Bantawa Rai s-, t-, and z-final verb roots: transitives, intransitives, causatives, and directives[1]

R. K. Sprigg
Kalimpong, India

At the Twelfth International Conference on Sino-Tibetan Languages and Linguistics, Paris, 1979, Michailovsky presented a paper, "Tibeto-Burman dental suffixes: evidence from Limbu" (Michailovsky 1979), in which he analysed Limbu verb roots into three phonological classes, two of them based on root-final consonant clusters containing -S or -T, e.g., -PS, -MS, -TT, -NT (together with -S and, in some cases, -T), and the third a contrasting clusterless class containing either a final single consonant or a final vowel, e.g., -P, -M, -N, -R, and -Ø (and, in some cases, -T). To these phonological classes he went on to attribute morphosyntactic categories, transitive, intransitive, and deponent, and the semantic notions "causative," "directive," etc.[2]

This paper is a corresponding analysis of Bantawa, one of the Rai group of languages (Thulung, Khaling, Bahing, Kulung, etc.), and closely related, within Kiranti, to Limbu. In both Limbu and Bantawa I have analysed the finals of verb roots into three prosodic classes, **s**, **t**, and **z**, on the basis of junction features, and into the seven phonemic units **P, T, K, Ø, M, N,** and **Ŋ** (together with a lateral-final type of root in Bantawa); and I have made a similar attempt to Michailovsky's to ascribe intransitive, transitive, and causative functions (II), and directive and nondirective functions (III) to **t**, **s**, and **z**, though my material is not as comprehensive as his.

I. Limbu and Bantawa root-final categories.

In order to show how closely Bantawa resembles Limbu (though the two languages are not mutually intelligible), and, therefore, to prove that the same phonological analysis can reasonably be applied to both these languages, I begin with skeleton prosodic and phonematic analyses of the verb root final in Limbu (A) and Bantawa (B).

A.   Limbu.

In Table 1, I give the phonetic exponents of the prosodic units **t**, **s**, and **z**, and of the phonematic units **P**, **T**, **K**, etc., as they appear in only one of the five main types of junction, that in which the root is followed by a suffix that is vowel-initial.[3] This type of junction provides phonetic criteria for distinguishing all these units except for **T** and **N**, which, in this case, share [-ɾ-]; but in other types of junction Tz and Nz are phonetically distinguished; e.g., junction in which there is a fricative-initial suffix (T) [-(t)tçh-] *versus* (N) [-ntsh-], as in [ʔaçɛ(t)tçhiʔ] 'he kills us two' and [ʔadʒɛntshuʔ] 'we two slit it'.

B.   Bantawa.

Corresponding Bantawa phonetic exponents of the three prosodic categories **t**, **s**, and **z** are given at (1), (2), and (3) respectively in Table 2, but in greater detail than for the Limbu. At (a) I have, in each case, again given the phonetic exponents of **t**, **s**, and **z** in the form in which they appear in junction with a suffix beginning with a vowel; but at (b) the phonetic exponents of these three terms are those appropriate to word-final position (no suffix), and therefore to junction between words (interverbal junction).[5]   A comparison of (1.b) with (3.b) shows that the phonetic exponents of **t** are identical in interverbal junction, as regards /P, K, T, M, ŋ, N/, with those of **z**: [-p, -k, -t, -m, -ŋ, -n]; while (2.b), if compared with (1.b) and (3.b), shows that the same is the case for **s** as regards /M, ŋ, N/, [-m, -ŋ, -n], and very similar as regards Øs and Øz, [-(V):, -V(:)].

Line (3.b) of Table 2 shows that N shares [-n] with *l* for its phonetic exponency in interverbal junction, at (4.b); but (3.a) shows N as distinguished from *l* when in junction with a vowel-initial suffix, by either [-:ʃ-/-V:-] or [-n-] as against [-1-], at (4.a).

