

BALTI-TIBETAN VERB SYLLABLE FINALS, AND A PROSODIC ANALYSIS

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In a recent survey of Tibetan dialect features Róna-Tas drew attention to the fact that the only modern spoken Tibetan dialects to have consonantal features corresponding to the *yang-'jug* class of Tibetan orthography, *-(g/ng/b/m)s*, are Balti and Ladakhi, and this might be considered sufficient reason in itself for a study of the degree to which Balti provides consonantal evidence for the *yang-'jug*;¹ but Balti Tibetan has also a purely descriptive interest, as raising a problem of phonological statement: verbs that can have the assibilated finals [ps], [ms], [k/χs], and [ŋs] or [V̄:s], and are thereby distinguished in certain environments from verbs with invariably non-assibilated finals, in [p], [m], [k/q], and [ŋ/V̄:], not to mention [r], [l], [s], [t], [n], [ʈ], and [V], are not always distinguished from them by assibilation ([-Cs]) as against non-assibilation ([-C, -V]); and indeed there are environments in which the "assibilated" verbs, those with the potentiality of assibilation, are not phonetically distinguished by syllable-final features from certain of the non-assibilated verbs at all. In fact, the distinguishing features of the "assibilated" verbs may vary from environment to environment, from post-consonantal alveolar friction ([Cs]) to labio-dental friction ([f]) to nil. Since prosodic analysis, the type of phonological analysis originated by J. R. Firth, is particularly suited to dealing with the phonological problem presented by such a high degree of variation in the phonetic form of lexical items, it is prosodic analysis that is here applied to this Balti material.²

¹ A. Róna-Tas, *Tibeto-Mongolica* (The Hague, 1966), pp. 156-7; Róna-Tas also associates a non-consonantal feature of Central Tibetan, "lengthening of the preceding vowel", with *yang-'jug*, in, for example, *nags* "forest" *nā*, *rigs* "clan", *rī*; but this feature can as readily be associated with the *rjes-'jug* "g", cf. *rgya-nag* [-na:] "China", *thugs-rig* [-ʃi:] "intelligence".

The phonetic symbols used in this article have I.P.A. values, as much detail being shown as is relevant. [l] represents a clear "l", [r] a flapped "r", [t], [d], and [n] dentals, except that [t] and [d] represent alveolars when preceding [ɹ], and [C] and [V] consonant and vowel respectively. ['] has been introduced to represent occlusion with inaudible release.

² J. R. Firth, "Sounds and Prosodies", *TPS* 1948, 1949, pp. 127-52, and "A Synopsis of Linguistic Theory", *Studies in Linguistic Analysis* (Oxford, 1957), pp. 15-17. For an application of prosodic analysis to a similar but more complex problem than that presented by Balti, the analysis of the syllable-final features of Limbu verbs, see "Phonological Formulae for the Verb in Limbu", *In Memory of J. R. Firth* (London, 1966), pp. 431-53.

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Accordingly, fifteen types of verb (1-15) are distinguished by syllable-final feature, of which types 1-4 are "assibilated", and the rest non-"assibilated"; and the syllable-final features of these fifteen types of verb are considered, together with syntagmatically associated features of the following syllable where relevant, in seven phonological types of piece (I-VII). In the first of these seven types of piece the verb syllable is word-final, and the "assibilated" verbs are distinguished from the non-"assibilated" by the assibilation feature ([-Cs]).

I. Type-I Piece; Word-final; Assibilation versus Non-assibilation

There being no verbal particle in the type-I piece the verb syllable is word-final; it is also sentence-final. The initial features of a following (sentence-initial) word do not vary in association with any of the syllable-final features, and have, therefore, been omitted. The features and examples considered in this type of piece are taken firstly (at (A)) from future negative clauses.

A. Future Negative

The following are examples of this type of clause:

[polis 3:na, kho mi ʔips] ³	If the police come, he will not hide.
[di rgjā:po mi ʔtip]	We shall not knock this wall down.
[khosi phaɟa mi za]	He will not eat pork.

