NEPALESE LINGUISTICS

Linguistic Society of Nepal

Estd. 1979

Office Holders: 1986-87

Dr. Rameshwar P. Adhikary	President
Dr. Yogendra P. Yadava	Vice-President
Mr. Nirmal Man Tuladhar	Secretary
Mrs. Geeta Khadka	Joint-Secretary (Office)
Dr. Novel Kishore Rai	Joint Secretary (General)
Mr. Devi Gautam	Member
Mr. Kashi Nath Tamot	Member
Mr. Madhav Pokhrel	Member

NEPALESE LINGUISTICS

Chief Editor

Abhi Subedi

Editors

Dr. Shreedhar Lohani
Col. J.P. Cross
K. B. Gurung
Hemanga Adhikari

Nepalese Linguistics, Vol. 4

November 1987

CONTENTS

****

THREE PROBLEMS IN BANTAWA RAI PHONOLOGY
(AND THREE UNORTHODOX SOLUTIONS)[1]

R. K. SPRIGG

I. Recapitulation: the t, s, and z prosodic categories, and the phonematic units P, K, T, M, N̲, N, Ø, and L.

At the 6th International Conference of the Linguistic Society of Nepal, in November, 1985, my topic was a phonological analysis of (monosyllabic) verb lexical items in the Bantawa Rai language, but confined to features of their final, comprising the syllabic vowel and, where present, a following post-syllabic vowel, consonant, or consonant cluster. Consonant clusters occur in only one out of several types of junction of the verb lexical item with a following particle lexical item.

A. Types of junction

For some verb lexical items as many as five different types of junction need to be distinguished, because the final of those lexical items has been observed to take five different phonetic forms. The lexical item meaning 'tell --- to kill', for example, in table (1) column (3), has a consonant cluster ([-tt-]) in one type of junction, while in other types of junction it has a single consonant ([-t- -?- -d- -t]); this same lexical item has an alveolar place of articulation for its consonant or consonants in four of its types of junction ([-tt- -t- -d- -t]), but glottal ([-?-]) in the fifth; it has voicelessness in four of its types of junction ([-tt- -t- -?- -t]), but voice in the fifth ([-d-]), a stop articulation in two types of junction ([-t- -d-]), plosion in two others ([-tt- -?-]), and, in the remaining type, in which the lexical item is final in the word ([-t-], either stop or plosive according as this lexical item is followed by a pause, or, if not, by a consonant or by a vowel. These five phonetic variants, then, comprise: [-tt- -t- -?- -d- -t]; each is appropriate to that lexical item in a different type of junction; and each is complementarily distributed by type of junction.

Not all types of lexical item show a fivefold phonetic difference in final: the -M type, for example, in the t prosodic type of piece (Table 1, column 4) shows only two such distinctions, [-mt- -m(-)]; but, even so, for easy comparison, all five types of junction

are distinguished in Tables 1, 2, and 3. The first type (line 1) applies to junction in which the (verb) lexical item in question is immediately followed by a particle lexical item beginning with a syllabic vowel, e.g. [-ttV-] in Table 1, column 3; the second applies to junction in which a particle lexical item beginning with a nasal consonant follows, e.g. [-tm-] in that same table and column; the third to junction in which a following particle begins with a non-syllabic vowel ([-?j-]); the fourth to junction involving a voiced initial plosive in a following negative) particle lexical item ([dd-]); the last to interverbal junction ([-t C/V-]), in which the relevant (verb) lexical item is final in the word in which it occurs, and may be followed by another word, which may begin with a consonant ([C-]) or a non-syllabic vowel ([j-w-]), or with a syllabic vowel ([V-]); or it may be followed by a pause between utterances (and, possibly, by a change of speaker).

B. The three prosodic types of final piece, and their symbols t, s, and z

Table 1 shows the five complementarily distributed sets of junction features for a class of verb lexical item that can be distinguished from the other two classes on the prosodic (or syntagmatic) grounds that its final in junction of type 1 (line 1) contains a cluster that associates an alveolar plosive ([t]]) with a preceding stop or nasal consonant: [-pt- -kt- -tt- -mt- -Nt- -nt-]; Table 2 shows the contrasting final features of a second prosodic class of verb lexical item that has, in junction of type 1 (line 1), either (i) a consonant cluster that associates a sibilant (voiceless alveolar fricative) with a preceding nasal consonant, or (ii) a single sibilant (voiceless alveolar or alveolo-palatal fricative) associated with a preceding vowel, either syllabic or post-syllabic: (i) [-ms- -Ns(j)-]; (ii) [-V(:)s- -e:S-u/O/aiS-]; and Table 3 contains the remaining class of verb lexical item, those whose finals, in junction type 1 (lines 1-2), have either (i) a single consonant, or (ii) a non-syllabic vowel syntagmatically associated with a preceding syllabic vowel, or (iii) a syllabic vowel, either long, or short and followed by a (post-syllabic) close or closish back rounded vowel, further followed by a non-syllabic close front spread vowel: (i) [-Vm- -VN- -Vl- -VR- -Vn-], (ii) [-Vw- -V(:)j-], (iii) [-V(:)- -EUj-/-AUj- aUj- -oUj-].

Choice of symbols

I chose the phonological symbols t and s for the two types of final piece shown in Tables (1) and (2) respectively on phonetic grounds: each of the two prosodic symbols t and a serves as a reminder of a crucial set of phonetic features, [t] and [s] respectively, in their phonetic exponency. In Table 1, line 1, the phonetic symbol [t], for a voiceless alveolar plosive, occurs as the final sound

[t], for a voiceless alveolar plosive, occurs as the final sound of all seven clusters, [-pt- -kt- -tt- -mt- -Nt- -nt- -tt-]. Similarly, in Table (2) line (1), the phonetic symbol [s], for a voiceless alveolar fricative, occurs as the final sound of the two clusters [-ms- -Ns-], and the final sound of the sequence [-V(:)s-] (the sole remaining type of final, the sequences [-V:/iS-], contains a fellow sibilant of [s], namely the voiceless alveolo-palatal fricative [S]).

For consistency it would have been preferable to use a symbol with phonetic implications for the remaining term in the final system; but the phonetic exponents of this term, in Table (3) lines (1) to (3), contain a variety of single consonants, [-m- -N- -1- -R- -n-], and non-syllabic vowels, [-w- -(:) j-], and even a syllabic type of vowel final, [-V(:)-], with no common phonetic element to serve as a reminder of what sort of phonetic exponents to associate with this third prosodic term. In the absence of a serviceable phonetic symbol I have had to resort to an entirely different naming principle; I have used the letter z, partly because, like x and q, z is a symbol that is not likely to cause confusion through being used in the phonetic transcription, and partly, perhaps, because z is the initial letter of zero, though I do not thereby wish to suggest that the z term is different in status from the t and the s terms; on the contrary, all three are equal members of a single closed system based on differences in syntagmatic relationship.

C.   The phonematic units P, K, T, M, N, N, O, and L

Further distinctions need to be made in each of the three prosodic classes, the t, the s, and the z, giving rise to the seven columns in Tables (1) and (2), for the t and the s types of piece, and the eight columns in table (3), for the z piece. The distinctions that these columns illustrate are phoneme-like; they distinguish a set of seven phonematic units common to the t, the s, and the z type of prosodic piece: P, K, T, M, N, N, and Ø. The principle followed in symbolizing these phonematic units is again phonetic as regards the first six: the P symbolizes a phonological unit for which the phonetic features bilabiality and plosion are common phonetic exponents; the K unit commonly has velarity and plosion as its phonetic exponents; the T, similarly, has alveolarity and plosion; and the M, N, and N have nasality, labial, velar, and alveolar respectively. The phi-like symbol Ø has no such phonetic significance; I have borrowed it from Michailovsky 1979 for the type of final that utilizes vowel features as its phonetic exponents

D.   Grammatical relationships

It is convenient, on phonetic grounds, to include in the z piece
the type of final that has a lateral consonant, [-1-], in line
(1) of table (3); but the [1]-final type of lexical item does not
share in the grammatical relationships that associate certain
lexical items of the z prosodic class with those of that t prosodic
class; e.g. the Tt lexical item, with phonetic exponents [sjEtt-],
etc., 'tell --- to kill', with the Tz lexical item, with phonetic
exponents [seR-], etc., 'kill', and certain of the s prosodic class
of lexical item with those of the z prosodic class; e.g. the Ms
lexical item [nams-], etc., 'smell' (transitive) with the Mz lexical
item [na:m-], etc., 'smell' (intransitive), or the Ms lexical item
[khams-], etc., 'make --- cry', with the Pz lexical item [khap],
etc., 'cry' (the phonematic classification of [khams-] as M rather
than P is re-considered, and revised, in section (IV) below).

Part of the justification for distinguishing the t, s, and z
phonological classes, then, is not purely syntagmatic and,
therefore, phonetic but grammatical: it aims to associate lexical
items by such functions as transitive, intransitive, causative,
and benefactive across the boundaries of the prosodic categories
t, s, and z.

E.   Classification of lexical items by final prosodic and phonematic terms

In the preceding section (D) I have identified a number of lexical
items by the type of final piece that they examplify. Thus, the
lexical item that is glossed as 'tell --- to kill', and has the
five phonetically distinct forms [sjEtt- sjEt- sjE?- -sjEd- sjEt],
can be referred to as Tt, from t, the term of the three-term final
system appropriate to it, through which it is distinguished from
the s and the z terms, and T, the phonematic unit by which it is
distinguished from the P, K, M, N̲, N, and Ø terms, and similarly
with the Ms lexical item glossed as 'smell' (transitive), with
its phonetic forms [nams- nam(-)], and the Pz lexical item glossed
as 'cry', with phonetic forms [khaU- khap'- khap(-) – khab].
These combinations of two phonological symbols are part of a
phonological formula designed to summarize all phonetic variant
forms of that lexical item arising out of differences in type of
junction or, where necessary, differences in tempo (fast versus
slow). In this paper I have concentrated on the phonological
analysis of the final part of the lexical item, ignoring
phonologically relevant differences in the syllabic vowel and in
the initial consonant or consonants.

F.   Table 1, 2 and 3

These preliminary remarks introducing the types of junction, the prosodic terms t, s, and z, and the phonematic units P, K, T, M, N̲, N, Ø, and L are intended to give help in understanding the otherwise rather complex Tables 1, 2 and 3, which now differ slightly from the form in which I first presented them in my paper for the 5th International Conference of the Linguistic Society of Nepal (1984), 'The root finals of Bantawa Rai verbs in comparison with Limbu', as regards the Øt column (Table 1) and the Tz column (Table 3).

piece
line
es not
certain
rosodic
sjEtt-],
honetic
class
the Ms
exical
item
khap],
rather

and z
and,
exical
ative,
gories

c   and

exical
, the
as the
sjEt],
final
from
it is
ilarly
with
lossed
hab].
of a
ariant
ype of
versus
ogical
noring
nd in

Table 1

t-final prosodic class

	P	K	T	M	N̲	N	∅	
1.	[-pt-	-kt-	-tt-	-mt-	-Nt-	-nt-	-tt-]	[V-]
2.	[-p'-	-k'-	-t'-	-m-	-N-	-ñ-	-t'-]	[C-]
3.	[-p-	-k-	-?-	-m-	-N-	-i-	-?-]	[j-]
4.	[-b'-	-g'-	-d'-	-m-	-N-	-n-	-d'-]	[d-]
5.	[-p	-k	-t	-m	-N	-n	-t]	

e.g.

	P	K	T	M	N̲	N	∅
1.	[?Epte	Lekte	sjEtte	damte	DUNte	phIntaN	Itte]
2.	[?EpNa	lekNa	sjEtma	damma	dUNNa	phInma	itNa]
3.	[?ipjaN	kakjaN	sjE?jaN	?UmjaN	tANjaN	tsaijaN	i?jaN]
4.	[masjEbde	matShEgde	masjEdde	mawamde	mad/RUNde	mathInde	maIdde]
5.	[?Ep	lek	sjEt	dam	dUN	phiN	it]

Glosses
1. Winnow it. Lick it. Tell (him) to kill it. Brand it. Drink it for ——. I jumped. Laugh at ——. 2. I winnow. I lick it. To tell (him) to kill it. To brand. I drink it for ——. To jump. I laugh at (him). 3. He is putting —— to sleep. He is jumping over. He is telling —— to kill it. He is sucking it. He is chasing —— away. He is feeding them. He is laughing at him. 4. Do not sharpen (it). Do not lock up. Do not tell (him) to kill it. Do not snatch it. Do not drink it for ——. Do not wake —— up. Do not laugh at ——. 5. He winnows. He licks it. He tells —— to kill it. He brands it. He drinks it for ——. He jumps. He laughs at (you).

Table 2

s-final prosodic class

(revised below, section IV)

P	K	T	M	N̲	N	Ø	
1.			-ms-	-Ns(j)-	-V:/iS-	-V(:)s-	
2.			-m-	-N-	-N-	-V:-	[V-]
3.			-m-	-N-	-V-	-V:-	[C-]
4.			-m-	-N-	-n-	-V-	[j-]
5.			-m	-N	-n	-V:	[d-]

e.g.

	M	N̲	N	Ø
1.	[ʔimsaN	dUNsje	pe:Su [bHuiSUN]	pe:sa]
2.	[ʔImNa	dUNNa	pEnNa	le(:)NaNa]
3.	[ʔimjaN	dUNjaN	pẽjaN [bHuĩjaN]	pe(j)aN]
4.	[maImade	majUNde	mapEnde	maped/Re]
5.	[im	DUN	pEn	pe:]

Glosses

1. I slept. Offer a drink to ---. He flew it. He got sick. I refused it.
2. I sleep. I offer a drink to ---. I fly it. I know. 3. He is sleeping. He is offering a drik to ---. He is flying it. He is being sick. He is refusing it.
4. Do not sleep. Do not put it down. Do not make it fly. Do not vomit. 5. He sleeps.
He offers a drink to (you). He flies it. He gets sick.

Table 3

z-final prosodic class

	P	K	T	M	N̲	N	∅	L
1.	[-Uj-	-Uj-	-(:)j-	-m-	-n-	-(:)j-	-v(:)-	-l- [v-]
2.	[-w-	-w-	(-e-)			(-e-)		
3.			[-R-			-n-		
4.	[-p'-	-k'-	-t'-	-m-	-N-	-n-	-v:-	-n- [c-]
5.	[-p-	-k-	-?-	-m-	-N-	-ṽ-	-v:-	-v- [j-]
6.	[-b'-	-g'-	-d'-	-m-	-N-	-n-	-v:-	-n- [d-]
7.	[-p	-k	-t	-m	-N	-n	-v(:)	-n]

e.g.

	P	K	T	M	N̲	N	∅	L
1.	[tSEUje	1jAUje	1Ho(:)ja leu	na:maN	duNe	po(:)ja pea,pe:]	i(:)a	phY(:)le
2.	[tSewaN	lewaN	[SeRe			ba:ne]		
3.	[tSepNa	1EkNa	1Ho:tNa [sEtNa	namNa	dUNNa	pEnNa banNa]	i:Na	phYnNa]
4.	[tSepjaN	1EkjaN	1H?jaN [sjE?jaN	namjaN	dUNjaN	pEjaN banjaN][5]	i:jaN	phỸijaN]
5.	[matEbde	mawagde	malHodde [masjEdde	matshYmde	mad/RUNd	mapEnde mabande]	maide	maphYnade]
6.	[tSe(:)p	le:k	1Ho:t [sEt	na:m	dUN	pEn,po:n?i: ban]		phYn]

Glosses

1. Tell (him). Lick it. He ran. I stank. Drink it. He grew big. He laughed; he came down. Untie it. 2. I spoke. It licked me. He let it loose. It flew. Fly. 3. Kill it. Come here. 4. I speak to him. I lick it. I run. I stink. I drink it. I fly. I laugh. I untie it. I kill it. I come. 5. He is telling him. He is licking it. He is running. He is stinking. He is drinking. He is flying. He is laughing; he is coming down. He is untying it. He is killing it. He is coming. 6. Do not wash it. Do not drive it away. Do not run. Do not get the price raised. Do not drink it. Do not fly. Do not laugh; do not come down. Do not untie it. Do not kill it. Do not come. 7. He speaks to him. He licks it. He runs. He stinks. He drinks it. It flies. It grows big. He laughs; he comes down. He unties it. He kills it. He comes.

II. Problem 1: vocalic phonetic exponents, or no phonetic exponents, for Ns, Nz, Tz, Pz, and Kz

A. Consonantal phonetic exponents

The symbol N at the head of the third column in the s-final Table (Table 2) and the sixth column in the z-final Table (Table 3), and the symbols P, K, and T at the head of the first, second, and third columns in the z-final table suggest that the phonetic exponents of these phonematic units should be consonantal; and a glance at the phonetic features symbolized in those columns shows that, in most types of junction, they are indeed consonantal:

Ns: [n],	lines 2, 4-5
Nz: [n],	lines 3-4, 6-7,
Tz: [R t' ? d' t],	lines 3-7,
Pz: [P' P b']	lines 4-7,
Kz: [k' k g']	lines 4-7;

but in the remaining lines their phonetic exponents appear either as a combination of consonantal with vocalic feasutres, or else as purely vocalic, if, that is, they are allowed to have phonetic exponents at all.

B. Consonantal combined with vocalic phonetic exponents (Ns in type-1 junction)

The only final phonematic unit for which combined consonantal and vocalic phonetic exponents need to be stated is N in the s final piece (Table 2). The phonetic exponents shown

there for N in line (1) are: [:S] and [iS]. The difference between the phonetic exponents of the phonematic unit N and those of M, N̲, and Ø in this, the s, type of final piece is that the place of articulation of its friction feature is alveolo-palatal ([S]) rather than alveolar ([S]); so the place-of-articulation feature, alveolo-palatality, must be considered to be part of the phonetic exponency of N. In combination with this consonantal feature, as a further phonetic exponent of N, there is the vocalic feature shown as either length ([:]) or as a post-syllabic vowel, a close front spread vowel ([i]) from the syllabic vowel, [u o a], to the alveolo-palatal fricative, [S]; e.g.

    [bHuiSu poɪSu daiSu],

he refused it, he saved (money), she showed it.
Where, however, the syllabic vowel is half-close, front, and spread, there is no post-syllabic vowel; and the vocalic phonetic exponent of N appears not as [i] but as vowel length; e.g.

    [pe:su], not *[peiSu],

he flew (it).