These comparisons between types of junction show that the vowel-initial-suffix type, at (a), is much more helpful and efficient in providing phonetic criteria for **t**, **s**, and **z**, and in distinguishing *l* from N, than the complementarily distributed type of junction at (b), interverbal junction.[6]

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3   For all five types of junction see Sprigg 1985, pp. 10-11, 15, 16.
5   In the Bantawa examples [t] and [d] symbolize alveolars; in the Limbu, on the other hand, they symbolize dentals.
6   The percipience of Senior in giving "two forms for each verb, not merely the verbal noun (in -ma), as was only to be expected in 1908, but also the much more useful imperative form in -e, from which different root classes can be distinguished" is commended in Sprigg 1977. Cf. also Michailovsky (1975:187): "The imperative clearly shows the root final. . . . Some recent word-lists of languages related to Bahing have suffered from the defect that the verb form chosen for quotation has been one from which the root form could not be recovered."

	P	T	K	M	N	Ŋ	Ø
t	-pt-	-(t)t-	-kt-	-md-	-nd-	--	-V̀(ʔ)ɾ-
s	-ps-	-(t)tsh-	-(k)kh- -ks-	-ms-	-ntsh-	-ŋkh- -ŋs-[4]	-V:ɕ-
z	-b-	-ɾ-	-g-	-m-	-ɾ-	-ŋ-	-V/V(j)-
t	ʔepte 'fan it'	mʌ(t)te 'blow it'	ka:kte 'jump over'	jemdɛ 'tattoo him'	pindaŋ 'I jumped about'	--	pí(:)ɾɛ 'give them it'
s	ʔipsaŋ 'I slept'	phe:tshaŋ 'I forgot'	tsa(k)khɛ 'wear it' cakseʔ	kenamsuʔ 'you smell it'	pentshuʔ 'he puts a good finish on it'	soŋkhɛ 'sell it' soŋseʔ	phe:ɕɛ 'break wind'
z	jebe 'stand up'	ɕeɾɛ 'kill it'	lagɛ 'lick it'	tʌmɛ 'meet him'	tɕɛɾɛ 'slit it'	thʌŋɛ 'drink it'	tʌ́(j)ɛ 'dig it'

TABLE 1

Probably the most controversial feature of Table 2 is my having attributed an identical phonetic exponency, in the **t** type of final, at (1), to both T and Ø, not merely in one but in both of the two types of junction (a, b) shown in the table (and, in fact, in all types of junction). How, in that case, can a verb with forms such as [itte, it], which I have classified as **Øt**, be distinguished from my example of a **Tt** verb, with such forms as [sjεtte, sjεt]? My reason for classifying the [itte, it] verb as **Øt** rather than **Tt** is given in (II.B) and (III.B) below; briefly, the reason is that I take [itte, it] to be the **t** forms corresponding to the **z** forms [i:jε, ?i:], which are clearly those of a Ø-final verb. The glosses of these Ø-final root forms are:

[i:jε]   'laugh; come down'

[?i:]   '(he) laughs; (he) comes down'

[itte]   'laugh at (him); bring it down'

[it]   '(he) laughs at (him); (he) brings (it) down'.

As regards the grammatical categories transitive and causative, and the lexical category "directive" (or "benefactive"), the most revealing example in my Bantawa material has the following set of three forms, **z**, **s**, and **t**, the root-final phonematic unit being **ŋ**:

        z: [duŋe] 'drink (it)'
        s: [doŋsje] 'offer a drink to (him)'
        t: [doŋte] 'drink it for X'.
Cf. Limbu: THUŊ tr. 'drink' & THUŊS tr. 'cause to drink, entertain' (Michailovsky 1979:19). I have no other examples in my material as revealing as this. The nearest to it are the two following. In the first, a -M verb, the **z** form is intransitive, the **s** form transitive, and the **t** form also transitive but not, apparently, directive:

        z: [jo:ma] '(he) starved'
        s: [jɔmsje] 'starve (it)'
        t: [jɔmte] 'starve (it)'.
In the other, a -K verb, the **t** form is directive and the **z** and **s** forms nondirective, all three being, apparently, transitive:

        z: [ɦo:jε] 'open (it)'
        s: [ɦɔŋsje] 'open (it)'
        t: [ɦɔkte] 'open it for X';
cf. Limbu: [kho:ndε] 'open (it)'.
    Since sets of three forms are rare and generally unsatisfactory, I have presented my material (in sections II and III below) through pairs of forms.