The characteristic syllable-final features of the "assibilated" verbs (types 1-4) in this type of piece are: alveolarity + friction + voicelessness ([s]), associated with preceding features as follows:

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The informant for the Balti material was a seventeen-year-old student, Zakir Hussain Baltistani (Z.). Except where otherwise specified it is of the Skardu (S.) dialect, the prestige dialect of Baltistan. The research was carried out not in Baltistan but in Rawalpindi, the Pakistan Government having refused me permission to visit Baltistan for this purpose. My work with Z. was made much easier by the kindness of Mr. A. F. C. Read, author of *Balti Grammar* (London, 1934), in allowing me to copy his unpublished typescript Balti-English glossary.

³ All examples of verbs in this article are taken from sentences like the three given here; they are not isolate forms.

In this article the symbol [i] has two values: (i) a centralized close to half-close front spread vowel ([i]) in all closed syllables other than those contained in certain loan words, and also in three open syllables, the negative particle [mi], the genitive particle [i], and the agentive particle [si]; (ii) a close front spread vowel ([i]) in all open syllables except those specified in (i), and in the loan-word closed syllables referred to in (i), e.g. [polis] "police".

The symbol [u] has, likewise, two values: (i) a centralized close to half-close back rounded vowel ([o]) when accompanied by nasality, and in all closed syllables except plural forms (in [-ŋ]), and (ii) a close back rounded vowel ([u]) in all open syllables except those with nasal vowels, and in plural closed syllables, e.g. [mjŋ] "men", [lu:ŋ] "sheep".

1: lab. + plos. + voicelsns. ⁴	[ps]
2: lab. + nas. + voice ⁵	[ms]
3: vel. + plos. + voicelsns.	[ks] ⁶
uvul. + fric. + voicelsns.	[χs] ⁶
4: vel. + nas.	[ŋs] ⁶
vow. + nas. + voice + length	[V:s] ⁶

The remaining eleven types of verb (5-15) can be grouped together as non-"assibilated"; they have the following syllable-final features ([-C -V]):

5: lab. + occ. + voicelsns.	[p]
6: lab. + nas.	[m]
7: vel. + occ. + voicelsns.	[k] ⁷
uvul. + occ. + voicelsns.	[q] ⁷
8: vel. + nas.	[ŋ] ⁷
vow. + nas. + voice + length	[V:] ⁷
9: alv. + flap + voice	[r]
10: alv. + lat. + voice	[l]
11: alv. + fric. + voicelsns.	[s]
12: dent. + occ. + voicelsns.	[t]
13: dent. + nas.	[n]
14: alv. + occ. + voicelsns. + retro.	[ɽ]
15: vow. + voice + shortns.	[a o u];
e.g. 1: [mi baps]	will not come down
2: [mi dams]	will not assemble

⁴ The phonetic features have been abbreviated as follows: labiality: lab.; plosion: plos.; voicelessness: voicelsns.; nasality: nas.; velarity: vel.; uvularity: uvul.; friction: fric.; vowel: vow.; occlusion: occ.; alveolarity: alv.; laterality: lat.; dentality: dent.; retroflexion: retro.; labio-dentality: labden.; shortness: shortns.

⁵ Since, apart from a speech defect, nasality is always co-articulated with voice in Balti, voice is no longer specified.

⁶ The alternative features harmonize with one or other of two degrees of vowel aperture, velar occlusion ([k ŋ]) with closeness ([i u]), and uvular friction and nasal vowel ([χ V̇:]) with more open degrees of aperture, whence open words can be distinguished from close words. The Persian script, unlike the Tibetan, provides Balti-speakers with a means of distinguishing the stop from the fricative through the use of *kāf* as opposed to *khe*; but the sequence *nūn* and *gāf* has to do duty for both [ŋ] and [V̇:].

For a corresponding vowel-harmony feature in another Tibetan dialect see "Vowel Harmony in Lhasa Tibetan", *BSOAS*, XXIV, 1 (1961), pp. 116-38.

⁷ Velarity (k ŋ) is a close-word feature, and harmonizes with closeness of vowel ([i u]); and uvularity and nasality of vowel ([q V̇:]) are open-word features, and harmonize with more open degrees of aperture. Nasality of vowel has, however, been observed in close words too in some fast-tempo utterances. The velar stop is distinguished from the uvular in written Balti by *kāf* as opposed to *qāf*; but *nūn* followed by *gāf* is used for both velar nasal and nasal vowel, there being no suitable pair of symbols for making the distinction.

"Vowel + length" implies voice.

