factors for the development of language variation.

Dialects from Indo-Aryan family have been greatly influenced by cultural characteristics like social caste division and religion. We have seen that upper caste Bhojpuris and Maithilis do not speak Bantar and Mushar though Bantar is Bhojpuri and Mushar is Maithili or how Miya and Pyaju have come to be a different dialect? Ethnicity is also a strong factor for marking variation. The Tharu speech in Morang is not really a different speech from that of the Maithili speech, and the Tharus have never recorded their mother-tongue as anything else than Tharu. so much so that their ethnicity beats some distinction in their type of speech. The role sex is very important in the orthodox Hindu or Muslim society. Women definitely speak a code exclusive to themselves even though this code can be restricted in social use.

It is observed that among various dialects of Maithili and Bhojpuri there exists mutual intelligibility. They have borrowed common features from each other to the extent that no rigid communication barrier remains. Despite the diversity of different language structures, there has been a considerable convergence of linguistic structures at colloquial level. In fact, this interdialect contact situation prevails over a large area in Jhapa and Morang. Against the multilingual background such an area could be defined as a sprachbund or linguistic area.

In many instances the group loyalty or the language loyalty plays a big role in the birth or death or the long life of a mother-tongue. People like Rais, Limbus, Tamangs, Magars and Newars do not easily give up their native speeches in favour of another when they migrate from their native place to another. Their affiliation or solidarity to their ethnic group is symbolised by their loyalty to their mother-tongue.

People like Thakalis and Gurungs are the opposite cases. With their strong support to their ethnic groups, they do not show loyalty to their native speech as soon as they leave their native place. In Jhapa and Morang, the survey could not obtain single Gurung or Thakali speech data when there are many on Rai, Limbu, Tamang, Magar and Newar. But the census gives numbers of Thakali and Gurung speakers in Jhapa and Morang. This shows that the census has given entries to some languages when they are not used and languages in vital use are not included.

Such radical emphasis on languages in use or disuse could be explained by social values for group identification or social or political pressures.

Factor like language loyalty or tendency for maintenance of mother-tongues in social groups lends support for keeping a language

vital or alive. Census being a government operation, considerations like political pressures, or social values have to be accounted for. Nonetheless so many dialects vitally spoken by the masses cannot be discarded by labelling 'others'.

May be they do not have social attributes like autonomy, historicity or standardization (Ferguson), but what is more significant is the social attribute like vitality which unrecorded languages of Jhapa and Morang have.

If the census cannot recognise speech varieties because of common divergent or convergent features in them which tend to create certain amount of fluidity in them, it is a matter of great linguistic relevancy for further enquiry in Jhapa and Morang.

Such phenomena like speech variations, language boundary diffusion and language consciousness or allegiance prevail in all multilingual societies. They persist even beyond Jhapa and Morang in the other Terai districts of Nepal.

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1981 Census

Table 1

Languages	Speakers	Percentage
Nepali	8,767,361	58.3
Maithili	1,668,309	11.1
Bhojpuri	1,142,805	7.6
Tharu	345,685	3.6
Tamang	522,416	3.5
Newari	448,746	3.
Awadhi	234,343	1.5
Magar	212,681	1.4
Gurung	174,464	1.1
Rai-Kirati	221,333	1.4
Limbu	129,234	.85
Bhote-Sherpa	73,589	.48
Rajbansi	59,383	.03
Satar	22,403	
Danuwar	13,522	
Sunwar	10,650	
Thakali	5,289	
Others	764,802	
Total Population -	15,022,839	

Table 2

Morang		Populations 534,692
Languages	Speakers	Percentage
Nepali	272,900	51.
Maithili	102,606	19.
Tharu	33,772	6.3
Rai-Kirati	13,058	2.4
Rajbansi	11,538	2.1
Limbu	10,509	1.9
Tamang	6,692	1.2
Magar	5,105	.95
Newar	5,027	.94
Satar	4,755	1.3
Santhal	2,267	
Bhojpuri	3,120	.58
Gurung	1,727	.32
Bhote-Sherpa	699	
Danuwar	433	
Sunwar	136	
Thakali	97	
Awadhi	57	
Others	60,194	11.2
Total Population	15,022,839	

Table 3

Jhapa		Populations 479,743
Languages	Speakers	Percentage
Nepali	8,767,361	58.3
Maithili	1,668,309	11.1
Bhojpuri	1,142,805	7.6
Tharu	545,685	3.6
Tamang	522,416	3.5
Newari	448,746	3.
Awadhi	234,343	1.5
Magar	212,681	1.4
Gurung	174,464	1.1
Rai-Kirati	221,333	1.4
Limbu	129,234	.85
Bhote-Sherpa	73,589	.48
Rajbansi	59,383	.03
Satar	22,403)	.01
Sunthal	5,804)	
Danuwar	13,622	
Sunwar	10,650	
Thakali	5,289	
Others	764,802	5.
Total Population	15,022,839	