	P	K	T	M	Ŋ	N	Ø	I
1a.	-pt-	-kt-	-tt-	-mt-	-ŋt-	-nt-	-tt-	
1b.	-p-	-k-	-t-	-m-	-ŋ-	-n-	-t-	
2a.	-ms	-ŋs-	-(V):ɕ-	-ms-	-ŋs-	-(V):ɕ(ʌ)	-(V)s-	
			-(V)iɕ-			-(V)iɕ-		
2b.	-m-	-ŋ-	-n	-m	-ŋ	-n	-(V):	
3a.	-ʔ-	-ʔ-	-ːj-	-m-	-ŋ-	-ːj-/-ː-	-(V):	
						-ŋ-		
3b.	-p	-k	-ɾ-	-m	-ŋ	-n	-V(:)	
			-t					
4a.								-l-
4b.								-n

TABLE 2

	P	K	T	M	Ʊ	N	Ø	I
1a	ʔɛpte 'winnow it'	lekte 'lick it'	sɛtte 'tell him to kill it'	damte 'brand it'	dɔŋte 'drink it for X'	phintaŋ 'I jumped'	itte 'laugh at (him)'; 'bring it down'	
1b	ʔɛp 'he winnows it'	lek 'he licks it'	sɛt 'he tells X to kill it'	dam 'he brands it'	dɔŋ 'he drinks it for X'	phin 'he jumps'	it 'he laughs at X'; 'he brings X down'	
2a	ʔɯnsaŋ 'I slept'	tsaŋsje 'bathe (him)'	lɦoisje 'make X run'	namse 'sniff/smell'	dɔŋsje 'offer a drink to X'	peːcu 'he flew it'	bɦeːsje 'break wind'	
2b	im 'he sleeps'	tsaŋ 'he bathes him'	lɦoŋ 'he makes X run'	nɛm 'he smells it'	dɔŋ 'he offers a drink to X'; bɦɔicɔŋ 'I refused it'	phin 'he flies it'	bɦe 'he breaks wind'	
3a	ʔɛɔ̃je 'stand it up'	lʲeɔ̃je 'lick'	loːje 'run'; sɛre 'kill it'	naːmaŋ 'I stank'	dupe 'drink it'	peːʲ poːje 'fly'; 'grow big'; baːne 'come here'	iːʲje 'laugh'; 'come down'	
3b	ʔeːp 'he stands it up'	leːk 'he licks'	loːt 'he runs'; sɛt 'he kills it'	naːm 'he stinks'	dɔŋ 'he drinks it'	pen, poːn 'it flies'; 'he grows big'; ban 'he comes'	ʔiː 'he laughs'	
4a								phyːle 'untie it'
4b								phyn 'he unties it'

TABLE 3

Section II deals with intransitives, transitives, and causatives; section III deals with directives and nondirectives. Within these two sections I have paired the forms as follows: A = z versus s, B = z versus t, C = s versus t. In addition, there is in section II an extra subsection, D (-Nt versus -Tt).

II.   *Intransitives, Transitives, and Causatives.*

A.   **z versus s**.

1.   *Intransitive versus transitive/causative.*

My material comprises 25 (or possibly 26) examples:

a   ŋ   z   [juŋe]   'sit down'   [tha:ŋe]   'come up'
           s   [jɔŋse]   'put (it) down'   [thaŋse]   'bring (it) up'

b.   M   z   [na:me]   'stink'   [ka:ma]   '(it) stayed joined'
           s   [namse]   'sniff, smell'   [kamsje]   'join (them)

c.   N   z   [po:n]   '(he) grows big' [pɛn]   '(it) flies'
           s   [pɔisje]   'save (money)'   [pe:sje]   'fly (it)'

d.   Ø   z   [ma:]   '(he) got lost'   [kɤ:a]   'it rotted'
           s   [masje]   'lose (it)'   [kɤ:se]   'rot (it) down'

e.   K   z   [(wa:) tsaɔje]   'have a bath'
           s   [(wa:) tsaŋsje]   'bathe (him)'