C.   Vocalic phonetic exponents

1.   Ns in type-3 junction

It is reasonable to suspect that Ns in type-1 junction (Table 2, line 1) formerly had nasalization as a phonetic exponent: line (3) shows nasalization as a phonetic exponent of N in type-3 junction in combination with the same vowel glide, or post-syllabic vowel, as has been referred to above for type-1 junction, [i]; e.g.

    [bHuĩjaN pOĩjaN daĩjaN peĩjaN],

he is refusing it; he is saving it; he is showing it; he is flying it.

2.   Nz in type-3 junction

The same, or very similar, phonetic exponents as were stated for Ns in the preceding paragraph for type-3 junction also apply to Nz in type-3 junction (table 3, line 5), in which [y:] deputizes for *[uĩ]; [ỹ: Oĩ aĩ ẽ (ĩ)]; e.g.

    [khwỹ:jaN pOĩjaN baĩjaN pẽ(ĩ)jaN],

he is carrying; it is growing; he is coming; it is flying.

3.   Nz and Tz in type-1 junction

3.   Nz and Tz in type-1 junction

Like Ns in type-1 junction Nz in type-1 juction also has orality, not nasalization, as an exponent.

a.   Back vowels and open vowels ([u o a])

Where the syllabic vowel of the verb lexical item is a back vowel or an open vowel, [u o a], Nz differs from Ns in having as a further phonetic exponent not the single feature alveolo-palatality ([S]) referred to above in section (B) but the combination of features voice, frontness, spreading, and non-syllabicity ([j]); e.g.
     [khuju poja]; he earned it; it grew big
(for the problem of Nz lexical items that have not [j] but a consonantal phonetic exponent ([n]) in type-1 junction, e.g. [bana] 'I came', [Enu] '(you) heard it' see section III below).

Tz has the same phonetic exponents in this type of junction as those shown above for Nz for some of its lexical items; but the Tz class, like the Nz, is divided into two sets of lexical items, one of which, like the Nz lexical item [ban-] referred to in the previous paragraph, has consonantal phonetic exponents, e.g. [seR-], [khaR-], as in [seRu] '(he) killed it', [khaRa] 'he went' (table 3, line 3). This type, which is easily in the majority, is considered at (III) below. The small minority of lexical items that resembles the Nz examples [khuj-] and [poj-] in having [j] for the phonetic exponents of Tz in type-1 junction comprises only two lexical items, [1Hoj-] and [laj-], as in [1Hoja laju], 'he ran', 'he took it out' (table 3, line 1).

b.   Front vowels ([i e])

Where the vowel in the verb lexical item is a front vowel, both Nz and Tz have no [j] as phonetic exponent.   Indeed, it would be possible to say that, in these circumstances, they have no phonetic exponent at all; for the phonetic data in line (2) of the third and sixth columns, the Tz and Nz columns, of table (3) show a sequence of syllabic vowels or simply a single long vowel [e:] (from *[-ee]) or [E:] (from *[EU]); e.g.
     Tz: [1eu]/[1jo:], [1E:N]; Nz: [tSiu:, pea, pe:];
'he loosed it, I loosed it; he finished it, it flew, fly'.

4. Vocalic (shared) phonetic exponents or no phonetic exponents?

It would be possible to assign the former of the two vowel sounds of such sequences as [eu ea] in section (3) above to the vowel unit of the verb lexical item and the latter vowel sound to the vowel unit of the following (verbal particle) lexical item, in which case no phonetic features would be left to be assigned, as its phonetic exponents, to the final T or N of the verb lexical item. The T or the N would then have to be said to have no phonetic exponents in the front-vowel ([i e]) sub-type of type-1 junction (3.b above), and would, therefore, be highly unusual phonematic units. Since the initial part of such vowel sequences as [eu -ea] can readily be identified with lexical items that have Tz or Nz finals (and Pz, Kz, or Øz finals too; section (6) below), supported by phonetic exponents of Tz or Nz in junction of types 2, 3, 4 and 5 (table 3, lines 4-7), it would seem illogical to deny phonetic exponency to Tz and Nz in the one remaining, and complementarily distributed, type of junction, type-1 junction, and, even then, only in a sub-type of type-1 junction, the front-vowel sub-type (3.b). If, then, Tz and Nz are to be assigned phonetic exponents in the front-vowel sub-type of type-1 junction too, it can only be by considering the vowel [3] of such examples as [leu], or the [i] or the [e] of [tSiu: pea], as shared by the vowel phonematic unit with the following T or N phonematic unit; and those three words would exemplify [e] as the phonetic exponents of -ETz in [leu], and [i] and [e] as the phonetic exponents of -INz and -ENz respectively in [tSiu:] and [pea]. The same sharing principle would apply to the alternative phonetic form to [leu] '(he) looses it', [ljo:] (3.b), where, moreover, the phonetic melange is such that it is impossible even to specify the phonetic exponents of the vowel phonematic units -E- and -U.

5. Shared phonetic exponents

The practical course, therefore, and the soundest theoretically, seems to me to be that of treating [eu]/[-jo:] as exponents of all three phonematic units, -ETU, while [-iu:], [-ea], and [-e:] should be treated, respectively, as the phonetic exponents of the sequences of phonematic (and therefore phonological) units -INU, -ENA, and -ENE. Historically, I think it likely that [leu]/[ljo:] might have developed from *[letu], and

that [tSiu:], [pea], and [pe:] might have developed
from *[tSinu], *[pena], and *[pene]; this hypothesis
is supported by the final consonants [t' ? d' t] that
characterize the verb lexical item in types of junction
other than that exemplified by [leu]/[ljo:], and by
the final consonant [n], alternating with nasalization,
that characterizes the lexical item glossed as 'fly',
for example, in table (3) column (6); e.g.
     Tz: [leu/ljo: lEtNa le?jaN malEdde let]
     Nz: [pea pe: pEnNa pejaN mapEnde pEn];
Tz: he loosed it; I loose; he is loosing; do not loose;
     he looses it.
Nz: it flew; fly; I fly; he is flying; do not fly;
     he flies.

Another possible analysis, but at the phonological
level rather than the phonetic level, would be to treat
lexical items such as [le-/lEt'-/le?-/lEd'-/let] 'lose'
or [pe-/pEn-/pe-/-pEn-/pEn] 'fly' (e.b. above) as each
having two phonological forms, a vowel-final form,
LE or PE, with [le-] and [pe-] respectively as phonetic
exponents, and a consonant-final form, LET or PEN,
with [lEt'-/l3?-/-lEd'-/let] or [pEn-/pe-/-pEn-/pEn]
respectively as its phonetic exponents. I do not see
this solution as offering any advantage: in the first
place, the vowel-final forms would, unnecessarily,
introduce a new type of final into the analysis, neither
-P, -K, -T, -M, -N, -N, -Ø, or -L but -I or -E (vowel-
final); in the second place nay such additional vowel
type of final, -I or -E, would be in complementary
distribution, by type of junction, with one or other
of the other types, -T or -N, in type-1 junction versus
types 2-5; e.g. LE/LET and PE/PEN; in the third place
it would give excessive prominence to a sub-type of
only one type of junction, the [-VV] or [-V:] sub-type
of type-1 junction (3.b. above), as against the remaining
sub-type of type-1 junction, the [-j-] sub-type (3.a.
above), and the other four types of junction, types
2-5 (I.F., table 3 above); fourthly, it would upset
the grammatical relationships t-z and s-z referred
to in section (I.D) above, e.g. (-Tt and -Tz) [sjEtt-]
'tell --- to kill' (causative) and [sjER-] 'kill';
and, fifthly it would unnecessarily complicate Bantawa
lexicography, by introducing two forms, e.g. LE and
LET, where one, LET, is sufficient.

I therefore see shared phonetic exponency as the answer
to the problem posed y vowel sequences such as [ea]
and their long-vowel equivalent [e:], not only for

Tz and Nz but also, in corresponding circumstances, for Pz and Kz (section (6) below).

6. Vocalic phonetic exponents, both shared and unshared, for Pz and Kz

    a. Consonantal phonetic exponents

A set of voiced and voiceless consonantal phonetic exponents each was stated at (A) above for Pz and Kz:
        Pz: [p' p b];   Kz: [k' k g];
examples have been given at (I.F) above (table 3); cf. also: (Pz) [dUp te:p lap rop]; (Kz) [bYk thYkjaN ?Uk re(:)k wak Hok]; Pz: he may earn; he washes it; he catches it; he breaks it; Kz: he cleans; it is tearing; he peels it; it tears; he chases it away; he opens it.

    b. Vocalic

        i. Non-syllabic vowel ([w])

For Pz and Kz, vocalic phonetic exponents occur under much the same conditions as for Tz and Nz, though they do not always belong to precisely the same phonetic categories. Thus, where Tz and Nz have a non-syllabic vowel as their phonetic exponent, in type-1 junction (3.1 above), e.g. (Tz) [lHo(:)ja] 'he ran', (Nz) [po(:)ja] 'it grew big', so also do Pz and Kz, but with the difference that the non-syllabic vowel is not front spread ([j]) but back rounded ([w]), and occurs only preceding a central or an open vowel ([A a]); e.g.
    Pz: [ewa khawaN]; Kz: [(wa:) tsawAi jawaN];
Pz: he stood up; I cried; Kz: have a bath; I stayed.

        ii. Post-syllabic vowel ([u])

The post-syllabic vowels [i̯ i̯] have already been introduced as phonetic exponents of Ns in type-1 junction, e.g. [bHuiSu] (section B above) and type-3 junction, e.g. [bHui̯jaN] (section 1 above), and as phonetic exponents of Nz in type-3 junction, e.g. [poi̯jaN] (section 2 above); post-syllabic vowels also need to be stated as phonetic exponents for Pz and Kz in type-1 junction, but with the

difference that they are not front, spread, and oral or nasalized ([i ĩ]) but back, rounded, and oral only([u]), and are followed by a non-syllabic close front spread vowel ([j]) where a front spread vowel ([-e]) follows; e.g.

    P: [rouje/ro:je   Lauje   tSEuje][9]
    K: [jouje   wauje   ljAuje];
P: break/snap it; catch it; tell him;
K: knead it; chase it (away); lick it.

    iii. Vowel sequence or long vowel; shared exponents

Vowel sequences and long vowels have already been drawn on, in (3.b) above, to provide shared phonetic exponents for Tz and Nz, e.g. [-eu -iu: -eq -jo: -E- -e:]; they can also be used to furnish Pz and Kz with phonetic exponents, but with the difference that the long vowels are not front ([-e:]) but back, [u: o:j Y:j]; e.g.

    Pz: [du: du:a du(:)je teu/tjo: lau rou]
    Kz: [bAu/bY: thY:a bY:jE u: reu way Hou]
Pz: he made it (in metal); he earned; earn; he washed it; he caught it; he broke it;
Kz: she swept it; it tore; sweep it; he peeled it; he tore it; he chased it away; he opened it.

7. Alternation of vocalic with consonantal features in phonetic exponents

Section (A) and (B) and sub-sections (1)-(6) of section (C) above show that the Bantawa final phonematic units N in the s and the z types of piece, and T, P, and K in the z type of piece are remarkable for alternating consonantal with vocalic features, both shared and unshared, for their phonetic exponents; e.g.

    conson. non-syll. vow. post-syll. vow. vow. sequen. (shared)

NS:	[bHUn		bHuiSUN]		
Nz:	[pEn	poja	poijaN	pea	pe:]
Tz:	[lHo:t	lHo(:)ja		leu/lJau	
					lE:N]
Pz:	[tSe:p	tSewaN	tSEuje	du:a	du:]
Kz:	[bYk	jawaN	bYuje/bY:je	bYu/bY:]	

Ns: he refuses it; I refused it; Nz: it flies; he grew big; he is growing big; it flew; it flies;

Tz: he runs; he ran; he let it loose; I let it loose;
Pz: he tells him; I told him; tell him; he earned;
    he made it (in metal);
Kz: he sweeps it; I stayed; sweep it; he swept it.

'Most of the older works on phonetics present the dichotomy between vowel and consonant as absolutely basic' (Catford 1977, 165); yet my treatment of Ns, Nz, Tz, Pz, and Kz in the phonological analysis of Bantawa requires (i), for Ns, an alveolar nasal consonant sound tobe closely associated with the single phonetic feature nasalization, which is usually associated with vowels (though it can combine with oral friction and with lateral and rolled articulations, e.g. [s̃ l̃ r̃]), and with a vowel sound, either oral or nasalized, that is not the syllabic vowel of the verb lexical item but follows that syllabic vowel, (ii), for Nz, an alveolar nasal consonant sound closely associated not only with nasalization and with a nasalized post-syllabic vowel but also with a non-syllabic front spread vowel, and (iii), for T, P, and K in the z type of final, voiceless plosive and voiced or voiceless stop consonant sounds closely associated with non-syllabic vowel sounds and with oral post-syllabic vowels: (i) [n V̄ i ĩ], (ii) [n V̄ i j], (iii) [t/d/? j], [p/b w u], [k/g w u]; and the sets of variants (ii) and (iii) are further associated, by virtue of the lexical items that they characterize, with the first vowel sound of sequences of syllabic vowels such as [ea eu/jAu Yu ou u(:)a oa] and long vowels such as [e: E: u: Y:]; this means that a final phonematic unit Ns, Nz, Tz, Pz, or Kz of a verb lexical item has an unspecified share in the syllabic vowel features [e jA Y u(:) o] and [e: E: u: Y:] for its phonetic exponency.

I assume, from comparing the different forms of P-final, K-final, T-final, and N-final lexical items in all types of junction that at an earlier stage of the language lexical items containing them had final consonant sounds where they now have a non-syllabic vowel ([w j]), a vocalic sound following the syllabic vowel ([i ĩ u]), or merely a share in the syllabic vowel. This would mean that phonetic forms such as [bHuiSUN pẽjaN pea pe:], [1Ho(:)ja laju leu], [ewa jawaN du:a thY:a du: bAu/bY:] would have earlier passed through a stage: *[bHunsUN penjaN pena pene], *[1Hota latu letu], *[epa jakaN dupa thYka dupu bYku]. The front spread post-syllabic vowel [i ĩ] that serves as one of the phonetic exponents of N(s/z) in certain types of junction suggests that the correspondingly alveolar phonematic unit Tz might

also have had a post-syllabic-vowel exponent [i] at an earlier
stage:

    NS: [1Hoisje   bHuiSUN   bHui̯jaN]
    Nz: [poi̯jaN]
    Tz: *[1Hoia] < *[1Hoita];

Ns: make (him) run; I refused it; he is refusing it;
Nz: he is growing big;   Tz: he ran.

III. Problem 2: alternative exponents for Tz and Nz

A. Re-classification from Øt to Tz

The problem of alternative exponents for Tz arises out of
a re-classification that I have since made in my 1984 paper.
I had mistakenly assigned to the Ø phonematic unit of the
t final piece, Øt, the class of lexical items having the
following final features in each of the five types of junction:

    [-R-   -t'-   -?-   -d'-   -t]; e.g.
    [seRe   sjEtNa   wa?jaN masjEdde   set] (table 3);
'kill it', 'I kill', 'he is wearing it', 'do not kill',
'he kills it'.

A consequence of this faulty analysis was that the Øt verb
glossed as 'kill', exemplified above, was assigned to the
same prosodic class, t-final, as its related causative verb,
the Tt verb glossed as 'tell --- to kill', with the following
final features:

    [-tt-   -t'-   -?-   -d'-   -t]; e.g.
    [sjEtte sjEtma sjE?jaN masjEdde sjEt] (table 1);
'tell --- to kill', 'to tell --- to kill', 'he is telling
--- to kill', 'do not tell --- to kill', 'he tells --- to
kill'. The difference between them was, consequently, not
a difference of prosodic terms but a difference of phonematic
units, Ø versus T within the t-final prosodic category.
I later realized that this opposition of Ø to T was a phonolo-
gical misfit: other relationships of causative to transitive
and intransitive verbs, and benefactive to non-benefactive
verbs, correspond to prosodic differences, to t versus z
or to s versus z, not to differences of phonematic unit
such as T versus Ø; e.g.

	drink it for	starve it	open it for	stand it up
	t [dUNte]	t [jOmte]	t [HOkte]	t [e:pte]
N	M	K	P	
z [duNe]		z [jo:ma]	z [Ho:jE]	z [?ewai]
	drink it	he starved	open	stand up

Offer a drink to	smell it	fly it
s [dUNsje]	s [namse]	s [pe:sje]

N   M   N

z [duNe]	z [na:me]	z [pe:]
drink it	strink	fly

The final cluster comprising alveolar stop and alveolar
plosive ([-tt-]) in junction of type 1, e.g. [sjEtte], clearly
marks out the causative verb glossed as 'tell --- to kill'
as a member of the t-final category (Tt). The verb glossed
as 'kill' must, in that case, be assigned to one of the
other two prosodic categories, either to the s or to the
z. The final phonetic features shown for this lexical item,
'kill', donot quality it for membership of the s category
(Table 2); but that set of features, [-R- -t'- -?- -d'-
-t], especially the [-R-] appropriate to junction of type
1, is consistent with the z class. The verb 'kill', and
others of the same pattern (all verbs, that is, of the former
Øt class, with final features [-R- -t'- -?- -d'- -t]), should,
therefore, be re-classified as Tz.

B. Two sets of phonetic exponents for Tz

To this re-classification there is, however, an obstacle:
the Tz class in my 1984 paper already had a representative,
the class of verbs with the final features:

   [-(:)j-   -t'-   -?-   -d'-   -t]; e.g.
   [1Ho(:)je 10 1HOtNa 1HO?jaN malHOdde 1Ho(:)t]
   [1aje/1a:e   1atNa   1a?jaN   maladde   1at];
run; I run; he is running; donot run; he runs;
take it out; I take out; he is taking out; donot take out;
he takes out.

The two sets of phonetic exponents are identical except
for those appropriate to junction of type 1, the type in
which a vowel follows within the word:
   [-RV-] v. [-(:)jV-], e.g. [seRe] 'kill' v. [1ho(:)je];
   'run'.
The question then arises which of the two sets is the correct
set of phonetic exponents of Tz, or, alternatively, is it
possible for Tz to have two sets of phonetic exponents,
differing only in type-1 junction, [-(:)j-] v. [-R-]. If
it weremerely a question of fast-tempo and slow-tempo
alternatives for the same lexical item, e.g. [banjaN]
v. (fast-tempo) [baɪjaN], 'he is coming', I should have
had no hesitation in accepting the two phonetic forms as
stylistic alternatives, in complementary distribution by
tempo; but, on the contrary, they apply to different lexical
items, and are, lexically, in parallel distribution.