3: [mi ʒiks] ⁸	will not be afraid
[mi faχs]	will not go (honorific)
4: [mi spuŋs]	will not pile up
[mi lā:s]	will not get up
5: [mi ʃtsap]	will not teach
6: [mi zdam]	will not collect (transitive)
7: [mi ʃtsik]	will not build
[mi jaq]	will not put
8: [mi ldig]	will not swim
[mi tā:]	will not send
9: [mi spar]	will not light
10: [mi rgjal]	will not defeat
11: [mi bʒes]	will not drink (hon.)
12: [mi tʃat]	will not cut
13: [mi ʃtan]	will not show
14: [mi khat]	will not stammer
15: [mi ʃa]	will not die
[mi za]	will not eat
[mi bja]	will not do
[mi go]	will not go

There is only the one example of a type-14 verb in the dialect, with the translation "stammer" when collocated with [ʃtʃe] "tongue" but otherwise "be compelled"; e.g. [handəq khatpa] "to be compelled to sit on a roof". The rarity of this type of verb, combined with its retroflexion feature, strongly suggest that it is an obvious loan, and could well be assigned to a secondary system, though in this article it is given equal treatment with the other fourteen types of verb.⁹

With the exception of type-15 verbs the above features are also statable for each type of verb in two other grammatically different examples of the type-I piece, (B) the imperative, and (C) the emphatic negative imperative, though verbs that have vowels of the [a] type in non-imperative clauses have lip-rounding, backness, and half-openness ([ɔ]) in imperative clauses;¹⁰ e.g.

B. Imperative

type 1: [bɔps]	go down;	cf. [mi baps]
type 4: [tʃhɔ:s]	jump;	cf. [mi tʃhɔ:s]

⁸ The affricate [dʒ] of the Khapalu dialect regularly corresponds to the fricative [ʒ] of the Skardu dialect, which is symbolized in the orthography by *jim* not *zhe*.

⁹ For primary and secondary systems see Eugénie J. A. Henderson, "The Phonology of Loanwords in some South-East Asian Languages", *TPS* 1951, 1951, pp. 131-2.

¹⁰ By this criterion and others such verbs are prosodically distinguished, as *a* verbs, from other verbs in accordance with a three-term (*a*, *y*, *w*) prosodic system that associates initial-consonant features with vowel features.

type 5: [ʃtsɔp]	teach;	cf. [mi ʃtsap]
type 8: [thuŋ]	drink;	cf. [mi thuŋ].

C. Emphatic Negative Imperative

type 1: [rilana bap ma bɔps]	do <i>not</i> come down from the mountains
type 4: [lā: ma lɔ:s]	do <i>not</i> stand up
type 5: [balti skat ʃtsap ma ʃtsɔp]	do <i>not</i> teach Balti
type 8: [khola tʃä: ma tʃɔ:]	do <i>not</i> hit him.

Type-15 verbs, however, have final [s] in these two grammatical types of piece, and are thereby indistinguishable in them from type-11 verbs;¹¹ e.g.

B. Imperative

type 15: [ʃis]	drop dead;	cf. (A) [mi ʃa]
type 15: [ma ʃkus]	do not steal;	cf. (A) [mi ʃku]
type 15: [ʃtɔs]	look;	cf. (A) [mi ʃta]
type 15: [bʒɔs]	do it;	cf. (A) [mi bʒa]
type 11: [bʒes]	drink (hon.);	cf. (A) [mi bʒes]
type 11: [ma xtʃes]	do not get over-excited	cf. (A) [mi xtʃes];

C. Emphatic Negative Imperative¹²

type 15: [ʃɔqʃɔq rbi ma rbis]	do <i>not</i> write letters
type 15: [dika ʃko ma ʃkɔs]	do <i>not</i> dig here
type 15: [di laspo bja ma bʒɔs]	do <i>not</i> do this work
type 11: [khola tʃhes ma tʃhes]	do <i>not</i> believe in him.

In the three grammatical kinds of type-I piece the verb is word-final; but the assibilation ([-Cs]) that distinguishes verbs of types 1-4 from the remainder in this type of piece is also to be observed medially.

II. Type-II Piece; Medial; Assibilation versus Non-assibilation

The type-II piece can be exemplified from (A) present habitual forms, in which the verb is followed by the present-habitual particle [et] (fast temp [ɔt]) in the case of verbs of types 1-14, or is fused with it (type-15 verbs); e.g.

types 1-14

[stɔnu khoŋ rilana bapset] in autumn they come down from the mountains
[zakir husenisi ʒala ʒaqtan]

¹¹ The sole exception is [zo] "eat", not *[zɔs]; e.g. [di za:npɔ za ma zo] "do not eat this food".