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

g.   T   z   [lo̯:t]   '(he) runs'   [tsoɾa]   '(it) dripped'

           s   [lɦoisje] 'make (him) run' [tsoisje] 'sprinkle (it)'

2.   *Transitive versus causative (1 pair).*

     ŋ   z   [duŋe]   'drink (it)'
           s   [dɔŋsje]   'offer a drink to (him), water (cattle)'

For comparison I give the following forms from Limbu. Those in capitals are from Michailovsky 1979:

1.a. JUŊ . JUKS (16); THAŊ . THAŊS (16)

b. [namɕɛ]; KAM. KAMS 'be habituated'. 'habituate someone'

c. POR. PHOS (18); PɛR. PHɛS (18)

d. MA:R. MAS (17); [ki:ɾa] 'rotted' (intr.)

e. [tsa:ktɛ] 'swim'

f. HA:P. HA:PS (15); JɛP. JɛPS (17)

g. LOKT. LOKS (22); SɔːR. SɔːNT (20)

2a. THUŊ . THUŊS (19).

Among the above Bantawa/Limbu pairs. (e) through (g) show K. P. and T in *z* forms alternating with K. P. and T respectively in *s* forms. Since there are no such root finals as [ks], [ps], and [ts] in Bantawa (Table 2). such pairs suggest that some apparent instances of Ŋs. Ms. and Ns should be regarded as phonetic exponents of underlying Ks. Ps. and Ts respectively. The alternating Ŋ. M. and N of examples (a) through (c) and 2. on the other hand. provide phonetic exponents of Ŋz. Mz. and Nz. versus Ŋs. Ms. and Ns respectively. on phonetic and morphological grounds.

The total number of supporting pairs for *z* versus *s* functioning as intransitive versus transitive/causative. or as transitive versus causative. is: Ŋ: 7/8; M: 5; N: 2; Ø: 6; K: 1; P: 3; T: 2. for a total of 26/27.

B. *z versus t*.

1. *Intransitive versus transitive/causative.*

My material here comprises 15 (or possibly 18) examples:

Ŋ	a.	M	z	[joːma] 'he starved'	[ɾoːma] 'it got hot'
			t	[jɔmte] 'starve (him)'	[ɾɔmte] 'parch it'
	b.	P	z	[eːp] '(he) stands'	
			t	[eːpte] 'stand (it) up'	
	c.	K	z	[leːk] (?) 'he licks'	
			t	[lekte] 'lick it'	

d. ŋ z [juŋe] 'sit down'   [tha:ŋe] 'come up'
   K t [jɔkte] 'mount it'   [thakte] 'bring (it) up'

e. N z [mina] '(he) thought'
   T t [mitte] 'remember (it)'

f. Ø z [ma:] '(he) got lost' [i:je] 'laugh. come down'
     t [matte] 'lost (it)'   [ɪtte] 'laugh at (him),
                                     bring (it) down'

g. Ø z [ʔia] 'he felt sleepy'
   P t [ʔipte] 'put it to sleep'

h. Ø z [dɦa]   '(it) falls'
   N t [dɦante]   'take (it) down'
   Ø z [ma:]   '(he) got lost'
   N t [mantu (kje:su:)] '(he) went and forgot (it)'

2.   *Transitive versus causative.*

My material comprises 5 pairs of examples:

a K z [paɷje]   'wear (it)'
      t [pakte] 'clothe (him)'

b. T z [vaɾe]   'wear (it)'   [se:ɾe] 'kill (it)'
      t [vatte] 'garland/muzzle (X)' [sɛtte] 'tell X to kill'

c. Ø z [tsa:]   '(he) eats (it)[7]
   N t [tsante] 'graze (them)'

d. T z [kiɾe]   'be frightened of X'
   N t [kɪnte] 'frighten (him)'