1.   T in comparison with P and K

At first sight the set of features that I had originally
allocated to the T phonematic unit, in 1984, has the
advantage of corresponding to the P and the K in type-
1 junction (in which a syllabic vowel follows): all three,
T, P, and K, have a syllabic vowel, [-V(:)], or a vocalic
sequence comprising a syllabic vowel followed by a post-
syllabic vowel ([ou]), further followed by the
non-syllabic front spread vowel [j] in imperative forms
in [-e]; e.g.

                 T   P   K
        [1Ho(:)je, laje/la:e   rouje/ro:je   Ho:je]
        run, take out   break (it)   open (it); cf.
        [1HOtNa,   latNa   rOpNa   HOkNa]
        I run, I take out   I break   I open;
but in type-1 junction other than that of the imperative,
where the suffix is, for example, the 3rd-person
intransitive past [-a], or the 3rd-person transitive
past [-u], the likeness is less close; and T is
distinguished from P and K by a non-syllabic front spread
vowel ([j]) versus a non-syllabic back rounded vowel
([w]) or a sequence of vowels ([VV]); e.g.

              T   P   K
        [1Hoja, laju; tshoa, lau; (wa:) tsawa, Hou];
T: he ran; he took (it) out; P: it was dry; he caught
    (it);
K: he had a bath; he opened it (cf. also II.B.6.a.i
    above).

2.   z in comparison with t and with s

        z: [laje/la:e, maladde leu/1jEU, malEdde]
    T
        t: [latte   1Ette];
Tz: take (it) out; donot take (it) out; he let (it)
     go; do not release (it);
Tt: take (it) out for ---; let it loose.

The Tz verb glossed as 'run', on the other hand, has
a Ns verb as its causative; e.g.

        [1Hoisje] make (it) run; [1HOnNa] I shall make him
run (the case for re-classifying this Ns causative verb
as Ts is stated at IV.B.1 below).

The above examples show that two out of the three Tz
lexical items in them have the advantage of having corres-
ponding forms in Tt; while the third has a corresponding
form in Ns (or Ts). These three are the total membership
of that type, the minority type, of Tz lexical item.

3. Minority and majority sets of phonetic exponents

On the other hand, in favour of accepting the other set, [-R- -t'- -?- -d'- -t], as the orthodox phonetic exponents of Tz, there is the fact that they are much more numerous: in my material this set of features characterizes twenty-three lexical items; the set of features exemplified by [lHo(:)je], etc. is limited to three lexical items (section B. above).

Further, eleven or twelve of the majority type have matching Tt forms; e.g.

    z [kiRe   khiRe   waRe   kjeRe   dHeRe   pARe]
T
    t [kitte   khitte   watte   kjEtte   dHEtte   pYtte];
z: be afraid; buy; wear; break (it); cut; scrub one's
    self;
t: be afraid of; order (something); garland/muzzle;
    break (it) for ---; scrub for --- (of. also Sprigg
    to appear, II.B.2 and III.A).

4. Tz in Bantawa and Limbu comparison

A comparison with Limbu shows six Bantawa Tz lexical items, including four formerly classified as Øt, as corresponding to Tz lexical items in Limbu:
                        formerly Øt   original Tz
Bantawa: [seRe waRe   paRa keRe; leu   laje/la:e]
Limbu: [SERE wa(:)RE pa:re HERE; 1ERE 1a:RE]
Bantawa: kill (it); wear (it); it cackled; crack it; he let
         it loose; take (it) out;
Limbu: kill (it); wear (it); speak to ---; crack it;
         leave it; take (it) away from.

It will be seen that comparison with Limbu supports the claim of both the majority and the minority pattern to represent Tz, the first four examples being drawn from the majority, and the last two from the minority, pattern.

5. Two sets of exponents for Tz

Unorthodox though it may seem, I therefore accept both sets of final features as phonetic exponents of Tz, (i) the minority set, and (ii) the majority set:
    i. [-(:)j- -t'- -?- -d'- -t];
    ii. [-R- -t'- -?- -d'- -t].

It is difficult to account for the presumed development from [t] to [j] in the three minority-pattern lexical items rather than to the phonetically more plausible,

and much more common, [R]. It would be worth while to examine other dialects within Bantawa, or other neighbouring Rai languages, to see whether some influence in favour of [j] might have come from them.

C. Alternative phonetic exponents for Nz

Support for the possibility that [t] might have developed to [j] for the minority set of the two sets of phonetic exponents of Tz discussed in section (B) above comes from what appears to be a parallel phonetic development giving rise to alternative sets of phonetic exponents for Nz, the corresponding nasal phonematic unit to T within the z category of final. The alternative phonetic exponents of Nz for the five types of junction are:

```
    i.  [-n-      -n-      -Ṽ-/-n-          -n-        -n]
    ii. [-j-       "        "               "          "] (table 3);
                                                        e.g.

    i.  [ba:nE    banNa    baĩjaN/banjaN   mabande    ban]
    ii. [poja     pOnNa    poĩjaN           mapOnde    pOn/po:n];
```

 i. come; I come; he is coming; do not come; he comes;
ii. he grew big; I grow; he is growing; donot grow big; he grows.

There are six lexical items of (i) the former, or consonant, type ([-n-]), and six of (ii) the latter, or vocalic, type ([-i:- -e- -uj- -oj-]); e.g.

```
 i. [mine      EnE      sjEne    HEne    lEAne     ba:nE]
ii. [tSi:e     tShi:e   pe:      tea     khuje     poje/po(:)e]
    [tSin      tShin    pEn      tEn     khUn      pOn/po:n] (table 3)
```

 i. think about it; hear it; ask him; sacrifice it; thread it; come here;
ii. finish it; put it round; fly; it fell down; carry it; grow big; he finishes; he puts it round; it flies; it falls down; he carries it; he grows big.

The alveolar nasal consonant ([n]) in type-1 junction definitely establishes the six lexical items exemplified at (i) above as belonging to the Nz class; the alveolar nasal consonant in junction of types 2, 4, and 5, e.g. [pEnNa mapEnde, pEn], 'I fly', 'do not fly', 'he flies', and the nasalization features in type-3 junction, e.g. [pẽjaN], 'he is flying' (cf. also table 3), strongly support the claim of the six lexical items at (ii) to be treated as belonging to the Nz class; but the orality feature in type-1 junction ([V]), e.g. [tSi:e], rather than nasality, e.g. [mine], tells against them. I suspect that this class, the Nz, is in transition from one type of phonetic exponency, the nasal-

consonant, or [-n], type, shown in (i) above, to a type in
which orality ([-i; -e; -uj -oj/-o:], has replaced it in type
-1 junction, perhaps via a stage in which the apical contact
of [n] was lost, and nasality developed into nasalization,
e.g. *[-ĩ:- -ũj̃-]; something like this seems to be happening
in type-3 junction, giving rise to alternative forms [banjaN]
and [bãjaN].

If this hypothesis should turn out to be correct, then there
is a strong case for permitting Bantawa, and other languages
that are in transition, to have two sets of phonetic exponents
for a single phonological category, one of them from the past
and the other indicating the future, as though, paradoxically,
the état de language of such a language comprised two états
de langue within it. Such a state of affairs may arise when
a language is declining in the face of competition from another
language, as Bantawa is from Nepali, and standards of speech
become uncertain.

IV. Problem 3: the missing s-final phonematic units P, K, and
T

A. Introductory; filling the Øt vacuum

It is revealing to compare the three tables in section (I.F)
above, table 1 containing the t-final prosodic class, table
2 the s-final, and table 3 the z-final, and speculate on the
absence of certain phonematic units from one or other of these
tables. The most notable, for absentees, is table 2, in which
only four phonematic uits appear, M, N, N, and Ø; for P, K,
and T are absent, and so is L. A further absentee should
be the Ø member of the system of phonematic units appropriate
to the t-final prosodic class table 1), because I have now,
in section (III.A) above, transferred the phonetic exponents
that I had originally assigned to Øt, in my paper for the
5th International Conference of the Linguistic Society of
Nepal (and the phonetic forms exemplifying those phonetic
exponents) from the Ø column of Table 1 (the t-final prospdic
piece) to the T column of table 3 (the z-final prosodic piece):

Tz: [-R- -t'- -?- -t], e.g. [seRe sjEtNa wa?jaN set];
gloss: kill it; I kill; he is wearing it; he kills it.

A glance at table 1, however, will be enough to show that,
in anticipation, I have already re-filled the Øt column of
that table:

Øt: [-tt- -t'- -?- -d'- -t]; e.g. [Itte itNa i?jaN maIdde it];

gloss: laugh at ---; I laugh at ---; he is laughing at ---; do not laugh at ---; he laughs at ---.

My reason for choosing these phonetic exponents for Ot will serve to introduce the modus operandi by which I provide phonetic exponents for the absentees, Ps, Ks, and Ts, in section (B) below.

1.   Øt and Tt; complete overlap in phonetic exponency

The unorthodox thing about these new phonetic exponents for Øt, in column 7 of table 1, is that they are identical with those of Tt, in column 3 of that same table:

Tt: [-tt- -t'- -?- -d'- -t]; e.g. [sjEtte sjEtma sjE? jaN masjEdde sjEt]

gloss: tell - - - to kill; to have --- kill; he is telling - - - to kill; do not tell --- to kill; he tells --- - to kill.

In a phonemic analysis of the school that follows the postulate 'once a phoneme, always a phoneme' an overlap in the phonetic realization of phonemes is prohibited; from that point of view this analysis of mine is unorthodox, to say the least. In fact it could not be a more flagrant breach of that principel, because the overlap in phonetic exponency between Tt and Øt is total: one cannot point to any phonetic feature as being a criterion for distinguishing the T phonematic unit from the Ø.

2.   Grammatical association of z with t as a criterion

The criterion for assigning a particular lexical item to the Øt category rather than to the Tt is not phonetic but grammatical. A grammatical relationship of causative with non-causative, or of benefactive with non-benefactive, serves to associate certain undeniably Øz lexical items with lexical items that are candidates for recognition as Øt; e.g.

	laugh	come down	it got lost	dig it
Øz:	[i:jE	i:je	maa	tu:jE]
Øt:	[Itte	Itte	matte	tUtte]
	laugh at (him)	bring (it) down	lose it	dig (it) for

	it rolled down
Øz:	[dHY:a]
Øt:	[dHYtte]
	knock it over.

This grammatical association, and the phonological
analysis that follows from it, is supported by seven
good examples in my material, with two doubtful pairs
in addition. This part of my phonological analysis of
Bantawa illustrates one of the principles in prosodic
phonology, promulgated by J.R. Firth, that the phonolo-
gical analysis must be·congruent with analysis at other
levels, in this case, the grammatical level: 'The
"meaning" of language events in this sense is dealt with
at a mutually congruent series of levels, sometimes in
a descending order beginning with the context of situation
and proceeding through collocation, syntax, including
colligation, to phonology and phonetics, even experimental
phonetics, and sometimes in the opposite order' (Firth
1957, 8).

3. Phonetic development of [-tt-] from *[-t-]

By my present analysis Øt is identical, in its phonetic
exponency, with Tt: [-tt- -t'- -?- -dd- -t]; but I suspect
that at an earlier stage of the language there may have
been a difference, at least in type-1 junction ([-tt-
]). It would have been logical for the phonetic exponents
of Øt to be [-t-] in this type of junction, with the
result that the Øt form at (2) above, [Itte], 'laugh
at - - -', 'bring (it) down', would have been *[ite],
and would have been distinguished from the Tt form [sEtte]
'tell (him) to kill - - -' (and from the Tz form [seRe]
'kill (it)'). If so, the alveolar plosive *[-t-] would
have been the only voiceless plosive in type-1 junction;
for there are no such final consonants as *[-p-] or
*[-k-]. [p] and [k] occur only as part of the clusters
[-pt-] and [-kt-]; so *[-t-] might have been under
pressure to follow suit, by developing length: [-tt-]
(the alternative route, followed by P, K, and T in the
z final piece (table 3, line 1), seems to have been to
voice the consonant to [b g d], and then either vocalize
it to [-u-/-w-] or [-(:)j-/-j-] or tap it, whence
[-R-] (II.C.7 and II.C.6.b.ii above).

4. Grammatical association of z with t for T lexical
    items

It is only through the sort of grammatical relationship
described above that a candidate for classification as
Øt can be confirmed as such; in the absence of that
association a candidate lexical item must be assigned
to the Tt category. In this respect the Tt class differs
from the Øt: there is no grammatical requirement. In
fact, however, a number of the lexical items belonging
to the Tt class have lexical items in the Tz class that

can be associated with them, as causative and non-causative, or as benefactive and non-benefactive, in the same way as the Øt and Øz pairs exemplified in section (2) above; e.g.

	kill (it)	wear (it)	break (it)
Tz:	[seRe	waRe	kjeRe]
Tt:	[sjEtte	watte	kjEtte]
	tell (him) to kill	garland (him)	break (it) for

	cut (it)	buy (rice, etc.)
Tz:	[dHeRe	khiRe]
Tt:	[dHEtte	khitte]
	cut it for	order (rice, etc.)

(cf. also Sprigg to appear, II.B and III.A).

B. Filling the Ps, Ks, and Ts vacancies

If it were not for the grammatical criterion that I introduced at (A.2) above to justify classifying such forms as [Itte] 'laugh at (him)', 'bring (it) down', and [tUtte] 'dig (it) for' as examples of Øt, all such forms would have had to be classified as Tt, and there would have been a gap in the system: Ø appears as a phonematic unit in the s-final and in the z-final phonematic systems, but would have been lacking in the t-final system, which would have comprised only the six phonematic units P, K, T, M, N̲, and N. As it is, I have been able to add Ø, to bring that total up to seven.

In comparison with these seven the four phonematic units shown in table 2, M, N̲, N, and Ø, seem woefully deficient: P, K, T are lacking.

1. Grammatical association of z with s as a criterion for P, K, and T

Here, too, the selfsame grammatical relationships as were used at (A.2) above, for associating certain t-final lexical items with z-final lexical items, can be used to associate certain s-final lexical items, as transitives, causatives, and benefactives, with certain z-final lexical items; and the grammatical relationship can then be used for distinguishing phonematic units P, K, and T within the s-final prosodic class, to fill the three vacancies. Such relationships already apply to the 'orthodox' phonematic units M, N̲, N, and Ø; e.g.

	it rotted		smell (intr.)
	z:[kY:a]		z: [na:me]
Ø		M	
	s:[kY:se]		s: [namse]
	rot it down		smell (tr.)

	drink it		he flies
z:	[duNe]	z:	[pEn]
<u>N</u>		N	
s:	[dUNsje]	s:	[pe:sje]
	offer a drink to		fly it.

Without a relationship such as those exemplified above for Øz and Øs, Nz and Ms, <u>N</u>z and <u>N</u>s, and Nz and Ns, it would not be possible to distinguish Ps from Ms, Ks from <u>N</u>s, and Ts from Ns; as it is, Ps, Ks, and Ts can be distinguished on grammatical grounds, and exemplified as follows:

	(he) cries		(he) stands up
z:	[khap		e:p]
P			
s:	[khamse		Emsje]
	make (him) cry		stand (it) up

	have a bath		he runs		it dripped
z:	[(wa:) tsaUje]	z:	[1Ho:t		tsoRa]
K		T			
s:	[(wa:) tsaJsje]	s:	[1HoiSu		tsoiSu]
	bath him		he made (him) run		he sprinkled it

2. Grammatical association of t with s as a criterion for P, K, and T

Further support for bringing these phonetically un-distinguishable units Ps, Ks, and Ts into the phonology of current Bantawa instead of re-constructing them historically through some such process as internal re-construction comes from comparing candidates for Ps, Ks, or Ts status with Pt, Kt, and Tt respectively. I will first illustrate this relationship of t with s from pairs of examples that are not controversial, those in which the phonematic unit common to them both is Ø, M, <u>N</u>, or N; e.g.

	defecate on		break wind [?] at		bend (it
t:	[?Ette		bHEtte]	t:	[pUmte]
Ø				M	
s:	[?e:sje		bHe:sje]	s:	[pUmsje]
	defecate		break wind		bend (it)

	suck (it)		drink (it) for		go out
t:	[?Umte]		[dUNte]	t:	[1oAnte]
M		<u>N</u>		N	
s:	[?Umsje]		[dUNsje]	s:	[1OiSu]
	suck (it)		offer a drink to		he took (it) out

	have a bath	he runs	it dripped
z:	[(wa:) tsaUje]	z: [1Ho:t	tsoRa]
K		T	
s:	[(wa:) tsaNsje]	s: [1HoiSu	tsoiSu]
	bth him	he made (him) run	he sprinkled it

2.   Grammatical association of t with s as a criterion for P,K, and T

Further support for bringing these phonetically un-distinguishable
units Ps, Ks, and Ts into the phonology of current Bantawa instead
of re-constructing them historically through some such process
as internal re-construction comes from comparing candidates
for Ps, Ks, or Ts status with Pt, Kt, and Tt respectively.
I will first illustrate this relationship of t with s from pairs
of examplex that are not controversial, those in which the phonematic
unit common to them both is Ø, M, N̲, or N; e.g.

	defecate on	break wind [?] at		bend (it)
t:	[?Ette	bHEtte]	t:	[pUmte]
Ø			M	
s:	[?e:sje	bHe:sje]	s:	[pUmsje]
	defecate	break wind		bend (it)

	suck (it)	drink (it) for		go out
t:	[?Umte]	t: [dUNte]	t:	[loAnte]
M		N̲	N	
s:	[?Umsje]	s: [dUNsje]	s:	[1OiSu]
	suck (it)	offer a drink to		he took (it) out

my less orthodox ecamplex include:

	put to sleep	urinate on		shout at (him)
t:	[?ipte]	t: [tShEtte		pattE]
P		T		
s:	[?Imse]	s: [tShe (:) Sa		paisu]
	sleep	he urinated		he made (him) shout

	mount/ride it	it got twisted
t:	[jukte	rYkta]
K		
s:	[jUNsE	rYNsje]
	put (it) down	spin (it) round.