¹² For type-15 verbs Z. would also accept final [s] for the preceding verb syllable of the verbal phrase as well as for the last, with lip-rounding, too, in the case of *a*-syllable verbs; e.g. [rbis ma rbis], [bʒɔs ma bʒɔs], but, exceptionally, [zo ma zo] "do not eat", not *[zɔs ma zɔs].

balti skat [tsabet]	Zakir Hussain teaches me Balti every day;
type 15	
[khosi ʃɔɠbu rbet]	he writes books
[khosi ŋana jambo las bet]	he works with me.

The characteristic syllable-final features of the fifteen types of verb in this type of piece are:

A. Present Habitual

1: lab. + plos. + voicelsns., alv. + fric. + voicelsns.	[ps]
2: lab. + nas., alv. + fric. + voicelsns.	[ms]
3: vel. + plos. + voicelsns., alv. + fric. + voicelsns.	[ks] ¹³
uvul. + fric. + voicelsns., alv. + fric. + voicelsns.	[χs] ¹⁴
4: vel. + nas., alv. + fric. + voicelsns.	[ŋs] ¹³
vow. + nas. + length, alv. + fric. + voicelsns.	[ā:ʃ:s] ¹⁴
5: lab. + plos. + voice	[b]
6: lab. + nas.	[m]
7: vel. + plos. + voice	[g] ¹³
uvul. + fric. + voice	[k] ¹⁴
8: vel. + nas.	[ŋ]
9: alv. + flap + voice	[r]
10: alv. + lat. + voice	[l]
11: alv. + fric. + voicelsns.	[s]
12: dent. + plos. + voice	[d]
13: dent. + nas.	[n]
14: alv. + flap + voice + retro.	[ɾ]
15: vow. + voice + shortns.	[ɛ];

e.g.			
1: [bapsɛt]	comes down	9: [zɛrɛt]	talks
2: [damsɛt]	assembles	10: [drulɛt]	walks
3: [(ŋjit)		11: [ʃɛsɛdɑ]	does he know
khuksɛt]	falls asleep		
[ʃɑχsɛt]	goes (hon.)	12: [tʃadɛt]	cuts
4: [lā:sɛt]	stands up	13: [minɛt]	gives
5: [tsabet]	teaches	14: [(lʃe)	
		khɑɾɛdɑ]	does he stammer
6: [zdamɛt]	collects	15: [ʃɛt]	dies
7: [duɛt]	sits	[zɛt]	eats
[jɑɛt]	puts	[bet]	does
8: [tɑɛt]	sends	[gwɛt]	goes.

The main difference between the type-I and the type-II piece is the voice feature that characterizes verbs of types 5, 7, 12, and 14 in the latter,

¹³ Close word.

¹⁴ Open word.

and the restriction on the vowel of verbs of type 15 (half-open front spread). A further distinguishing feature of verb-and-particle words containing a type-15 verb is that they are monosyllabic, the vowel being half-open front spread only ([ɛ]), whereas grammatically corresponding words containing a verb of one of the other types are disyllabic, and the vowel of the second syllable varies between [ɛ] and [ə], with [ə] restricted to fast-tempo utterances.

In the case of type-15 verbs it would be possible to attempt to allocate features to the final of the verb and to the particle separately: [ɛt] might be assigned to the particle in order to be consistent with verbs of types 1-14, thus leaving [C-] or [Cw-] for the verb; but there is no need to make a division: the vowel [ɛ] can perfectly well be considered as common to, and shared by, both verb and particle.

Other grammatical kinds of type-II piece comprise: (B) present continuous, (C) potential future,¹⁵ (D) future interrogative, (E) imperative, and (F) the form used in phrases with [manpo], except that where the verb is type-15 there is a [s] junction feature in the imperative clause (E) (cf. also I, B-C) and a length feature ([e:]) in the future interrogative clause (D) and in phrases in [manpo] (F); e.g.