As before. I give Limbu forms from Michailovsky 1979 for comparison:

1b. JƐP. JƐPS (17)
  d. JUŋ . JUKT; THAŋ. THAKT (16)

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[7] I should have expected a short vowel. [a]. here. This present-tense form [tsa:]. if heard correctly. is perhaps to be explained as due to emphasis in a contrast situation; cf. Sprigg 1989:101. n. 10. For a final long vowel [a:] in a past-tense intransitive form see [ma:] 'he got lost'. in which the length ([:]) is due to the past-tense intransitive suffix -A, as also in [kY:a] 'it rotted' and [ʔia] 'he felt sleepy'.

    f.   MA:R, MAS; ET, ETT (21); JU, JU:T (15)

    g.   IPS, IPT (23)

    h.   THA, THANT (15); MA:R, MA:NT (17)

  2b.   WA:T, WA:TT (21)

    c.   CA, CA:TT (20)

    d.   KIS, KIT (23)

The examples at (1d-e), in which there is an alternation of Ŋ with K and of N with T, suggest that [-kt-] and [-tt-] might have developed from *[-ŋt-] and *[-nt-] via *[-ŋkt-] and *[-ntt-], in which case Kt and Tt in these examples should be treated as reflexes of *Ŋt and *Nt.

The examples at (1f), on the other hand, suggest that [-tt-] in these words might have developed from an earlier *[-t-], which is what one would have expected the phonetic exponent of Øt to be, in which case [-tt-] in pairs of lexical items such as these should be treated, as here, as the phonetic exponent of Øt, though it is otherwise to be regarded as the regular phonetic exponent of Tt (2b).

The total number of supporting pairs for *z* versus *t* functioning as intransitive versus transitive/causative, or as transitive versus causative, is: M: 2; P: 1; K: 1/2; T: 2; Ø: 6/7; Ŋ/K: 3; N/T: (?) 1; Ø/P: 1; Ø/N: 3; T/N: 1, for a total of 20 or possibly 23.

C.   *s versus t.*

1.   *Intransitive versus transitive/causative.*

There are only 6 (or possibly 7) examples:

  a. P s [?ɯmse]   'sleep'
           t [?ɪpte]   'put X to sleep'

  b. T s [tçhe:sʲe] 'urinate';   [tçhɛn] 'he urinates'
           t [tçhɛtte] 'urinate on X'

  c. Ø s [?e:sʲe] 'defecate';   [bɦe:sʲe] 'break wind'
           t [?ɛtte] 'defecate on X'; [bɦɛtte] 'break wind (?at)'

The following Limbu forms, for comparison, are from Michailovsky 1979:

  a. IPS, IPT (23)

  b. SES, SE?R (23)

c.   ES, E1T (23); PHES, PHE?R (23)

Since there are no such plosive clusters as [ps] and [ts], or single plosives such as [p] and [t] in the **s** (prosodic) class of root final (Table 2), it is reasonable to find the corresponding nasals and clusters [ms] and [n] deputizing for them, as in (a) and (b) above. (Cf. also A.1 e-g.) In other words, [ms] and [e:s]/[n], in these s-piece lexical items, are exponents of P and T. In other alternating lexical items, however, such as those at A.1.b-c, [ms] and [Vi/:s] are exponents of M and N.   `

In the examples at (c) above, I have treated the sequence [-tt-] as the phonetic exponents of Øt, but in (b), on the contrary, I have given that same sequence as the phonetic exponents of Tt. My arguments in favor of allowing Øt and Tt to have identical phonetic exponents, an admittedly controversial solution to the problem, can be found at I.B and II.B above. An alternative solution would be to treat [-tt-] in the examples at both (c) and (b) as phonetic exponents of Tt, the phonematic unit Ø being absent from, or unrepresented in, the **t** category of root final. Tt would then be treated as the reflex of *Tt where it alternates with Ns, as in (b), but in those lexical items for which there is an alternation with Øs, as in (c), it would be treated as the reflex of *Øt. In other words, I have preferred a solution at the phonological level to a solution through reconstruction, but at the price of allowing identity in phonetic exponency for Tt and Øt (Tables 2 and 3).