3. Table 2, revised

Nothing now remains but to revise table 2 in accordance with the analysis proposed above:

Table 2, revised
s-final prosodic class

	P	K	T	M	N	N̲	∅
1.	[−ms−]	−Ns(j)−	−(:)/iS−	−ms−	−(:)/iS−	−Ns(j)−	−V(:)s−
2.	[−m−]	−N−	−n−	−m−	−n−	−N−	−V:−
3.	[−m−]	−N−	−V̂−	−m−	−V−	−N−	−V:−
4.	[−m−]	−N−	−n−	−m−	−n−	−N−	−V:−
5.	[−m]	−N	−n	−m	−n	−N	−V:−

							[V−]
							[C−]
							[j−]
							[d−]

e.g

	P	K	T	M	N	N̲	∅
1.	[khamse]	tsaNsje	tShe(:)Sa [1HoiSUN]	?imsaN	pe(:)Su bHuiSUN	dUNsje	pe:sa]
2.	[khamNa]	tsaNNa	lHonNa	?ImNa	pEnNa	dUNNa	le:NaNa]
3.	[khamjaN]	tsaNjaN	tShEjaN [1HOIjaN]	?imjaN	pejaN bHuijaN	dUNjaN	pe(j)aN]
4.	[makhamde]	matsaNde	malHonde	maImde	mapEnde	majUNde	maped/Re]
5.	[kham	(wa: tsaN	1HOn	im	pEn	dUN	pe:]

Glosses

1. make him cry; bath (him); he urinated; I slept; offer a
    drink to - - -; he flew it; he got sick; I made him run;
    I refused it;

2. I make him cry; I bath him; I make him run; I sleep; I
    offer a drink to - - -; I fly it; I know;

3. he is making him cry; he is bathing him; he is urinating;
    he is sleeping; he is offering a drink to - - -; he is
    flyhing it; he is being sick; he is making him run; he
    is refusing it;

4. do not make him cry; do not bath him; do not make him run;
    do not sleep; do not put it down; do not make it fly; do
    not vomit;

5. he makes him cry; he baths him; he makes him run; he sleeps;
    he offers a drink to (you); he flies it; he gets sick.

Notes

1. Based on a paper 'Once a morpheme, always a morpheme: a
    phonological analysis of the Bantawa language, of eastern
    Nepal', presented at the Centre National de la Recherche
    Scientifique, Paris, in May, 1986.

2. Since certain symbols of the International Phonetic Alphabet
    are not readily available, I have made use of the interrogation
    mark and some capital letters as phonetic symbols; their
    values are given in the appendix.

3. It is largely because of criticisms levelled at it in Haas
    1957, 'Zero in linguistic description', that I have avoided
    using the zero concept.

4. My data commonly show alternations in vowel sound for the
    vowel unit of the same lexical item as follows: [i]/[I],[e]/[E],
    [u]/[U], and [o]/[O]; but for [a:] and [a] the corresponding
    alternation is one of length and shortness, not one of
    quality. The closer of the alternative vowels, too, is
    often accompanied by length ([i(:) e(:) u(:) o(:)]). This
    closer alternative, and the long alternative [a:], generally
    occur when the vowel in question is followed by a single
    medial consonant, e.g. [pe;Su na:maN ?i?jaN na:mjaN] (tables
    2, 3, 1), or by a vowel or a non-syllabic vowel, e.g. [bHuijaN
    pejaN pe (j) aN lHo:je]; while the more open quality,
    accompanied by shortness ([I E U O]), and the short vowel
    [a], generally occur in combination with a sequence of
    two following consonants and with a single word-final consonant,

e.g. [?Epte dUNte ?Ep dUN]. The alternations are, therefore, gnerally in complementary distribution; but there are exceptions,in which the vowel I have noted in my phonetic transcription is the reverse of what one would expect from the above observation, e.g. [lekte itNa sjE?jaN ?UmajaN po:n]. Where a long vowel is used for emphasis, the vowel wound must be the closer of the alternatives, e.g. [po:n], emphatic alternative to [pOn] '(he) grows big'. Otherwise, assuming that my phonetic analysis and transcription are correct, I can only guess that these irregular vowel sounds are due to confusion resulting from the influence of Nepali, which my informant, in common with the male population of Chhinamukhu, probably spoke at least as frequently as his mother tongue, especially on formal occasions.

5. Alternatives [banjaN] and [baĩjaN] have been noted in my data.

6. Michailovsky 1975 gives an acoustic explanation for the Bantawa vocalic features [:] and [i]: 'What the [Lehiste and Peterson] data [from English] shows, for our present purpose, is, first of all, that –t, –n, and –s form a natural group with respect to their F2 transitions (perceptually the most important) with values in the 1400–1600 Hz range. In addition, we find a negative F2 transition after i, eI, and E (eIt is an exception) and a positive one after all other vowels, – – –, (326-7). In the first place, the alveolo-palatal frictive ([S]) of these Bantawa examples can be grouped with Michailovsky's –t, –n, and –s as being –in the denti-alveolar region'; and, secondly, the Bantawa close front spread glide vowel [i] from the back syllabic vowels [u o] and the openf ront vowel [a] to the consonant [S] corresponds to his positive F2 transition (+170, +400, etc.), while the length feature, [:], corresponds to his negative F2 transition (–310, –215; but with eIt, at +90, as an exception). 'A rise in F2 corresponds to movement forward in the vowel space' (327; i.e. a movement forward indicated by [i] in these Bantawa examples.

Michailovsky further supports his acoustic observations with examples from two dialects of Bantawa, Dilpa and Khawa; e.g.
Dilpa: tit   dot   bin   nan
Khawa: ti?   doi?   bii   naĩ
gloss clothing he begs he flies he rests a load; of.Chhinamukhu:
         [tit   dOt   pEn   nan].

From a comparison of the forms in these three dialects it appears that in the Khawa examples a former F2 transition

has become audibly manifest as the vowel sound [i]/[ĩ] in doi? and naĩ; the corresponding Dilpa examplex, and my examples from Chhinamukhu, which adjoins Dilpa, keep the transition, which is inaudible.

7. I take the phonetic exponent [j] that serves for both Nz and Tz to be a development of a former close front spread vowel glide onto a former denti-alveolar consonant: [-j-] < * [-ĩn-]/[-it-]; e.g.

    Nz [pona > poĩna > poiɐ > poĩa > po (:) ja]

    Tz [1Hota > 1Hoita > 1Joi?a > 1Hoia > 1Ho(:)ja]

(cf. Michailosky'sDilpa and Khawa examples in note 6 above).

8. Just as, innote 7, I took [j] to have developed from [i], a vocalic glide from a back or an open syllabic vowel [u o a] to a denti-alveolar consonant, so, here too, I take [w] to have deveoped from [u], a vocaic glide from the open front syllabic vowel [a] to the back, or dorso-velar, consonant [k]; e.g. *[jakaN] > * [jaukaN] (or, perhaps, * [jaYkaN]) > * [jauaN] and, similarly,
[ewa] < * [eua] < * [eupa] < [epa].

9. The voicing, vocalization, and lip-rounding of [p] to [u] via [b] in e.g. [tSEUje] would, in that case, find a parallel in Nepali in the presumed voicing, vocalization, and lip-rounding of an earlier [-p] to [-u-] in [baunsA] baunna 'fifty two' from *[bApAnnA], which is supported by the presence of [-p-] in [tripAnnA], tripanna 'fifty three', and by the vowel [A] or [bA-] in [bAHAttAr] bahattar 'seventy two'.

For a somewhat similar vocalization of a consonant in English of Gimson 1962: 'In some speech, notably that of Cockney, the tongue-tip contact for [L] is omitted, this allophone of /1/ being realized as a vowel (vocoid) in the region of [o] with weak lip-rounding or as [Y] with neutral or weakly spread lips, thus sell [seo] or [seY], - - -' (198); and, for French, of. James 1924: 'The [1] sound with back vowel resonance will give way to a back vowel; of a Latin

> [faL'ko:nE > fauko > foko]   <u>faucon</u>
> [bELLos > bELz > bEaLz > bEaU > bo]   <u>Beau</u>
> [aLba > aUbA > o:b]' (125).   <u>aube</u>

10. The long vowel [a:] in the form [la:e], in which there is no
    non-syllabic vowel ([j]) as in [laje], I take to be the
    in fast tempo the tongue front remains in the open positon;
    in more careful speech it reaches the close position ([j]).

REFERENCES

Catford, J.C., 1977. <u>Fundamental problems in phonetics</u> (Edinburgh:
    University Press)

Fiorth, J.R., 1957. 'A synopsis of linguistic theory, 1930–1955',
    in W.S. Allen (ed.), <u>/studies in linguistic analysis</u> (Oxford:
    Blackwel10, 1–32

Gimson, A.C., 1962. <u>An introduction to the pronunciation of English</u>
    (London: Arnold)

Haas, W., 1957. 'Zero in linguistic description', in W.S. Allen
    (ed.), <u>Studies in linguistic analysis</u> (Oxford: Blackwell),
    33–53.

James, A.L1., 1929. <u>Historical introduction to French phonetics</u>
    (London: University of London Press)

Michailovaky, B., 1975. "On some Tibeto–Burman sound changes',
    in Cathy Cogen at al. (eds.), <u>Proceedings of the First Annual
    Meeting of the Berkely Linguistics Society</u>

Springg, R.K., to appear. 'Bantawa Rai s-, t-, and z-final verb
    roots: transitives, intransitives, causatives, and directives',
    [paper presented at the 18th International Conference on Sino–
    Tibetan languages and linguistics, Bangkok, 1985].

Appendix: improvised phonetic symbols

[?] glottal stop or glottal plosive
[A] half-close spread central vowel
[C] an appropriate consonant
[E] half-open front spread vowel
[H] voiced glottal (arytenoidal) friction, or 'murmur'
[I] centralized front spread vowel, between close and half-close
[L] velarized voiced lateral consonant
[N] voiced velar nasal
[O] advanced half-open back rounded vowel

[R]   voiced alveolar tap, with slight retroflexion
[S]   voiceless alveolo-palatal fricative
[tS(h)] voiceless (aspirated) alveolo-palatal affricate
[U]   centralized back rounded vowel, between close and half-close
[V]   an appropriate vowel
[Y]   half-close back spread vowel
[']   occlusion (without audible release, as opposed to plosion).

NOUNS AND NOUN PHRASES IN NEWARI[1]

Tej R. Kansakar
Tribhuvan University
Kirtipur

1.   INTRODUCTION

A number of studies on the structure of nouns and noun phrases
in Newari are already available,[2] and the present account
is an attempt to view the data from a generative standpoint
rather than to contradict or replace the existing literature
on the topic. In an earlier paper on Newari verbs (Kansakar,
1982:12-29) we argued that the morphological alternations around
the stem are derived by various phonological rules from the
underlying phonemic form, requiring at each stage the
identification of boundary markers and the phonological
structure of each morpheme. This implies that each morpheme
that undergoes alternation has a single underlying form to
which morpheme-structure rules apply first, followed by rules
that insert the systematically redundant features. After these
two sets have applied, the segments are phonologically specified
with the plus-minus coefficients of systematic phonemics.
The representations in all cases were phonetically specifiable
and this had the advantage of predicting variation in any
particular form, while at the same time contributing to
generalizations about phonological structure.

We propose in this paper to describe in terms of ordered rules
the phonetic realization of Newari nouns when followed by case-
markers, number and gender markers, and noun classifiers.
It is important to recognize here that the phonological
component of a grammar contains a subcomponent of
morphemestructure rules (M-S rule) which specify the
phonological structure of morphemes and distinguish segments
and sequences that are natural or acceptable from those that
do not meet this condition. We shall also take the view that
the phonemic forms need to be phonetically natural, and that
the elements included under each form are fully specifiable
for all features. In brief, this analysis will attempt to
satisfy two conditions: (a) the morpheme-structure condition
which 'specifies the range of wellformed phonemic
representations' or Newari nouns, and (b) the phonological

rules (P-rules) proper which 'specifies the variation in shape morphemes undergo in various environments' (Anderson, 1974:50).

2. MORPHOLOGICAL CASE FORMS

Annamalai (1975) in his paper on Tamil nouns recognizes seven case-markers which, if we eliminate his 'proximate location', correspond closely to the six case forms posited by Hale and Manandhar (1973:39-54) for Newari. These labels will be used here to illustrate the case forms in some Newari nouns cited by Hale and Manandhar (40):

(1)	child	servant	mother	I	he
Nominative	macā	cyaa	mAA	ji	wo
Ablative[3]	macĀ-Ā	cyaa-nAA	māmA-A	JI-I	wO-O
Associative	macā-yāke	cyaa-yāke	mĀĀ-yāke	ji-ke	wo-yāke
Dative	macā-yāta	cyaa-yāta	mĀĀ-yāta	ji-ta	wo-yāta
Genitive	macā-yā	cyaa-yā	mĀĀ-yā	ji-(gu)	wo-yā
Locative	–	–	–	–	–

	shop	book	water	shoes	house
Nominative	passa	saphuu	laa	lākĀĀ	chE
Ablative	pasalA-A	saphulI-I	lakha-A	lakamA-A	chE-E
Associative	–	–	–	–	–
Dative	pasaa-yāta	saphuu-yāta	laa-yata	lākĀĀ-yata	chE-yata
Genitive	passa-yā	saphuu-yā	laa-yā	lākĀĀ-yā	che-yā
Locative	pasala-e	saphuli-i	lakha-e	lakama-e	chE-E

While Hale and Manandhar (1973:3(-54) discuss morphological case in relation to the clause structure of Newari, we wish to limit our attention to the morphological alternations within individual nouns and noun phrases. The rules that we formulate will assume an explicit relationship between phonological and phonetic representations, as this is quite crucial within generative phonological theory today. Another aspect of this approach concerns the facts relating to alternations between morphemes and the ways these are handled in natural languages. Our main goal then will be to account for these alternations by a process of derivation from the underlying base form for each morpheme. The occurent case forms of various nouns in (1) can first be summarized as follows for easy reference:

Case morphemes

Ablative	Associative	Dative	Genetive	Locative
-ÃÃ	-yãke /-ike	-yãta/	-yã	-ae
-AA		-ita		-ii
-II				-ee
-EE				

The question posed by Hale and Manandhar consitutes the syntactic and semantic analogue of the central phonological problem we wish to analyse here, i.e. 'What deep structure relationships are signalled by each of the various case endings and in which contexts do these occur ?' In other words, how are the occurent morphological cases derived from the underlying deep structure ? Consider as an illustration an anlative rule which normally consists of the following two phonological processes:

1. Vowel nasalization
2. Vowel lengthening

A simultaneous application of these two processes will have the following effect:

(3) Underlying :   macã   +   Abl.   'child'
                      (R.1)   (R.2)
                        ↓   ↓
                        A   Ã
                        ↓
     Derived   :   macÃÃ   'by/from the child'
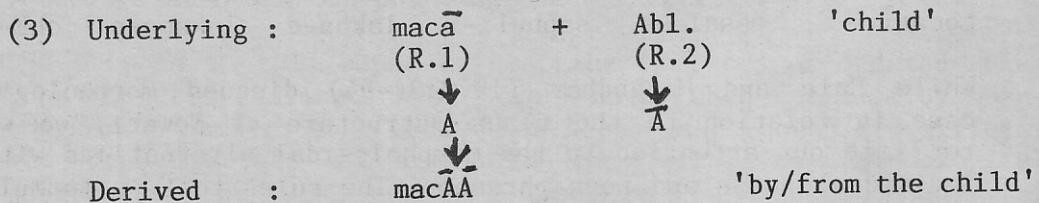
In this example a long nasal vowel which constitutes a case-maker, is derived from a short oral vowel of the stem noun, and this is true for all ablative cases except for those nouns which now add -nAA to the stem. This process however is reversed in the example /mAA/- 'mother' which already contains a long nasalized vowel in the stem-final position, so that when the ablative case-maker -mAA or -nAA is added, the vowel in the stem is de-nasalized and shortened as can be seen in the following derivation :

(4) /mĀma + Abl./
     mĀma-a   V lengthening
     mãmA-A   V nasalization
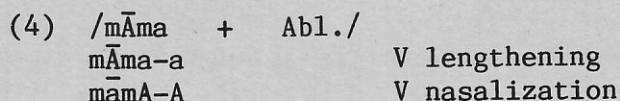
In a paper on Newari syllable structure (Kansakar, 1983: 63-75) we had observed that the loss of the stem-final syllables are still retained in the oblique case formations. These alternations are also obvious in the paradigms presented in (1) and can be seen in the following derivational rules:

(5)　(a) UF　/lakha + Abl/　　/sukuli + Abl/　　/nugala + Abl/
　　　Abl Rule　lakha-A　　　　sukuli-I　　　　nugala-A
　　　DF　　la.khAA　　　　suku.lII　　　　nuga.lAA

　　　　　'by/from the　　'by/from the　　'by/from the
　　　　　water'　　　　　straw-mat'　　　mind'

　　　(b) UF　/lakha + Loc/　　/sukuli + Loc/　　/nugala + Loc/
　　　Loc Rule　lakha-e　　　　sukuli-i　　　　nugala-e
　　　DF　　la.khae　　　　suku.lii　　　　nuga.lae

　　　　　'in the water'　'on the straw-　'in the mind'
　　　　　　　　　　　　mat'

As in the input string in (4) above, namely /mĀma + abl/ where the slashes represent word boundaries, and the '+' represents a morpheme boundary, and 'Abl' is the representation of a morpheme which triggers the application of a rule that lengthens and nasalizes the final vowel of the preceding stem. We argue for the existence of a final vowel in each of the forms /mĀma/, /lakha/, /sukuli/ and /nugala/ on the basis of the parallel need for a final vowel in the stems like /saphuli/ 'book', /tUthi/ 'well', /cukuli/ 'bolt', /pukhuli/ 'pond' etc where the final vowel is /i/ rather than /a/. The underlaying forms in (5) therefore have been posited so that all nouns can follow the same derivation for locative and ablative forms. While this has the effect of simplifying the derivation of locatives and ablaties, there are certain complications involving the underlying representation of the old stem-final /l/. In ordr to derive the unmarked or nominative forms of /sukuli/ and /nugala/, we need to delete certain final syllables as in the following :

(6)　/sukuli + Nom/　　　　　/nugala + Nom/
　　Nom.Rule sukuu　　　　　nugaa

This however is not an adequate generalization since we do not want /-li/ deleted from such underlying froms as /gwāli/ 'heel', /bāli/ 'harvest', /jāli/ 'net', /mwāali/ 'flute' etc where a syllable non-deletion Nom. rule will apply:

(7)   UF   /macā + Nom/   /gwāli + Nom/   /bāli + Nom/
     Nom.R   macā   gwāli   bāli
              'child'   'heel'   'harvest'

The Nom.rule then deletes a Nom except where the stemfinal is one of a listed set of syllables, i.e. /ti/, /thi/, /li/, /la/, /kha/, /wo/, /ja/, /sa/, /ca/, /ma/, /na/ and possibly /pa/ (as in /sarāā/ 'curse', but /sarāpA-A/ 'with a curse'). Where the Nom.rule applies to an affricate or fricative it will not simply delete and lengthen the preceding vowel, but will also replace the deleted syllable with /e/ :

(8)   UF   /bhoja/   /desa/   /thāsa/   /kwAca/
     Nom.Rule   bhoe   dee   thāe   kwAE
              'feast'   'country'   'place'   'bone'

Where the Nom rule applies to a nasal, it will nasalize the preceding vowel as well as lengthen it:

(9)   UF   /gā.ma/   /nā.ma/   /bākha.na/   /cika.na/
     Nom.Rule   gÃÃ   nÃÃ   bākhAA   cikAA
              'village' 'name'   'story'   'oil'

In a large number of recent loans with word-final consonants, however, the final syllables are not deleted by the Nom rule, e.g. in /parmeswar/ 'God', /jahān/ 'family', /mahārāj/ 'king', /memsāāb/ 'lady', /mālik/ 'master', /rāches/ 'ʒiant', /tāriph/ 'praise', /pāp/ 'sin', /āpat/ 'crisis', /mec/ 'chair' and the like. So while the Nom rule in (9) applies to an underlying form such as /gāma/ 'village' or /phasa/ 'wind', it cannot apply to an underlying from such as /mālik/. Though this may appear to be a forced solution, it does have the virtue of distinguishing forms to which the rule is or is not applicable. In other words, the rule can apply only to forms that end in the listed syllables, and the loan patterns obviously do not meet this condition. Note also that the underlying forms in (9) are marked with syllable boundaries so that we could simply refer to listed syllables and avoid confusion over the morphemic status of the old stem-finals. It is not however clear whether these stem-finals ever were morphemes, as the consonants at least seem to have been part of the noun stem and [4]/not independent morphemes or part of the suffix system. For example, the Nom rule will apply to the form /gwā.ca/ 'moustache' by virtue of /ca/ being a listed syllable, but it does not apply to /ku-cā/ 'a piece of' where /cā/ is a diminutive suffix which is indeed a morpheme. So the syllable boundary at this stage of the derivation founctions as a special marker that triggers the operation of the Nom rule, but is

blocked if there is a morpheme boundary. The derivational rules involved for all the forms can thus be summarized in the following two rules:

(10)   (a)   C ----> Ø / [Stem + Nom] $ _____ V

       (b)   Ø ----> C / [Stem + Abl/Loc] + _____ $\left\{ \begin{array}{c} V: \\ VV \end{array} \right\}$

                    where '+' represents a morpheme boundary and '$' a syllable boundary.