B. Present Continuous

1: [bapsɛn jɔt] ¹⁶	are descending
2: [damsɛn jɔt]	are assembling
5: [rdabɛn jɔt]	are killing
15: [bɛn jɔt]	are doing

C. Potential Future

3: [ʒiksɑŋ]	may be afraid
[ʃɑχsɑŋ]	may come (pol.)
4: [lā:sɑŋ]	may stand up
7: [dugɑŋ]	may sit
[tʃɑsɑŋ]	may break
15: [bjɑŋ]	may do;

D. Future Interrogative

1: [kjā: rilana na:m bapɛ]	when shall you come down from the mountains
2: [gɔntʃas tɾwa: na:m tʃhamɛ]	when will the washing be finished
5: [kjaŋisi ŋala balti na:m [tsabɛ]	when shall you teach me Balti
6: [kjaŋisi mjuŋ na:m zdame]	when shall you collect the men
15: [kjaŋisi de ʃɔqʃɔqpo na:m rbe:]	when shall you write that letter
[kjaŋisi za:n na:m ze:]	when shall you have meals
[di laspo na:m be:]	when shall you do this work
[kjā: tʃa: gwe:]	why are you going;

¹⁵ Z. was willing to accept this type of piece for the Khapalu (K.) dialect but not for the Skardu, for which the corresponding type of piece is the type-III (cf. n. 18).

¹⁶ In disyllabic words the vowel of the second syllable can be central ([ə]) in fast-tempo utterances.

E. Imperative¹⁷

3: [kursiga ʃɔχsi]	please take a seat (pol.)
4: [l̥ɔ:si]	stand up, then
7: [dika dugi]	sit down here, then
[tʃɔsi]	break it, then
9: [sɔŋi (le: bu)]	go away, boy
11: [k]ā: tɔpsi (K. [kɪ-])	you scow, then;
but	
15: [dɔse pɕesi]	open it at once
[dɔse zwe:]	eat it at once
[dɔse bjɔsi]	do it at once
[dɔse ɾkɔsi]	dig it at once;

F. Phrases with [manpo]

1: [kho bapsi manpo]	until he comes down
2: [tʃhamsi manpo]	until it finishes
5: [pene thɔb/βi manpo]	until he gets some money
6: [kho tsemi manpo]	until he stitches it
15: [kho je: manpo]	until he dies
[za:n ze: manpo]	until he eats
[khosi las be: manpo]	until he does some work
[kho gwe: manpo]	until he goes.

In phrases in [manpo] (F), however, Z. preferred the following final features for type-1 and type-2 verb syllables to those given above:

1: lab. + plos./fric. + voice	[b/β]
2: lab. + occ./fric. + nas.	[m/β̃];

e.g. (1) [bab/βi] (cf. [bapsi]), and (2) [tʃham/β̃i] (cf. [tʃhamsi]); with the result that these two types are indistinguishable from verbs of types 5 and 6 respectively.

There is a further type of medial, or intraverbal, junction, the type-III, in which assibilation is also a syllable-final feature of verbs of types 1-4; but in which the final features of some other types of verb (5-8), considered in conjunction with the initial features of the following particle, differ considerably from those stated for them in the type-II piece.

III. Type-III Piece; Medial; Assibilation versus Non-assibilation

The type-III piece is appropriate to the future clause, and to this type of clause alone.¹⁸ It comprises verb and particle; e.g.

¹⁷ 2-syllable verbs have lip-rounding, etc.; cf. also (I, B-C).

¹⁸ These translate into English as qualified, or potential, futures in the case of the Skardu dialect (cf. n. 15), but as plain futures in the Khapalu, e.g. "I shall get frightened".

[ŋa ziksuk]	I may get frightened
[khog dika duktuk]	they may sit here
[khosi mwe: phalu taluŋ ɾkwek]	he may steal all her ornaments.

In this type of piece the combination future particle and type-15 verb is monosyllabic, e.g. [ɾkwek], but disyllabic for verbs of the other fourteen types, the vowel of the second (particle) syllable being [u], e.g. [ziksuk, duktuk] (types 3 and 7 respectively); cf. also (II, A-D, F).