The number of supporting examples, by phonematic unit, is: Ø (alternatively Ø/T): 4/5; P: 1; T: 1, for a total of 6/7.

2.   *Causative versus transitive/intransitive.*

There are also two N/T pairs in which the grammatical relationship of **s** and **t** seems to be different from that in (1) above. That is, although the **t** form is transitive or intransitive, the **s** form is causative:

T   s   [paisje] 'make X shout'   [kvoisje]   'carry for a walk'
     t   [patte] 'shout at X   [(1am) kɔtte] 'go for a walk'

In the following N and P examples, the **s** form is again causative; but the **t** form is intransitive:

a   N   s   [(pu:) lɔ/øiçe:]   'make X get up'
        t   [lɔ/ønte]   'stand up'

b. P   s   [thɔmsje]   'have/keep a Dhami [tribal priest]'
        t   [thɔpte]   'behave like a Dhami'

D.   *(t) N versus T; intransitive versus transitive.*

There is one pair of examples in which both forms of the verb belong to the **t** prosodic class. In this instance, the grammatical difference between the two is therefore a function of one phonematic unit versus the other, of N (intransitive) versus T (transitive):

t   N   [lɔənte]   'go out'
    T   [lɔtte]   'bring/take out'

III.   *Directive versus nondirective.*

A.   **z** *versus* **s** *(nondirective versus directive).*

The only candidate for this class in my material is:

N   z   [ɦɛne]   'sacrifice X (to a god)'
    s   [ɦeːsʲe]   'set aside X for Y'

B.   **z** *versus* **t** *(nondirective versus directive).*

I can support this category with 7 examples:

a. ŋ z [duɲe]   'drink (it)'   [ʲoːɲe]   'diet'
      t [dɑŋte]   'drink it for X'   [ʲɔŋte]   'fast for X'

b. K z [ɦoːʲɛ]   'open (it)'
      t. [ɦɔkte]   'open it for X'

c. T z [laʲe, laːe]   'take (it) out'
      t [latte]   'take (it) out for X'

    T z [kʲeɾe] 'break (it)'   [dɦeɾe] 'cut it'
      t [kʲette] 'break (it) for X'   [dɦette] 'cut it for X'

d. Ø z [tuːʲɛ]   'dig (it)'
      t [tɑtte]   'dig (it) for X'

I have given my reasons above (I.B) for treating [-tt-] *as the phonetic exponent of both Tt and Øt, as in (c) and (d) just cited.*

	IIA1, IIB1, IIC1		IIA2, IIB2	IIC2	IIIA, IIIB, IIIC	
	intr. v. trans./caus.		*trans. v. caus.*	*intrans./trans. v. caus.*	*dir. v. non.*	
z	25/26		5		7	
	15/18				1	
s	6/7	25/26		4	1	1
t	15/18		5	4	7	
	6/7				1	

TABLE 4

C.   *s* versus *t* (*nondirective versus directive*).

For this category I have only one example to offer:

ŋ	s	[dɑŋsje]	'offer a drink to (him)'
	t	[dɑŋte]	'drink (it) for X'

The nine pairs of directive and nondirective examples in (A)-(C) above also all appear to be transitive, except one, the ŋ example [joːŋe]/[jɔŋte] in (B). These constitute all the examples of the directive-versus-nondirective category that I have in my material; but I suspect that with greater care in collecting the glosses, I might have found more.

I conclude with Table 4, in which I have plotted the number of examples that I can call on to support the functions of *z* as intransitive, transitive, and nondirective; of *s* as intransitive, transitive/causative, causative, directive, and nondirective; and of *t* as transitive/causative, causative, intransitive/transitive, and directive.

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