A notable exception to case formations for this class of nouns is evident in the example /chE/ 'house' in which the hypothetical final consonant does not surface in the forms either as ablative or locative case endings. This implies that Rules (10a) and (10b) do not apply to this form, and instead the case markers are indicated by lengthening of the stem vowel as can be seen in (11) formulated in terms of distinctive features:

(11) $\left[\begin{array}{c} + \text{syllabic} \\ + \text{high} \\ + \text{nasal} \end{array} \right] ----> \left[[+ \text{long}] \right] / \left[[+ \text{stem}] \right] \_\_\_\_ +$

Rule (11) illustrate the simple fact that a high nasal vowel is lengthened in the stem-final position. Note that Rule (11) is quite similar to the V lengthening rule in (3) above, but the two rules are to be distinguished in that they indicate different case markers, i.e. nasalization as a feature is inherent in (11) while the form in (3) has an underlying oral vowel. We thus have the following 3 part derivation for the form /chE/:

(12) UF /chE + Nom/   /chE + Loc/   /chE + Abl/
Nom. Rule   chE
Loc. Rule   chE-E
Abl. Rule   chE-E
        'house'   'in the house' 'by/from the house'

Here the Nom rule simply deletes 'Nom'; the Loc rule affixes /-e/ according to rule and nasalization spreads across the syllable; and the Abl rule lengthens and (vacuously) nasalizes the stem-final vowel. Note that the Locative and Ablative forms of /chE/ are phonetically similar since speakers do not consistently distinguish the two forms in normal speech. This is precisely what the normal rules for ablative and locative would predict, given a form with no deleted final consonant. So the form /chE/, where the vowel is short and no consonant surfaces in either the

locative or the ablative forms, can be taken as an expected
phonological ambiguity within the system of Newari noun
phonology.

The remaining case-markers /-yāke/, /-yāta/ and /-yā/
apply uniformly to the Associative, Dative and Genitive
forms respectively without involving alternations in the
stem nouns. In (5a) and (5b) we saw that the stem vowel
is shortened when followed by a case-marker beginning with
a lateral or an obstruent. But when a noun is followed
by a glide-initial suffix /-yāke/, /-yāta/ or /-yā/, the
segments in the stem remain constant. Notice however the
free variation indicated in (2) above, i.e. /-yāke/ and
/-yāta/ are phonetically reduced to [-ike] and [-itə] in
normal speech. the genitive case ending /-yā/ is not reduced
likewise especially in word-final positions. But as part
of a compound involving weak syllables, /-yā/ is often
realized as [i], e.g. tho-yā-gu and tho-i-gu - 'his', the
first occurs in careful speech and the second in rapid
speech This however may be a general rule that applies
not only to nouns but to verbs as well, e.g. coyā-conā
and coi-conā - 'was writing'. Thus if we were to maintain
that word-final position is what blocks the rule, then
auxiliaries would have to be taken as parts of verbal compounds.
This may be the logical view for Newari verb phrases as
reflected in the current spelling conventions. The case-
ending /-yā/ can also be followed optionally by a /-gu/
form, and in most speech situations this occurs quite normally.
For the first person pronoun 'I' the /-gu/ form seems to
be obligatory as an appropriate marker for possession,
e.g. ji-gu-saphuu - 'my book', but is not marked as such
by Hale and Manandhar (1973) since they were dealing with
clause-level constructions where /-gu/ as marker of inanimate
possession or /-mha/ as marker of animate possession are
not strictly relevant.

Another morphological alternation relating to the stem-
final consonant concerns the distinct tendency towards
'absolute neutralization' of the underlying segments.
In present day Newari it appears that the stem-final syllables
which have been lost are not all preserved in the ablative
and locative form of nouns, and these consonants now gradually
fil to appear on the surface. Hale and Manandhar (40)
note that "...these consonants may soon be lost. The ergative
form celA-A 'by the servant' for example is on its way
to obsolescence and is being replaced by cyaa-nAA. The
form mĀĀ-nAA 'by the mother' now occurs along side the
ergative, mā-mAA. The all-purpose ergative -nAA is paralleled
by the locative, lae (or khae in Bhaktapur) for those speakers

who have lost the oblique stem forms of various nouns."
It is not however certain on what basis Hale and Manandhar
have suggested /l/ as the underlying segment, unless it
is the case that /l/ is historically earlier than /w/.
The underlying form /cela/ thus may have been replaced
by the current archaic form /cewa/, as the ablative /cye.wAA/
is still evident in speakers of the older generation.

Consider however the currently obsolete form /celA-A/ as
an illustration of this trend. If the lost stem-final
/l/ in cyaa was recoverable in the ablative celA-A, then
we can logically posit /cya.la/ as the underlying form
and obtain the following derivational rules for both the
case forms:

(13)   UF /cya.la + Nom/   /cya.la + Abl/
Nom Rule cyaa
Abl Rule   cyala-A
       DF [ts^{j}ɔ:] 'servant'   [tx^{j}e. lɔ̃:] 'by/from the servant'

on the similar basis, since the nasal C /m/ surfaces in
the ablative forms of mÃÃ - 'mother' and lākÃÃ - 'shoes',
we can assume these nominative forms to contain the underlying
stemfinal nasal, as can be seen in (14):

(14) (a) UF /mā.ma + Nom/   /lākā.ma + Nom/
Nom Rule   mAA   lākAA
               'mother'   'shoes'

      (b) UF /mā.ma + Abl/   /lākā.ma + Abl/
Abl Rule   mama-A   lākama-A
          DF   mā.mAA   lākā.mAA
               'by/from the mother'   'by/from the shoes'

The alternative forms of the ablative consist in all cases
of the Nominative form followed by -nAA. Thus the alternative
forms would be /mÃÃ.nAA/ and /lākÃÃ.nAA/. The fact that
/cya.1AA/ or /cya.wAA/ has now been replaced by a more
general ablative /cyaa.nAA/, and the concurrent uses of
/mā.mAA/ and /mÃÃ.nAA/ indicate a process of historical
change which may be described as changes in the order of
application of certain rules (Kiparsky, 1965). The derivations
in (13) and (14) are however stated as a condition on underlying
forms rather than a condition on rules. This condition
assumes that if the alternating forms manifest one or more
allomorphas, i.e. [Ø] vs [m] or [n], then one of the allomorphs
is posited im the underlying base and others are derived
from it.

3. NUMBER AND GENDER

Another central problem in lexical representation for nouns is the problem of alternations that take place under morphological conditions in gender and number. Such alternations may involve only one form, i.e. the addition of a uniform suffix to the stem noun such as jyāpu 'farmer' – jyāpu+nii 'farmer's wife'; kalāā 'wife' – kalāā+pII 'wives'; phai 'sheep' (sing.) – phai+ta 'sheep' (plu.) etc. Or, they may involve more complex cases where vowels and consonants can alternate within a single morpheme or in some classes of words a monophthong/diphthong alternations to indicate gender/number distinctions. This brief analysis then will seek to determine what sort of underlying representation to give to a stem that undergoes such alternations in morphological environments. All alternations that involve classes of nouns will be examined and represented in rules that derive surface phonetic forms from the underlying morphemes.

3.1 Number Markers

Shresthacharya (1964:9) describes three ways of indicating number distinctions in Newari: (a) addition of a suffix /-pII/; (b) insertion of the suffix /-ta/ to the stem noun; and (c) by reduplication of the wh- question markers, or reduplications in pronouns and demonstratives. Here are illustrative forms:

(15)

(15)	(a)	/kijā/	–brother	/kijā-pII/	–brothers
		/kāe/	–son	/kāe-pII/	–sons
		/taami/	–a rich person	/taami-pII/	–rich prsons
	(b)	/phai/	–sheep (sing.)	/phai-ta/	–sheep (plu.)
		/kisi/	–elephant	/kisi-ta/	–elephants
		/manuu/	–man	/manuu-ta/	–men
		/lākĀĀ/	–shoe	/lākĀĀ-ta/	–shoes (Kinds of)
		/simā/	–tree	/simā-ta/	–trees (kinds of)
		/chE/	–house	/chE-ta/	–houses (kinds of)
	(c)	/chu/	–What ?	/chu-chu/	–what kinds?
		/go/	–where is it?	/go-go/	–where are they?

| /su/	-who?	/su-su/	-who all?
/tho/	-this/it	/tho-tho/	-these
/wo/	-that	/wo-wo/	-those

It may be noticed from (15) that the alternate uses of /-pII/ and /-ta/ appear to be unpredictable since these suffixes are not strictly confined to [+human] and [-human] nouns respectively. We thus have /i-pII/ 'they', /jahān-pII/ 'families', and /pāju-pII/ 'uncles' etc alongside other [+human] nouns such as /manuu-ta/ 'men', /guthyra-ta/ 'members of a social/religious organization', /misa-ta/ 'women' etc. A general rule may be stated to cover what first appears to be idiosyncratic alternations in /-pII/ and /-ta/:

(16)   ∅   ----> $\left\{ \begin{matrix} -pII \\ -ta \end{matrix} \right\}$ / $\begin{matrix} \text{stem N} \\ \text{[+animate]} \end{matrix}$ ———— #

This generalization however is not entirely satisfactory since /-pII/ and /-ta/ are by no means in free variation and cannot be attached to any noun indiscriminately. Shresthacharya (10) makes the plausible suggestion that nouns which have the classifier /ma/ or /mha/ as an implicit singular marker can take /-pII/ or /-ta/ in the plural, and the nouns which have underlying /-gu/ or other classifiers as the singular marker will in all cases take /-ta/ as the plural suffix. The examples in (15) fully support this fact since all nouns with /-pII/ as the plural suffix can have /mha/ in the singular form, e.g. /kijā-mha/ - /kijā-pII/ 'the one who is/those who are brothers'. /kāe-mha/ - /kāe-pII/ 'the one who is/those who are sons', /taami-mha/ - /taami-pII/ 'the one who is/those who are rich' etc, but we cannot have */lākĀĀ-mha/, */simā-mha/ or */chE-mha/ in any context.

Hale (1971:1) distinguishes three classes of nouns which he claims "can be defined in terms of differences in affixation, where affixation is taken to include both the classifiers which are affixed to the numerals which quantify the noun and the affixes which attach to the noun stem itself." Hale's classification is similar to Shresthacharya's in that Class 1 nouns take /pII/ and Class 2 nouns take /-/-ta/ as the plural marker, while Class 3 nouns manifest numerous singular classifiers and marginal occurrences of the plural marker /-ta/ which according to Hale usually has the meaning 'kinds of', i.e. /lākĀĀ-ta/ or /simā-ta/ imply 'kinds of shoes' and 'kinds of trees' rather than simple plural formations. As a general rule, Hale classifies

class 1 nouns as 'honored animate nouns', Class 2 as 'non-honored nouns', and those of Class 3 as 'inanimate nouns'. The facts as described by Shresthacharya (1964) and Hale (1971) seem to suggest that the three classes of nouns which trigger the uses of /-pII/ and /-ta/ can be expressed in terms of the following three rules:

(17) (a)
$$\begin{bmatrix} \text{Class 1 nouns} \\ \text{+singular} \\ \text{+human} \end{bmatrix} \longrightarrow \begin{bmatrix} \text{Stem + pII} \\ \text{Plural} \end{bmatrix}$$

(b)
$$\begin{bmatrix} \text{Class 2 nouns} \\ \text{+singular} \\ \text{+animate} \\ \text{+human} \end{bmatrix} \longrightarrow \begin{bmatrix} \text{Stem + ta} \\ \text{Plural} \end{bmatrix}$$

(c)
$$\begin{bmatrix} \text{Class 3 nouns} \\ \text{+Singular} \\ \text{+animate} \end{bmatrix} \longrightarrow \begin{bmatrix} \text{Stem +} \left\{ \begin{matrix} \emptyset \\ \text{ta} \end{matrix} \right\} \\ \text{Plural} \end{bmatrix}$$
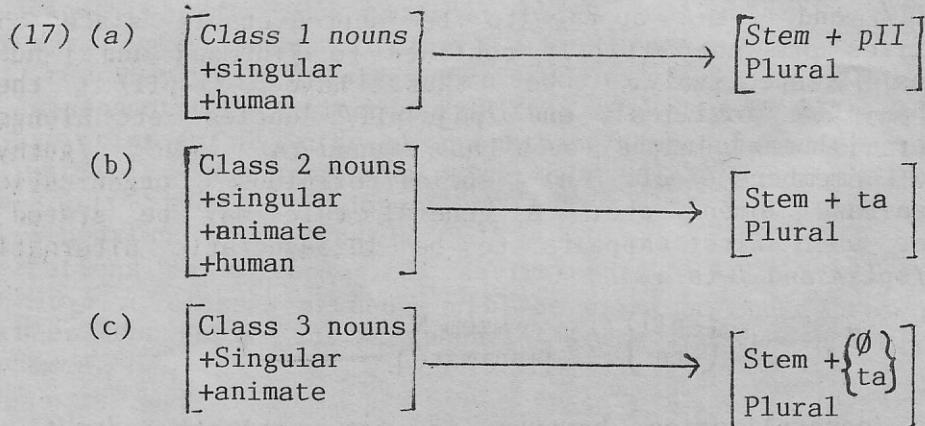
These rules will allow us to derive the following plural formations for the three classes of nouns:

(18) (a)   /pāju + Plu/   /jahān + Plu/
Plu Rule   pāju-pII   'uncles'   jahān-pII   'families'

(b)   /khicā + Plu/   /phogII + Plu/
Plu Rule   Khicā-ta   'dogs'   /phogII-ta/   'beggars'

(c)   /simā + Plu/   /chE + Plu/
Plu Rule   Simā-ta   'kinds of trees'   Che   'houses'

In (18a) the plural suffix /-pII/ applies obligatorily to particular [+human] nouns; in (18b) the suffix /-ta/ occurs optionally for [+human] nouns but in general to all [+animate] nouns; and in (18c) the sequence [stem+ta] is marginal so that a plural interpretation can be given even in the absence of /-ta/ by "specifying the classifier or set of classifiers in terms of which the noun may be quantified" (Hale, 1971:3).

3.2 Gender Markers

Shresthacharya (1964) recognizes three ways of indicating gender: (a) V or/and C alternation in the noun stem; (b) insertion of prefixes /ba-/ or /ma-/ to the noun stem; and (c) addition of a suffix /-nii/. As an illustration of (a)

consider first the following forms which constitute the most
common alternations in gender markers:

(19) /nãe/   'butcher'   /nAI/   'butcher's wife'
      /wEE/   'mad man'   /UII/   'mad woman'
      /kÃÃ/   'blind man'   /kanI/   'blind woman/'
      /nãyaa/   'head man'   /nakII/   'head woman'
      lyãemha/   'young man'   lyãse   'young woman'
      /mijAA/   'man'   /misã/   'woman'
      /khwÃE   'deaf man'   /khusII/   'deaf woman'
      /pwariyã/   'fisherman'   /pwarII/   'fisherwoman'
      /langarã/   'lame man'   /langari/ 'lame women'
      /gallarã/   'man with goiter'   /fallari/ 'women with goiter
      /yãrpã/   'cock-eyed man'   /yãlII/   'cock-eyed woman'
      /jyãtha/   'old man'   /jithi/   'old woman'

The paradigms given in (19) present a very complex picture
of alternations, and apart from the uniform agreement in the
initial C for masculine and feminine counterparts, each pair
of nouns manifest a variety of alternations in the stem
morpheme.