The final features of the fifteen types of verb syllable and the matching features of the particle in the type-III piece are:

1: lab. + plos. + voicelsns., alv. + fric. + voicelsns.	[ps]
2: lab. + nas., alv. + fric. + voicelsns.	[ms]
3: vel. + plos. + voicelsns., alv. + fric. + voicelsns.	[ks] ¹⁹
uvul. + fric. + voicelsns., alv. + fric. + voicelsns.	[χs] ²⁰
4: vow. + nas. + length, alv. + fric. + voicelsns.	[ā:/ɔ:s] ²¹
5: lab. + occ. + voicelsns., dent. + plos. + voicelsns.	[pt]
6: lab. + nas., dent. + nas.	[mn] ²²
7: vel. + occ. + voicelsns., dent. + plos. + voicelsns.	[kt] ¹⁹
uvul. + occ. + voicelsns., dent. + plos. + voicelsns.	[qt] ²⁰
8: vel. + nas., dent. + nas.	[ŋn] ¹⁹
vow. + nas. + length, dent. + nas.	[ā:/ɔ:n] ²⁰
9: alv. + flap + voice	[ɾ]
10: alv. + lat. + voice	[l]
11: alv. + fric. + voicelsns.	[s]
12: dent. + plos. + voice	[d]
13: dent. + nas.	[n]
14: alv. + flap + voice + retro.	[ɾ]
15: vow. + voice + shortns.	[ɛ] ²³ ;

e.g.

1: [bapsuk]	may come down	9: [zɛruk]	may speak
2: [damsuk]	may assemble	10: [kaluk]	may load
3: [ziksuk]	may be afraid	11: [tʃhɛsuk]	may believe
[ʃaχsuk]	may come (hon.)	12: [tʃaduk]	may cut
4: [lā:suk]	may stand up	13: [minuk]	may give
5: [ɾdaptuk]	may kill	14: [khaɾuk]	may stammer
6: [zdamnuk]	may collect	15: [phɛk]	may open

¹⁹ Close word.

²⁰ Open word.

²¹ Unfortunately no examples with close vowels ([i u]) were specially noted; but it is likely that such syllables have final velar nasality ([ŋ]), as in the type-I, type-II, and type-V pieces.

²² Also labiality + nasality alone, e.g. [xsamuk] "may think"; but Z. did not regard this as a good pronunciation.

²³ But, exceptionally, [i] in [gik] "may go", not *[gwek].

7: [duktuk]	may sit	[zɛk]	may eat
[jaqtuk]	may put	[bɛk]	may do
8: [rdug̃nuk]	may beat	[ɸkwɛk]	may dig/steal.
[tā:nuk]	may spread		

The suggested treatment for variation in the phonetic form of the particle syllable here is the same as that proposed above for variation in the phonetic form of the present habitual particle (II, A): that no attempt should be made to distinguish certain features as being final in the verb syllable or initial in the particle syllable, but that they should be attributed to the verb and the particle jointly. As an example of the difficulties that would arise from dividing up the phonetic data in that way here, one has only to consider that if, for example, [uk] were allotted to the particle, then [-pt], [-mn], [-kt], and [-ā:n] would have to be allotted to the verb syllable (types 5-8); and these features would be difficult to reconcile with the syllable-final features stated for these types of verb in the type-I and the type-II piece, while it would be even more difficult to find features that might reasonably be assigned to the type-15 verb syllable.

Verb-and-particle words of types 5-8 differ, as compared with the corresponding types of word in the type-II piece, through the presence of the dental plosion/nasality ([pt mn k/qt Ṽ:n]); and, in the type-III piece, words of types 5 and 7 differ from those of types 6 and 8 by plosion + voicelessness ([pt k/qt]) versus nasality ([mn ŋn Ṽ:n]), while all four are distinguished from types 12 and 13 ([d n]) by double localization of the stricture feature ([pt mn k/qt ŋn]) or nasality feature ([V:n]) versus single localization of these features ([d n]).

In the type-I, the type-II, and the type-III piece alike the assibilation feature ([-Cs -Ṽ:s]) unites verbs of types 1-4 against the rest; but in the following type of piece the assibilation feature is optional.

IV. Type-IV Piece; Medial; Optional Assibilation versus Non-assibilation

The type-IV piece can be illustrated only from conditional clauses, in which the verb syllable precedes the particle syllable [na]; e.g.

[rilana bap(s)na]	if they come down from the hills
[ɸala ŋjit khukhna]	if I fall asleep
[kjaŋisi dika ɸkosna]	if you dig here.

In this type of piece Z. was willing to accept alternative final features, assibilated and non-assibilated, for verbs of types 1-4, but with a preference for the non-assibilated; type-15 verbs again have final [s] (cf. I, B-C, and II, D).