These alternations involve changes from a monosyllabic to a
disyllabic word, e.g. /kÃÃ/ - /kanI/; vowel and consonantal
a changes within disyllabic patterns such as /nãyaa/ - /nakII/,
/khwÃE/ - /khusII/; and stem-final vowel alternations in
/langarã/ - /langari/, /gallarã/ - /gallari/ etc. For the
purpose of the present analysis, however, we shall consider
pairs like /nãe/ - nAI/, /wEE/ - /uII/, /nãyaa/ - /nakII/,
/lyãemha/ - /lyãse/, /yãrpã/ - /yãlII/ etc as separate lexical
items rather than as derivations of the from the other.
Historically these are very interesting forms, but in a
synchronic description it is doubtful whether the patterns
are sufficiently productive to warrant setting up the
rules to derive them from underlying sources. Further,
the rules required to derive each item seem to be highly
restricted, and the complexity involved in the rules is
not easily justified in terms of the number of lexical
forms they serve to describe. These rules however may
be given a natural ordering statement independently for
each form:

1.   A vowel lengthening and nasalization rule which
      lengthens and nasalizes a vowel sequence when
      followed by a nasal consonant in the word-final
      position:

      [+syllabic] ---> $\begin{bmatrix} +\text{nasal} \\ +\text{long} \end{bmatrix}$ / _____ N#

2.   Syllable re-structuring rule which inserts or deletes segments, thus affecting the relative distribution of consonants and vowels within the word. A consonant may be deleted word-finally but is retained when followed by a ·suffix. A vowel may also change into a glide, and diphthongs may be monophthongized in certain positions. These alternations have the effect of changing the syllable structure of the stem word. Further, the class of suffixes applicable to this function alters the syllable shape of the derived output:

(a)   + CV.CV + ---> CV:
(b)   VV ---> V:

The V lengthening and nasalization rule (1) and the re-structuring rule (2) apply simultaneously, as can be seen in the following sample derivations:

(20)   (a)   UF   /kā.na/   'blind man'   /ka.nina/ 'blind women'
       1.v length.   /kääna   kaniina
       2.V nas.   kÄÄna   kanIIna
       3.N del.   kÄÄ   kanII

             DF   [ka:]   [kəni͂:]

       (b)   UF   /nāya.ka/ 'head man'   /naki.na/ 'head woman'
       (R.1)   nāyaaka   nakiina
       (R.2)   –   nakIIna
       (R.3)   nāyaa   nakIT
             DF   [najɔ:]   [nəki:]

       (c)   UF   /khwāy.na/ 'deaf man'   /khusi.na/ 'deaf woman'
       (R.1)   khwāena   khusiina
       (R.2)   khwÄEna   khusIIna
       (R.3)   khwÄE   khusII

             DF   [khwx͂:]   [khusi͂:]

The derivational rules illustrated above leads to a change from a more complex syllable structure to a basic CV pattern which we take to be the preferred syllable structure for Newari. Such processes have the effect of reducing a disyllabic word into a single syllable, of deleting word-final consonants, and a vowel sequence realized as a single long vowel. The alternations involved in these processes may thus be regarded as 'optimal alternations' that derive the basic syllable structure of contemporary Newari (see also Kansakar, 1983).

It now remains to account for those classes of nouns which require direct insertion of affixes as differentiating gender-markers. It is obvious from such examples as /khwĀE/ - /khusII/, /nāyaa/ - /nakII/, /galaarā/ - /galaari/ etc that the high vowel [i] generally signals a feminine marker, but the final syllables with this high vowel do not constitute independent morphemes and hence are not a part of the suffix system. In the case of /jyā.tha/ - /ji.thi/ however, there is a possible morpheme break between the first and second syllables of the two words. The vowel harmony-like agreement in this pair of nouns is therefore an interesting fact which has no parallel in the data so far examined.

The class of nouns that insert prefixes or suffixes as gender-markers can be seen in the following forms:

(21)

/bā-kisi/	– male elephant	/mā-kisi/	– female elephant
/bā-hAE/	– drake	/mā-hAE	– duck
/bā-dhU/	– tiger	/mā-dhU/	– tigress
/bā-cakhUU/	– male sparrow	/mā-cakhUU/	– female sparrow
/yemI/	– male resident of Kathmandu	/yemi-nII/	– female resident of Kathmandu
/kAAmi/	– carpenter	/kAAmi-nII/	– carpenter's wife
/sāemi/	= Manandhar caste	/sāemi-nII/	– a Manandhar's wife
/āwāā/	– a roof-tile layer	/āwāā-nII/	– tile-layer's wife

It is evident from the examples in (21) that the prefixes /bā-/ and /mā-/ can go only with [+animate, -human] nouns, while the suffix /-nII/ is inserted only in the case of [+human] nouns. These facts can be described in the following two simple rules:

(22)

(a) $\emptyset \longrightarrow \begin{matrix} b\bar{a}- \\ m\bar{a}- \end{matrix}$ / # _____ + Stem [+animate, -human]

(b) $\emptyset \longrightarrow -nII$ / Stem [+human] + _____ #

4. NOUND CLASSIFIERS

Hale and Shresthacharya (1973:1-21) in their highly interesting paper on "Is Newari a Classifier Language ?" explore various criteria for characterizing true classifiers and provide

a wide sampling of representative classifiers in the language. We shall not be concerned here with the total system of classifiers, but more directly with the phonological representation of noun classifiers in particular. The brief analysis that we intend here will take account of phonological alternations involved in the use of noun classifiers and to express such facts in terms of informal rules. In this sense, we could treat classifiers in the same way that we have treated nouns, to the extent that they manifest the same stem alternations as the nouns. The syntactic and semantic implications of classifiers as investigated by Hale and Shresthacharya will thus be largely ignored in the present analysis since the choice of a classifier with a given head noun is accomplished by the syntax rather than the phonology.

We can thus make use of the rules we have developed for nouns (i.e. nominative, ablative, locative and plural rules) and illustrate how these rules also apply in the same form to classifiers. As the phonological shapes of individual classifiers are determined by their pairing with certain classes of nouns, we need in the first place to distinguish between classifiers that accompany [+animate] or [-animate] nouns on the one hand, and unit countable or unit non-countable nouns on the other. The following examples will serve to illustrate these distinctions:

(23)   manuu cha-mha   - one person
             khicā cha-mha   - one dog
             saphuu cha-gu   - one book
             cosā cha-pu   - one pen
             chE cha-khā   - one house
             lākĀĀ cha-ju   - one pair of shoes
             swĀĀ cha-phwo   - one flower
             laa cha-phuti   - one drop of water.

The illustrative forms in (23) show a uniform sequence, i.e. stem noun + numeral + classifier. The lexicon as listed however convey different kinds of information about the stem, e.g. phonological information: that each stem is composed of specified number of segments; syntactic information: that each is a noun that may be animate or inanimate, singular or plural etc; and semantic information: that its use is determined by the meaning content of the object or concept specified. Further, the use of classifiers more than the use of numerals serve to quantify the head noun in a manner which explicitly defines the inherent

properties of the stem. In this sense the syntactic component of the grammar would indicate that the features of the classifier would be copied from the head noun, or that the classifier itself must reflect the properties implicit in the stem. But prior to the application of phonological rules we assume that the syntactic or morphological features of the classifiers are converted into a string of segments which is added to the stem. We also assume that the spelling rules for the derivation of classifiers are not required since the selection of lexical items are determined by the syntax and provided in the input string. The derivational rules for the nouns and the classifiers given in (23) can thus take the following forms:

(24)

(a)   UF   /manu.kha + Nom/   /manu.kha + Abl/
Nom. rule: manuu   Abl.rule   manuu khAA
Classifier rule: manuu cha-mha   Clf. rule1   manuu cha-mhaesiA̅A̅/sike

               'one person'   'by/from one person'

          UF   /manu.kha + Plu/   /manu.kha + Abl/
Plu. rule   manuu-ta   Abl.rule   manuu khAA
Clf. rule   manuu-(ta)-ni-mha Clf.rule   manuu tae-sAA/taeke

               'two persons'   'by/from persons'
                                                 (number unspecified)

(b)   UF   /mhyā̅.ca + Nom/   /mhyā̅.ca + Abl/
Nom.rule   mhyA̅E   Abl.rule   mhyā̅e-(cAA)-nAA
Clf.rule   mhyā̅e cha-mha   Clf.rule1   mhyā̅e cha-mhaesiA̅A̅/sike

               'one daughter'   'by/from one daughter'

          UF   /mhyā̅.ca + Plu/   /mhyā̅.ca + Abl/
Plu.rule   mhyā̅e-pıı̅   Abl.rule   mhyā̅e-(cAA)-nAA
Clf. rule   mhyā̅e-pII ni-mha Clf.rule2   mhyā̅e pisAa/pIIke

               'two daughters'   'by/from daughters'
                                                 (number unspecified)

(c)   UF   /saphu.li + Nom/   /saphu.li + Abl/
Nom.rule   saphuu   Abl.rule   saphu lII
Clf. rule   saphuu cha-gu   Clf.rule   saphuu cha-gulII

               'One book'   '/by/from one book'

```
        UF      /saphu.li + Plu/                  /saphu.li + Loc/
Plu.rule        saphuu-(ta)      Loc.rule         saphu lii
Clf. rule       saphuu-(ta) ni-gu Clf.rule        saphuu cha-gulii

                'two books/two                    'in one book'
                kinds of books'


(d)     UF      /chE + Nom/                       /chE + Abl/
Nom.rule        chE              Abl.rule         chE-E
Clf.rule        che cha-kha̅     Clf.rule         chE cha-khA̅A̅

                'one house'                       'by/from oen house'


        UF      /chE + Plu/                       /chE + Loc/
Plu.rule        chE              Loc.rule         chE-E
Clf.rule        chE ni-kha̅      Clf.rule         ChE cha-kha̅e

                'two houses'                      'in one house'


(e)     UF      /la̅ka̅,ma + Nom/                  /la̅ka̅.ma + Abl/
Nom.rule        la̅kA̅A̅          Abl.rule         la̅ka̅ mAA
Clf.rule        la̅kA̅A̅ cha-ju   Clf.rule         la̅kA̅A̅ cha-jUU

                'one pair of shoes'              'by/from one pair of shoes'


        UF      /la̅ka̅.ma + Plu/                  /la̅ka̅.ma + Loc/
Plu.rule        la̅kA̅A̅-(ta)     Loc.rule         la̅ka̅ mAE
Clf.rule        la̅kA̅A̅-(ta)ni-ju Clf.rule        la̅kA̅A̅ cha-juii

                'two pairs of shoes'             'in one pair of shoes'


(f)     UF      /swa̅na + Nom/                    /swa.na + Abl/
Nom. rule       swA̅A̅           Abl.rule         swA̅A̅ nAA
Clf.rule        swA̅A̅ cha-phwo  Clf.rule         swA̅A̅ cha-phwo nAA/lII

                'one flower'                     'by/from one flower'


        UF      /swa̅.na + Plu/                   /swa̅.na + Loc/
Plu. rule       swA̅A̅           Loc.rule         swA̅A̅ nae/lae
Clf rule        swA̅A̅ ni-phwo   Clf.rule         swA̅A̅ cha-phwo lae

                'two flowers'                    'in one flower'


(g)     UF      /la.kha + Nom/                    /la.kha + Abl/
Nom.rule        laa              Abl.rule         la khAA
clf.rule        laa cha-phuti    Clf.rule         laa cha-phutII

                'one drop of water'              'by/from one drop of
                                                 water'
```

```
         UF     /la.kha + Plu/              /la.kha + Loc/
Plu.rule        laa               Loc.rule   la khae
Clf.rule        laa ni-phuti      Clf.rule   laa cha-phuti-i

                'two drops of water'         'in one drop of water'
```

5. CONCLUSIONS

We have attempted in this paper to write the rules for
the morpho-phonology of Newari nouns by specifying the
phonological strucutre of morphmes and the possible alternations
in the stem nouns. As in the case of verbs (Kansakar
1983), we have described these alternations by a process
of derivation from the underlying base form for each stem
noun, and the morphological conditions under which such
rules operate. These rules however have in the main been
phonetically motivated since we attempted to determine
the deep structure relationship of individual forms from
the surface representation or morphological affixes. Such
phonetic evidence, we pointed out, can be seen most clearly
in the case of those nouns which have lost the stem-final
syllables as part of historical process. These stem
alternations are clearly obvious in the numerous examples
provided to illustrate nominative, ablative and locative
rules where the derivational processes involved for various
classes of nouns have been analysed in terms of case-endings,
number-gender markers, and noun classifiers. The main
purpose of this analysis has thus been to present the
problems as clearly as possible with the support of extensive
data and, more specifically, to show the relationship
and constraint between Phonology and Grammar which remains
a basic issue in Generative Phonological theory.

NOTES

1/ The transcription scheme used in this paper is a phonemic representation of spoken Kathmandu Newari. This transcription consists six short vowels: i,e,a,ā,o, and u; eight long vowels: ii,ee,ae,āe,aa,āā,oo, and uu; and the diphthongs: ai, au, āi, āu, and ui. The nasalization of vowels, which is contrastive in the language, is represented by capitals: I, E, A, Ā, O, U, II, AA, UU etc. The transcription of Newari consonants includes the stops: p, ph, b, bh, t, th, d, dh, k, kh, g, gh; the affricates: c, ch, j, jh; the nasals: m, mh, n, nh, (ng); the liquids: l, lh, r (rh); the fricatives: s, h: and the glides: w, and y.

2/ The most notable treatments of Newari nouns and noun phrases are the works of Hale and Hale (1970:131-281): Hale (1971:11 pp.); Hale and Manandhar (1973/1980:39-54;79-93); Kolver and Kolver (1975: 87-177); Kolver (1977); Kolver (1978: 277-300); Malla (1985); Hale (1983) listed in the bibliography.

3/ We have renamed the Agentive as Ablative since it is clearly not semantically an agent with inanimate nouns. Ablative is the traditional name for source and in the instances where t is a semantic agent, the agent can be viewed as the source of the action. This is in line with the idea put forward by Kolver and Kolver (1975: 87-117) and others that Newari is an ergative language.

4/ For discussions that have a bearing on this problem, see also Kansakar (1983:63-75).

REFERENCES

Annamalai, E. 1975. 'The Phonology of Tamil Nouns' in F.H. Schiffman & M.C. Eastman (Eds) Dravidian Phonological Systems, South Asian Studies Program (Seattle: University of Washington Institute for Comparative and foreign area studies).

Anderson, Stephen R. 1974. The Organization of Phonology. New York: Academic Press.

Hale, Austin and Margrit Hale, 1970. 'Newari Texts.' Occasional papers of the Wolfenden Society, 3:4, 131-281.

Hale, Austin, 1971. 'Newari Nouns: a guide to vocabulary entries' (= Topics in Newari grammar II). Kathmandu: SIL, 11pp.

Hale, Austin and Iswarananda Shresthacharya, 1973. 'Is Newari a classifier language ?', Contributions to Nepalese Studies 1:1, 1-21.

Hale, Austin and Thakurlal Manandhar, 1973. 'Case and role in Newari', Nepal Studies in Linguistics - I, 39-54. (Revised version, Pacific Linguistics, Series A, No. 53, 1980, 89-93).

Hale, Austin, 1983. 'Noun phrase form and cohesive function in Newari'. Philippines: SIL, 25 pp.

Harms, Robert T. 1968. Introduction to Phonological Theory. Englewood Cliffs, New Jersey: Prentice-Hall.

Kansakar, Tej R. 1979. A generative Phonology of Kathmandu Newari. Unpublished Doctoral dissertation, Tribhuvan University, Kathmandu.

_____ 1980. 'The treatment of Glides in Newari Phonology', Nepalese Linguistics, 1, 9-16.

_____ 1981a. 'Newari language and linguistics: A conspectus', Contributions to Nepalese Studies, 8:2, 1-18.

_____ 1981b. An Introduction to Newari Phonology, Kathmandu: Degaa Pocket Books. In Newari.

_____ 1982. 'Morphophonemics of the Newari verb', Occasional Papers in Nepalese Linguistics, 1, 12-29.

_____ 1983. 'Syllable structure in Newari', Nepalese Linguistics' 2, 63-75.

_____ 1984. <u>A Basic Course in Colloquial Newari</u>, Tribhuvan University: Campus of International Languages.

Kiparsky, Paul, 1965. 'Phonological change'. Unpublished Doctoral dissertation, Massachusetts Institute of Technology. Reproduced by the Indiana University Linguistic Club, Bloomington, Indiana.

Kolver, Bernhard and Ulrike Kolver, 1975. 'On Newari Nound Inflection.' <u>Zentralasiatische Studien des Seminars fur Sprach-und Kulturwissen-schaft kentralasiens der universitat Bonn</u> - 9, Wiesbaden: Otto Harrassowits, 87-117.

Kolver, Ulrike, 1977. 'Nominalization and lexicalization in modern Newari', (Arbeiten des Kolner Zniversalien-Projekts (=akup) 30). Koln: Institut fur Sprachwissenschaft.

_____ 1978. 'On Newari Noun phrases;, in H. Seiler (ed) <u>Language Universals</u>, 277-300. Tubingen: Gunter Narr Velag.

Malla, Kamal P., 1985. <u>Contemporary Newari, a Working Outline</u>, Monumenta Serindica No. 14., Tokyo: Institute for the study of languages and Cultures of Asia and Africa.

Shresthacharya, Iswarananda, B.S. 2021, (1964). <u>Muulukha</u> (Newari grammar), Navadurga Press, Bhaktapur.

A MORE PROMISING RULE FOR NOMINATIVE CASE-ASSIGNMENT

Yogendra P. Yadava
Department of English, Kirtipur Campus

INTRODUCTION

As the rule for nominative Case-assignment, Chomsky (1981) proposes
that the subject NP of a tensed clause is governed and assigned
nominative Case by INFL (containing agreement, henceforth, AGR).
This paper is an attempt to show how this rule cannot be upheld
for languages like Maithili (an Indo-Aryan language). Instead,
we suggest that COMP be treated as the governor of the subject
in a tensed clause and the Case-assigner to it. This suggestion
is worth exploring for theoretical advantage, in that it accounts
for the phenomenon of nominative Case-assignment not only in
Maithili-type languages but also in languages like English, Italian
and Spanish.

This paper is organized as follows. In section 1 we present a
brief sketch of the Case theory, as proposed within the theory
of government and binding (henceforth, GB), focusing our attention
on the rule for nominative Case-assignment. In section 2 we argue
that Chomsky's rule for nominative Case-assignment cannot be retained
for Maithili-type languages, where AGR contains grammatical features
of not only the subject but also of the direct/indirect object
and possessive. In section 3 we suggest that INFL (containing
AGR) in Maithili be generated within VP, since it is a part of
V. In section 4 we note the problem of nominative Case-assignment
in Maithili if we treat INFL as a node within VP. We try to resolve
this problem by proposing that the subject of a tensed clause is
governed and assigned nominative Case by COMP containing the feature
+ Tense. We also show how this proposal has cross-linguistic
validity, in that it is operative not only in Maithili but also
in languages like English, Italian and Spanish. We conclude by
summing up our discussions in the preceding sections and showing
how the proposed rule is more 'promising' thean its earlier
counterparts.

1. THEORETICAL ASSUMPTIONS ABOUT CASE THEORY

The theory of Case occupies a significant status within some
recent versions of EST [Vergnaud (1979); Chomsky (1980, 1981,
1982); Jaeggli (1980) and other similar works]. It has been
considered as one of the principles of universal grammar
(UG, henceforth). Under the assumptions of the Case theory,
'abstract' Case is a feature assigned to a lexical NP in a
Case-marked position, irrespective of whether it is
Morphologically realized in a language or not. Thus, nominative
Case is assigned to the subject NP of a tensed clause in English,
but it is morphologically full.

- 55 -

To implement the idea underlying the theory of Case, we assume
that Case features appear freely within the syntactic feature
matrix[1] of lexical nouns listed in the lexicon. For example,
nouns like <u>boy</u> have the feature [+ Case], along with other
syntactic features:

(1)   <u>boy</u> [+ N, + Count, + Human, + Case] We also assume
        that[2] the Case features of nouns percolate upwards to
        NPs.[2] Chomsky (1981:331) expresses this assumption
        as follows:

(2)   The Case of an NP is derived from that of its head
        (i.e. N), or is assigned by a Case-assignment rule
        if the NP has no head (e.g. gerund).

        Now that the Case features are assigned 'freely' to
        nouns in the lexicon, it may happen that they are
        assigned improperly. For instance, a noun which requires
        nominative Case may be specified with objective or
        some other Case. To avoid such unwanted Case-assignment,
        the following principles have been proposed as Case-
        checking devices [Chomsky (1981)].

(3)   a.   NP -> [nominative] / if governed[3] by INFL

        b.   NP -> [objective] / if goverhed by V

        c.   NP -> [oblique]/ if governed by P and certain
              Vs.

        d.   NP -> [genitive] / [NP ----- X']

        The Case-checking rules in (3) specify the contexts
        in which an NP with a specific Case feature can appear.
        In other words, These rules determine whether Case
        features have been properly assigned to an NP in the
        lexicon or not. Nominative NPs, for instance, may
        be base-generated in any position of a D-structure.
        But rule (3a) permits them to appear only in the position
        governed by INFL (viz. as the subject of a tensed
        clause). Following Chomsky (1981), we assume that
        Case-checking applies at no later level of representation
        than S-structure, since this level is an input to LF
        - and PF components, both of which require
        Case-assignment.

        In addition to the free assignment of Case features
        in the lexicon and Case-checking rules (3) applying
        at S-tructure, a grammar requires another device, called
        Case Filter, to ensure that even lexical NP contains
        a Case feature. It is stated as follows·

(4)   *[NP-Case phonetic matrix]

Note that the rules in (3) do not permit the NPs which
are improperly Case-assigned. But they cannot block
the NPs which are not Case-marked at all. Hence, Case
Filter (4) is required to rule out such non-Case-marked
NPs. Following Vergnaud (1977) and Jaeggli (1980),
we suggest that Case Filter (4) should best be treated
as a condition on morphological well-formedness. Thus,
a sentence in which a lexical NP is not specified with
a Case feature will be blocked, since it will not satisfy
the well-formedness condition in (4). If so then the
Case Filter obviously belongs to the PF-component of
grammar.

We have so far discussed Case-assignment to the NPs
in the lexicon, i.e. base-generated NPs. Now, we turn
to show how Case is assigned to moved NPs, e.g. a wh
- phrase in English moved to COMP position. In the
GB theory Chomsky proposes a device like
'Case-inheritance,'[4] whereby a moved NP 'inherits'
the Case of the variable that it binds.[5] The variable
may be a trace or a resumptive pronoun. To execute
the notion of 'Case-inneritance', Chomsky (1981, 1982)[6]
suggests that Case should be assigned to a 'chain'.
To accommodate Case-assignment only to a chain, Chomsky
(1981: 334) reformulates the principles of Case-checking
[listed in (3)] in terms of a chain. Accordingly,
a member of a chain can be assigned a specific Case
if and only if it appears in a specific Case-marked
position, Extending this assumption to the Case Filter
in (4), Chomsky revises it as: every lexical NP is
an element of a chain with Case.[7]

2.   THE RULE FOR NOMINATIVE CASE-ASSIGNMENT AND THE MAITHILI DATA

Let us now turn to the main issue, i.e. investigating the
empirical adequacy of the rule for nominative Case-assignment
in the light of the Maithili data. This rule, stated in (3a),
is repeated in (5):

(5)   NP -> [nominative] / if governed by INFL

Consider structure (6) in this respect:

(6) John INFL [VP think that [She INFL [VP leave his book]]]

Here INFL governs <u>John</u> (= the subject of the matrix clause) and <u>he</u> (= subject of the embedded clause); so it assigns nominative Case to these subject NPs by rule (5).

As noted earlier, rule (3a), repeated as (5), (including other rules in (3)) is a part of UG. It then naturally follows that the rule in question should be operative not only in English-type languages but also in languages like Maithili. That is to say, in Maithili too, the subject NP of a tensed clause is governed and assigned nominative Case by INFL. If so then we require to invoke an S-expansion rule in Maithili like (7), where INFL is treated as an immediate constituent of S:

(7)   S -> NP   INFL   VP

Rule (7) can be motivated for English-type languages on various grounds. For instance, consider subject-verb agreement. Chomsky (1981:52) assumes the following expanding rule for INFL.

(8)   INFL -> [± Tense] (AGR)

AGR in (8) is optional;it shows up if and only if INFL contains [+ Tense]. It includes grammatical features like person, number, gender, etc. In English-type languages AGR contains the features of only the subject NP. Therefore, it seems quite plausible to assume that INFL containing AGR is the Case-assigner to the subject NP. Such an assumption is feasible within the GB theory only if INFL is generated as an immediate constituent of S, governing the subject NP, as in (7).

The treatment of INFL as an immediate constituent of S cannot be retained for Maithili, however. It is quite unmotivated for the language, since it provides none of the evidence in support of rule (7), and, for that matter, rule (5). In the subsections that follow we present two arguments against the retention of the preceding treatment of INFL for Maithili-type languages.

2.1   THE   AGREEMENT FACTS IN MAITHILI

AGR in Maithili has some very striking properties. A verb in the language agrees with the person and honorificity of not only the subject but also of the direct object, indirect object, and possessive NPs. These agreement facts are illustrated by the following examples (SUB = subject; Do = direct object; IO = Indirect Object; POSS = Possessive; hon = honorific' nonhon = nonhonorific; Midhon = midhonorific;

1 = first person;   2 = second person;   3 = third person;   and
M = nasalization):

(9) Subject + direct object agreement

a.   O   toraa   maar-al-kunh
     he- [3 hon.]   you-[2 nonhon.]be - past - [3 hon SUB]
                                              [2 nonhon DO]

     'He beat you'.

b.   U   toraa   maar-al-kau
     he- [3 nonhon.] you- [2 nonhon] - [3 nonhon SUB]
                                       [2 nonhon DO]

     (Same as in a.)

c.   ham   toraa   maar-al-iau
     I - [1]   you - [2 nonhon.]   - [1 SUB   ]
                                          [2 nonhon DO]

     'I beat you.'

d.   tuM   hunakaa   maar-al-uhunh
     you - [2 nonhon.] him- [3 hon.]   _ [2 nonhon. SUB]
                                          [3 hon. DO   ]

     'You beat him.'

e.   tuM   Lkaraa   maar-al-ihi
     you - [2 non hon.] him - [3 nonhon.] _ [2 nonhon. SUB]
                                            [2 nonhon. DO]

     (Same as in d.)

f.   tuM   haharaa   maar-al-ae
     you - [2 nonhon.]   me -][1]   _ [2 nonhon. SUB]
                                          [1 DO   ]

     'You beat me.'

(10) Subject + indirect object agreement

a.   tuM   hamaraa   okaraa
     you - [2 nonhon.]   me - [1]   him - [2 nonhon.]

     de- 1 - ae

     give-past - [2 nonhon. SUB]
                 [1 IO   ]

     'You gave him to me.'

b. tuM   hamaraa   hunakaa   de-1-ae
    you- [2 nonhon.]   me-[1]   him- [3 hon.]   _[2 nonhon.SUB]
                                                           [1 IO   ]

    (Same as in a.)

c. ahaaM   hamaraa   okaraa   de-1-auMh
    you- [2 hon.] me- [1]   him- [3 nonhon.] _[2 hon. SUB]
                                                     [1. IO   ]

    (same as in a.)

d. ahaaM   hunakaa   okaraa   de-1-iaenh
    you- [2 hon.]   him- [3 hon.]   _ [2 hon. SUB]
                                                           [3 hon. IO]

    'You gave him to him'. (where two occurrences of him are not
    coreferential)

(11) subject + possessive agreement

a. ham   tohar   ghar   dekh-al-iau
    I - [1]   your- [2 nonhon]   house   see-past- [1 SUB   ]
                                                        ,[2 nonhon POSS]

    'I saw your house.'

b. ham   tohar   ghar   dekh-al-iah
                   your- [2 midhon]   _ [1 SUB   ]
                                                     [2 midhon. POSS]

    (Same as in a.)

c. ham   ahaaMk   ghar   dekh-al-auMh
                   your- [2 hon]   _ [1 SUB   ]
                                                     [2 hon. POSS]

    (same as in a)

d. ham   okar   ghar   dekh-al-isek
                   his - [2 nonhon]   _ [1 SUb   ]
                                                     [3 nonhon. POSS]

    'I saw his house.'

e. ham   hunak   ghar   dekh-al-iaenhi
             his-3 hon.   [1 SUB   ]
                                                  ‒ [3 hon. POSS]

(Same as in d.)

The agreement facts illustrated in (9-11) show that AGR in
Maithili is a complex symbol, including the grammatical features[8]
of subject and object (direct or indirect) or apossessive NP.
Given the fact that a verb in Maithili agrees not only with
the subject alone, it does not seem plausible to treat INFL
(containing AGR, as shown in (8) as the Case-assigner to the
subject NP, as in rule (5). In other words, if we assume that
rule (5) is valid for Maithili also, we do not have any answer
to the question: Why does INFL (containing AGR) assign
nominative Case only to the subject NP, and not to the object
and possessive NPs, since the verb shows agreement with these
NPs too ?

2.2 Affix Hopping

Rule (5) can be rejected for another reason as well. Suppose
we accept rule (5), setting aside the agreement facts mentioned
above. Then we would have to invoke a rule like affix Hopping.
But the rule in question is unmotivated for Maithili, since
there is no syntactic process (e.g. subject-auxiliary inversion,
as in English interrogatives) in the language which requires
such a rule.

3.   INFL AS A PART OF V

The feature content of AGR and other syntactic processes in
Maithili obviously suggest that INFL, which contains AGR, cannot
be generated as an immediate constituent of S (as in (7)) and
whereby be allowed to govern the subject and assign nominative
Case to it (as in (5)). INFL in Maithili is in fact the feature
drawn from the subject as well as the object or possessive,
and is always attached to the final element in a verbal sequence
by suffixation. Hence, we must treat it as a part of V and
generate it inside VP. To accommodate this fact, we stipulate
the following categorical rules for Maithili:

(12) a. S -> NP   VP
      b. VP ->   V   ...
      c. V -> STEM ... INFL

(The dots in (12c) indicate that some auxilliary elements like aspect and model may intervene between STEM and INFL.)

4. PROBLEM

How that INFL in Maithili is generated not as an immediate constituent of S out as a part of V inside VP, it cannot govern the subject and assign nominative Case to it by rule (5). This raises a problem for the Case theory within the GB - framework; namely, the lexical subject NP remains non-Case-marked, violating Case Filter (4). To illustrate this issue, consider the sentence in (13):

(13) raam   haMsaet achi
     Ram   Laughs
     'Ram laughs.'

The structure of the sentence in (13) is given below[9]:

(14) $[_{S'''}$ COMP $[_{S''}....[_{S'}...[_S$NP $[_{VP} [_V$STEM

ASPACT be INFL$]]]]]]$

The subject NP in (13) is lexical; so, it must be Case-marked to satisfy Case Filter (4). But, in a structure like (14), it is not feasible to assign Case to the subject under government, since INFL appears inside VP and there is no lexical category (namely, $[\pm N, \pm]$ that can govern it.

5. SOLUTION: COMP AS THE GOVERNOR OF THE SUBJECT NP

To get around the problem of nominative Case-assignment in Maithili, we might simply say that while all other Cases are assigned under government, nominative • Case-assignment involves a different device. Jaeggli's suggestion may be worth exploring in this regard [Jaeggli (1980)]. He also argues that INFL cannot be treated as the governor of the subject in Italian and Spanish, since it is a part of VP in these languages. Hence, INFL cannot govern the subject and assign nominative Case to it by rule (5). Instead of rule (5), Jaeggli proposes a two-step procedure for nominative Case-assignment in Italian and Spanish: free assignment of Case and a filter. First, nominative Case is assigned

freely to <u>any</u> NP. Thus, if a NP, which is already specified for a Case, is also assigned nominative Case freely, then the resulting configuration would be (15):

(15) [NP, + NOM,   Case]

But such a configuration in which Case is assigned twice to an NP is morphologicallly uninterpretable. To block it, Jaeggli proposes the filter in (16) as the second step:

(16) A [+ NOM,   NP] must agree in person and number with the verb, otherwise*.

Jaeggli's proposal, which is well-motivated for the Italian and Spanish facts, cannot, however, be operative in Maithili, since we know that a Maithili verb agrees not only with subject but also with the direct/indirect object and poss-essive.

There is in fact no need to stipulate an alternative device for nominative CAse-assignment in Maithili. Assume that COMP, instead of INFL, governs the subject NP and assigns nominative Case to it by rule (17):

(17) NP -> [nominative]/if governed by COMP

Then the subject <u>raam</u> in (13) does not remain non-Case-marked under governmnet, since it is governed and marked nominative Case by (17). All that is required now is to stipulate COMP as a governor like N, V, and P.

Rule (17), stipulated for Maithili, can also be extended to the nominative Case-assignment in Italian and Spanish. If so then the subject in these languages too will receive Case from COMP under government and we need not invoke a different mechanism in this connection, as proposed by Jaeggli (1980). As regards the post-verbal subject in Italian and Spanish, we might say that it is base-generated pre-verbally and later moved to the post-verbal position by move (See Chomsky (1980) for further discussion.). Then the moved NP inherits the Case of its base position through coindexing. This approach has an edge over Jaeggli's proposal, in that it brings together divergent types of Case-assignment under government and accounts for nominative Case-assignment both in Maithili, and Italian and Spanish by a single rule, Viz. (17).

As for English, it is interesting to note that the assignment of nominative Case in this language too has been analyzed in almost the same way/Bennis (1981) proposes that a subject NP is governed and assigned nominative Case by the COMP of a tensed clause.[10]

Even within the GB-framework (Chomsky (1981): also see Chomsky (1980) , there is nothing new about our decision to treat COMP as the governor of the subject. The complementizer for, which is an element in COMP, has been treated as the governor of the subject in infinitival constructions like the following:

(18) the students prefer $[_{S'}$ $[_{COMP}$ for] $[_S$ Bill to visit paris]]

In (18) for governs the subject Bill and assigns it oblique Case by rule (19):

(19) NP -> [oblique]/if governed by P

This approach seems to be worth exploring, in the sense that both types of complementizers (namely, for: the complementizer of a tenseless clause, and that : the complementizer of a tensed clause) are supposed to govern the same element, i.e. the subject NP, which leads to a kind of unification between the two types of complementizers. They can be further unified if we assume that the COMP nods itself, instead of complementizers within it, always governs the subject, irrespective of whether it contains for or that (along with other elements, e.g. a wh-phrase in English). Note that the COMP of a tensed clause differs from the COMP of a tenseless clause with regard to Case-assignment; i.e. the former assigns nominative Case, while the latter assigns oblique Case. To distinguish different Case-assignment by COMP in tensed and tenseless clauses, we require to postulate a feature [± Tense] in COMP[11] and state that [COMP + Tense] assigns nominative Case and that [COMP - Tense] assigns oblique Case:

(20) a. NP -> [Nominative]/if governed by [COMP + Tense]
     b. NP -> [oblique]/if governed by [COMP - Tense]

[COMP -Tense] is realized as for in English and referred to as 'prepositional' complementizer (Chomsky (1981)). Since it assigns the same Case as a preposition does and has the form identical with the preposition for, rule (20b) can be subsumed under (19). In Maithili, however, COMP is always [± Tense], since Maithili has only tensed clauses

and the Maithili counterparts of tenseless clause behave like VP'$_s$; hence, there is no need for specifying [± Tense] in the COMP node of the language.

6. CONCLUSION

In this paper we have examined Chomsky's rule for nominative Case-assignment and shown its inadequancy in accounting for the facts about Maithili language. Incidentally, Jaeggli (1980) also makes similar abservation with respect to the Italian and Spanish data and proposes a two-step procedure for nominative Case-assignment, which does not involve the notion of government. Instead, we have made an attempt to postulate the rule in (20m), which can accommodate nominative Case-assignment not only in Maithili but also in languages like English, Italian and Spanish. The rule in question accounts for more data than its earlier counterparts (viz. rules (5) and (15) and (16) and makes the grammer simpler and more elegant. It is in this theoretical sense that we have referred to our rule in (20m) as 'more promising'.

FOOTNOTES

* I wish to thank K.A. Jayaseelan and P. Dasgupta for their insightful comments. An earlier version of this paper was presented at the fourth annual conference of the Linguistic Society of Nepal (Dec. 23-24, 1983).

[1] See Chomsky (1965) for a discussion of such a matrix.

[2] Mohanan (1981) also makes a similar asumption for analyzing the Case-system in Malayalam (a Dravidian language).

[3] For the definition of 'government' see Chomsky (1981: 165).

[4] cf. Chomsky (1980), where a _wh_-phrase receives the Case of the position from which it is moved to COMP.

[5] For a detailed discussion of resumptive pronoun, see Yadava (1982, 1983).

[6] By 'chain' Chomsky (1981) means sequences of categories at S-structure, the first member of which is a lexical NP or PRO, called the 'head' of a chain, and the rest are traces coindexed with the head by Move _C_. For illustration, consider the structure given below:

$$[_{S_1} John_1 \text{ seems } [_{S_2} t_i \text{ to be happy}]]$$

The chain in this structure is [_John_, _t_], wherein the first member _John_ is the head and the second member is the trace _t_, coindexed with _John_.

[7] Later Chomsky (1981) reformulates the O-criterion in such a way that Case Filter follows from it and, therefore, it need not be stipulated independently in the grammar.

[8] This is not an exhaustive treatment of verbal agreement in Maithili. For a more detailed discussion, see Jha (1958), Trail (1973), and Yadava (1980, 1983).

[9] In Yadava (1983) the following categorial rules (along with the rules in (12)) have been proposed for generating Maithili sentences:

(i)   S''' -> COMP S''
(ii) S'' -> T   S'
(iii) S'   ->   F S

(T = Topic; F = Focus)

[10] Under the assumptions of the GB - framework, Bennis (1981) argues that English _does_ require for another reason that COMP

be stipulated as the governor of the subject; otherwise, this
would lead to the violation of the Empty Category Principle (ECP).
See Bennis (1981) for further discussion.

[11]Bennis (1981) provides two arguments for positing the feature
[± Tense] inCOMP. First, the choice of a lexical complementizer
depends upon whether the verb is tensed or not. Thus, _that_ appears
with a tensed verb and _for_ with a tenseless verb. (Chomsky (1981)
also expresses a similar view). Secondly, in Dutch root sentences
a tensed verb is moved into COMP postion.

REFERENCES

Bennis, H. 1981. 'A Note on Government and Binding', in R. May and J. Koster (eds.) <u>Levels of Syntactic Representation</u>, Dordrecht, Foris Publications.

Chomsky, N. 1965. <u>Aspects of the Theory of Syntax</u>, Cambridge, The MIT Press.

Chomsky, N. 1980 'On Binding', <u>Linguistic Inquiry</u> 11,1.

Chomsky, N. 1981. <u>Lectures on Government and Binding</u>, Studies in Generative Grammar monograph # 9, Dordrecht, Foris Publications.

Chomsky, N. 1982. <u>Some Concepts and Consequences of the Theory of Government and Binding</u>, Linguistic Inquiry monograph six, Cambridge, The MIT Press.

Jaeggli, O. 1980. ' On Some Phonologically - Null Elements in Syntax', unpublished Ph.D. Dissertation, MIT.

Jha, S. 1958. <u>The Formation of the Maithili Language</u>, London, Luzac and Company, Ltd.

Mohanan, K.P. 1981. 'Grammatical Relations and Clause Structure in Malayalam, in J. Bresnan (ed.) <u>The Mental Representation of Grammatical Relations</u>, Cambridge, The MIT Press.

Trail, R.L. (ed) 1973. <u>Patterns in Clause, Sentence and Discourse in Selected Languages of India and Nepal</u>, Vol. 2, Kathmandu, SIL, Tribhuvan University.

Vergnaud, J.R. 1979. 'Quelques Elements pour une Theorie Formelle des Case', unpublished manuscript.

Yadava, Y.P. 1980. 'The Tense-Aspect System in English and Maithili: a Contrastive Study', unpublished M. Litt. Dissertation, CIEFL, Hyderabad.

Yadava, Y.P. 1982. 'More Evidence that Resumptive Pronouns are Syntactically Sound', unpublished manuscript.

Yadava, Y.P. 1983. 'Movement Rules in English and Maithili: Their Implications for the Theory of Government and Binding, unpublished Ph.D. Dissertation, CIEFL, Hyderabad.

Translation : <u>Mapping the Territory of Participants' Experience</u>*

by Abhi Subedi
Central Department of English
Tribhuvan UNIversity

The paper presents the linguistic perspective of translation which shows it as a mutual sharing of experience by participants, as an exercise in the territory between two languages or as a study of texts: each is 'as it were a translation of the other'. The paper will examine various stages of translating by putting the activity in a hierarchical paradigm known as rank-scale. The main object of putting the study in this framework will be to show that the translation can start at the lowest rank where the mutual equivalence between languages will be minimal, but greater equivalence between two languages can be estalished by gradually moving upwards from the lower to the upper rank. Such an upward movement will mark a systematic shift from one-to-one correspondence between two languages to the realization of free equivalence and the ultimate production of a text known as translation. Translation at this stage provides an insight into the nature of ethnological linguistic system. It also provides other theoretical insights into the nature of semantic equivalence between lexemes. At the outset, the paper will briefly present the description of translation as such viz; technical translation, machine translation and literary translation. But the main thrust of the paper will be a linguistic description of translation as an exercise in mutual communication between two parties visible or invisible.

Translation has been regarded traditionally as a self-containing system. Traditional linguistics regarded it as the literal transfer of one code system into another. Such a notion of translation does not take into account the most important factor in the construction of a text whether that be original or translation, the context. Context helps the translator to map text-worlds onto the surface texts, which is realized via discourse actions (Dressler 1981: 216). Translators who ignore the context element advocate the effectiveness of literal translation. But the modern approaches to the theory of translation stipulate that language equivalence cannot be set up by ignoring the context or the setting. In other words, there can be no text without contextual value attached to it, because the only function of language is to set

up a communicative situation, and such communication cannot be
set up without taking into account the setting in which the discourse
is to take place, or the text is directed. The translatior should
aim at providing a context in the text so that the translation
may become readable or meaningful to the target audience. He
should all the time strive to narrow the experience-gap between
the two worlds of text very easily if their mental tasks such
as trying to narrow the mental experience gaps between degree,
works like a creative writer. He can be more creative in literary
translation thean in scientific translation. The scale of creativity
differs in various types of translations, and the degree of creative
or free exercise can be plotted along the longitudinal scale
from L1 to L2. Poetic, technical, journalistic, commercial, official,
scientific, legal translations will have various degrees of
difficulties of establishing equivalence. Translation requiring
immediacy such as scientific or technical translations, or
journalistic translations tend to be theoretically easier than
the literary translation which does not require the immediacy
of action as the translations of the previous category. Literary
translations can wait, but scientific and technical translations
cannot. It is easier to recognize cognates more easily in technical
texts than in literary texts, because of the fixed nature of
the technical terminology in the modern world. But whatever
may be the nature of the complexity of semantic equivalence,
translation as such yields to the linguistic scrutiny.

Translating is transferring an event, the event of one language
into another language - the goal language. The translated text
thus becomes a third text that links up the worlds of texts.
That is why, taking translation as a formal correspondence between
two texts is not a correct approach, pragmatically or theoretically
either. Those who believe in the one-to-one correspondence theory
believe in the creation of two identical environments or contexts,
but in reality, that does not happen. We prepare a scale along
which we plot the points of acceptability for translation. The
degree of acceptability shifts with various varieties of language.
Some forms of translation will have a high degree of acceptability
than others, but here we are concerned with the communicative
function that translation performs, by reference to the texts.
That is why, it is not possible to judge the degree of acceptability
by establishing grammatical and lexical correspondences between
two languages alone. An alternate and more viable model will
be one of progressive selection among categories which will map
the degree of correspondence between two worlds of texts, by
starting from the lowest rank where we can realise the 'most
probable' equivalent and move upwards realising in each stage
the less probable equivalent (Halliday 1964:127). We start from
morpheme, the smallest meaningful grammtical unit and move through

word, group and clause. This framework postulates that the higher units will produce more acceptable equivalents. We are using this model to show translation at various ranks. The translated texts selected for the study in this model were acquired by giving a Nepali short text to advanced English learners located in Kirtipur, who are involved in research works requiring English translation very often. The informants produced naturally various translations of the same Nepali text. Since the level of English proficiency of the informants is high, their various responses to the Nepali text indicate the various communicate strategies they would adopt in communicating with the invisible party, the consumer of the translated text. However, certain common features emerged from the texts some of which have been used in the rank-scale paradigm below:

Text A

Translation at rank

of:	ma	ekanki +	ko	pandulipi	liera	hinde
morpheme	I	—	of	manuscript	—	—
Word	I	drama	of	manuscript	bring	—
Group	I	drama	of	manuscript	bring	—

Clause	I brought along the manuscript of the drama
Sentence	I flet with the manuscript of the one-act play
Context	Anaphoric refence provided by the use of the definite article. Drama, a generic term replaces specific term. Translation stays at the level of clause

---

Text B

morpheme	ma	ekanki	+	ko	pandulipi	liera	hinde
	I	one -act	of	manuscript		—	—
Word	I	one-act		of	manuscript	—	set out
Group	I	one-act		of manuscript		set out	

Clause	I set out from there with the manuscript of the one-act play

Sentence	I left with the manuscript of the one-act play
Context	'set out' introduces spatio feature, <u>with</u> preposition used
Context (Contd)	to translate the Nepali predicative. Thus, introduces extra features to build up a context not quite required by the target language.

In the following translation as shown by the rank-scale, context is provided by deletion of elements in text A. B provides the social context by retaining the cultural feature of addressing a writer as <u>dai</u>, or brother, not common in the English context. Example –

Text A

Translation
at rank of:

	Vijaya +	dai	nikai	kalpanashil	cha
morpheme	–	–	–	–	is
Word	Vijaya	–	–	–	is
Group	Vijaya	–	–	–	is
Clause	Vijaya is contempletive				
Sentence	Vijaya is a quite imaginative writer				
Context	Deletes 'dai' kinship term from the Nepali text for the advantage of the target audience. Also deletes the degree marker.				

Text B

Translation
at the rank of :

	Vijaya +	dai	nikai	Kalpanashil	Cha
morpheme	Vijayadai		–	imaginative	is
word	Vijaya	dai	–	imaginative	is

group	Vijaya dai tremndously imaginative is
clause	Vijayadai is tremendously imaginative
sentence	Vijaya is a quite imaginative writer
context	Retains Nepali kinship term not appropriate in the English context. Introduces extra emphasis by using 'tremendously' to mark degree represented by quite/pretty in Egnlish.

Both texts are context-sensitive. Text A tries to build up the context at the lower levels, at the level of word or group or clause but text B builds up context at the higher level -at the level of sentence or text. Text B provides several cohesive components to lend texture to the text. But this translated text is equally sensitive to the L 1 environment as it is to the L 2 environment. As a result, each text, as far as text B is concerned, to quote Halliday, is 'as it were a translation of the other.' The one-to-one correspondence gives way to a lesser degree of correspondence at the higher level. At this level the translator may refer to the codes of both languages his chief objective nolonger being to match each item of the two texts but to establish a kind of communicative or discourse system, with the target consumer of his text. Here is an example from the letter of an English writer of Nepali:

Journal bishaema na timile na nirmalle chinta linupardaina.

The triple negatives used here are derived from English and Nepali grammatical systems about the use of negatives.

The speaker or a writer may sometimes translate his thoughts into the textual patterns in the goal language that will require a great deal of effort to spell out his communicative strategy. In a special survey of Egnlish language use in the present day world, the Newsweek (Nov 15, 1982) published several instances of complex text structures by the foreign learners of English language. The report says, "A busy school teacher in India might tell a pupil "Do not you know I am not vacant? Come behind." Or a happy person might say," My heart is garden-garden." An American university professor received the following letter from Taiwan: "Would you mind enlightening the thirsty palmer languishing in the icy quagmire of despondency on the names and addresses of the professors adoring the Department of Linguistic science, University of Illinois ?""

In the above discussed rank-scale paradigm the cultural or ethnological factors can be shown to be operating at the linguistic level. Sometimes the components shift their ranks in the translated form. For example, the following words shift their ranks and represent groups in translation:

    langauti = loin-cloth
    tika/tilak = forehead marking
    chayaur = haircutting ceremony
    pira = sitting plank

At the level of word and group also the translator can build up a native contextual unit. Braj Kachru (1983) has culled the following examples to indicate conscious shifts by injecting native environment into the goal language -

- May the vessel of your life never float in the sea of existence
- a crocodile in a loin-cloth
- May the fire of ovens consume you
- What honourable noun does your honour bear?
- What is the name conferred upon you by the authorities of your existence (my collection)
- Son of a concubine
- You donkey's husband, you have eaten my life
- When you are married I shall drink a seer of frothing warm milk, you widow
- the incestuous sister-sleeper
- you circumscised son of a pig
- If I do not spit in Mali's mouth my name is not Jugger Singh
- I bow my forehead
- Well Professor sahib how are things?

In these instances, words and expressions are features or symbols of culture. According to Nida (1964:91), ecology, material culture, social culture, religious culture and linguistic culture should be taken into consideration to tackle the problems of translation which are essentially problems of equivalence. The translation of ecological terms such as hill, mountains, rivers, lakes etc. depend upon the ecological features. A Scottish couples driving me to the borders exclaimed, "Oh, the sun over the hills looks beautiful tonight !" This is only a natural thing to say in an ecological environment where the sun sets only at 10 o'clock in the night. If I were to translate that into Nepali how would I do it? Same is true about material culture. Nepali raksi is often translated as wine which is not an exact translation of the word. Sometimes the speaker of one language finds it difficult

to translate the lexemes of another language whether that be foreign or some native language, and continues to use the duplication form. Examples:

- tikanbajichiura
- byroakdo bato
- bootjutta
- restaurant bhojanalaya
- muffler pheta

To make up for the lexical deficiency in its own system, a language sometimes takes the lexicons of another language bringing in 'new civilization,' and use alongside its own near-equivalent lexemes. In the same manner, one language may lexicalize a meaning that is not lexicalized in another, which becomes manifest in translation. Here are a few examplex:

- 'to get wet' gets lexicalized into Nepali <u>rujhnu</u>
- 'to roll a ball' into <u>bhakundyauna</u>
- 'a ball of flour given as fodder to animals' into <u>kundo</u>
- 'suffering from diarrhoea' into <u>cheraute</u>
- '<u>laslai sugandhi aushadhi aadi halera kuhuna nadinu</u> gets leicalized into 'mummyfy' in English.

The above phenomenon reveals that word-for-word translation is unsatifactory because the so called equivalent lexemes become incongruent in such translations. Some translators try to lexicalize the native lexeme into the goal language and produce very artificial translation.

The complexities of social organization and social control pose problems for translation. Translator's problems will be formidable if he is operating in a society with sharp social stratification on the basis of caste and social privileges. One can notice a tendency among people to translate their castes into Sankskrit or curiously enough, their titles in English abbreviations. In social discourse, interlocutors often tend to avoid the use of native kinship terms. In Nepali conversational situations one can very frequently encounter such evasions as -

- aaja mero wifele try garne bhaekocha
- mero husband lai yo jutta asadyai manparcha hao !

In a very orthodox gathering of pundits, I heard a lady, appartently the wife of the main pundit speaker, give her introduction as

- ma wahan speakerkai misses hun.

English pronominals and predicatives occur to avoid the complex placing of honorifics in the hierarchical paradigm in Nepali such as ta, timi, tapai, hajoor, with the corresponding predicatives gar, gara, garnos and garisiyos. A number of other problems involved with the translation of cultural or ritual practices require rank-shifting in the rank-scale paradigm. The English translation of Jutho as 'ritualised pollution' is one such curious example of rank-shifting at the level of cultural interpretation.

Differences existing between languages effect translation very much. While translating a foreign place name or name, translation tends to select the most homophonous lexeme in his translation. Several curious examples of such homophonous adaptations can be cited from a Nepali script Jangbahadurko Belayat Yatra (Janga Bahadur's Visit to England) written by a member of Jang's entourage in 1850. The text translates -

- Southampton as sautanghat
- Birmingham as barmadi
- Richmond Terrace as rijabantakyarij
- Alexendria river as alakhajanjari nadi
- Plymouth as pimla
- Lord as lathsahib
- Jesus as Jiju
- River Thames as timas nadi

The Dinman weekly of India translates Mrs Thatcher as srimati taichar. Most curious cases of homophonous translations occur when the translator tries to evade the sounds that might cause embarrassment to the consumer. To avoid embarrassment to the listeners in the hills and tarai, the Radio Nepal used to translate Shekhmujiboor as Shekhmajibar.

Morphological features effect translation greatly. English uses compounds by deleting possessives like 'school compound,' 'courtyard' etc. whereas Nepali very rarely uses that system of compounding. So, a Nepali translator tends to translate such compounds by providing the possessives as compound of the school etc. Sometimes a word shifts double ranks and becomes a clause in translation:

- swargabasi becomes 'Mr x who now lives in heaven' (Encountered in a special translation)
- sworgiya becomes 'Dwelling in heaven (Turner 1931)

Translation of some words require a rank-shift to a position as high up as the context itself which requires the creation of a text that performs a particular speech act itself. Here is an example from Turner (1931):

The lexeme bhatkaru in Nepali is translated into English as, "Messenger sent ahead of the marriage procession to the bride's house to give information of the procession's approach and of the number of men in it and the amount of rice required to be made ready."

So, in the rank-scale paradigm words that do not require rank-shifting are mainly technical words. Fewer cases of rank-shifting occur in technical or machine translation which is based upon the view of language, to quote Halliday (1964:133) as "a string of beads, whether called words or morphemes arranged into patterned sequences called sentences." But more powerful models of language such as literary or cultural text translation requires the recognition of the complex exponents of the categories in the rank-scale paradigm.

Conclusion

Translation is the production of a progressive language with dynamic exponents of categories operating at every point along the scale. The translator keeps shifting and adjusting the categories according to the nature of the communicative situation where the translated text which I would like to call intertexts, has to operate. So, the intertext operates in or requires the same kind of variables as are necessary to build up a discourse system.

REFERENCES

Basil, Hatim (1984). 'A Text-Typological Approach to Syllabus Design in Translation Training'. The Incorporated Linguist. 3:146-149

Dressler et al (1984). Introduction to Text Linguistics. London: Longman.

Finch, CA (1969). An Approach to Technical Translation. London: Pergamon Press Ltd.

Halliday, MAK et al (1964). The Linguistic Sciences and Language Teaching. London: Longman.

Kachru, Braj B (1983). The Indianization of English. Oxford: OUP.

Lyons, John (1977). Semantics. Vol 1. Cambridge: CUP.

Nida, Eugene (1964). 'Linguistics and Ethnology in Translation-Problems' in Dell Hymes ed Language in Culture and Society. New York: Harpers & Row. pp 90-7.

Pradhan, Paras Mani et al (1970). New Standard Dictionary English-Nepali.

Robins, R.H. (1980). General Linguistics, An Introductory Survey. London: Longman.

Turner, Ralph, Lilley (1931). Comparative Etymological Dictionary of the Nepali Language. London: Routledge & Kegan Paul Limited.

Whelpton, John (1983). Jang Bahadur in Europe. Kathmandu: Sahayogi.

Lehman, Winfred P (2978).' Machine Translation' in Archibald A Hill ed Linguistics. Washington: VOA. pp 213-222.