Dental nasality ([n]) is a constant initial feature of the particle syllable in the type-IV piece except where the verb is type-14, in which case it is

alveolar and retroflex ([ŋ]); the characteristic syllable-final features of each type of verb syllable are:

1: lab. + occ. + voicelsns.	[p]
lab. + plos. + voicelsns., alv. + fric. + voicelsns.	[ps]
2: lab. + nas.	[m]
lab. + nas., alv. + fric. + voicelesns.	[ms]
3: vel. + plos. + voicelsns., vow. + voicelsns.	[kh] ²⁴
vel. + plos. + voicelsns., alv. + fric. + voicelsns.	[ks] ²⁴
uvul. + fric. + voicelsns.	[x] ²⁵
uvul. + fric. + voicelsns., alv. + fric. + voicelsns.	[xs] ²⁵
4: vow. + nas. + length	[Ṽ:] ²⁶
vow. + nas. + length, alv. + fric. + voicelsns.	[Ṽ:s] ²⁶
5: lab. + occ. + voicelsns.	[p]
6: lab. + nas.	[m]
7: vel. + occ. + voicelsns.	[k] ²⁴
uvul. + occ. + voicelsns.	[q] ²⁵
8: vow. + nas. + length	[Ṽ:] ²⁶
9: alv. + flap + voice	[r]
10: alv. + lat. + voice	[l]
11: alv. + fric. + voicelsns.	[s]
12: dent. + occ. + voicelsns.	[t]
13: dent. + nas.	[n]
14: alv. + occ. + voicelsns. + retro.	[t]
15: alv. + fric. + voicelsns.	[s]:

e.g.

1: [bap(s)na]	if they come down	9: [zerna]	if he speaks
2: [dam(s)na]	if they assemble	10: [skɔlna]	if you boil
3: [zikhna, ziksna]	if he is afraid	11: [tʃhesna]	if you believe
[jaχ(s)na]	if he goes (pol.)	12: [tʃatna]	if you cut
4: [lā:(s)na]	if he gets up	13: [minna]	if you give
5: [thɔpna]	if you get	14: [khaʃna]	if you stammer
6: [zdamna]	if he collects	15: [phesna]	if you open
7: [dukna]	if he stays	[zɔsna]	if you eat
[jaqna]	if he puts	[bjasna]	if you do
8: [tā:na]	if you send	[ɸkusna]	if you steal.

The preferred (non-assibilated) final features of type-1, type-2, and type-4 verb syllables render these verbs identical with those of types 5, 6, and 8 respectively as far as syllable-final features are concerned; but, in this type of piece, all phonetic forms of type-3 verb syllables continue to be

²⁴ Close word.

²⁵ Open word.

²⁶ These features are appropriate to open words, but, for close words, cf. n. 21.

distinguished from the type-7, either by plosion versus occlusion ([kh/ks] v. [k']), in close words, or, in open words, by friction versus occlusion ([χ(s)] v. [q]).

Before leaving the types of piece I-IV it should perhaps be emphasized that the features assigned in them to verbs of types 1-4 represent the Skardu dialect, as spoken by Z. In the Khapalu dialect, in his opinion, verbs of types 1, 2, and 4 have the same syllable-final and junction features as have been stated in these four sections for verbs of types 5, 6, and 8 respectively:

verb	type I	type II	type III	type IV
1:	[-p]	-b-	-pt-	-p-]
2:	[-m]	-m-	-mn-	-m-]
4:	[-V̇:	-ŋ-	-V̇:n-	-V̇:-];
<i>e.g.</i>				
1:	[mi bap]	babet	baptuk	bapnare]
2:	[mi dam]	damet	damnuk	damnare]
4:	[mi lā:	laŋet	lā:nuk	lā:nare];

they are therefore indistinguishable from verbs of each of those three types with the result that the number of verbs that would be distinguishable in the Khapalu dialect would be not fifteen but twelve. A. F. C. Read, on the other hand, states that the assibilation feature attributed to verbs of types 1, 2, and 4 in the types of piece I-IV applies equally to the Khapalu dialect.²⁷

A further type of piece, the type-V, maintains the distinction between the "assibilated" types of verb (1-4) and the rest, but not by means of assibilation.

V. Type-V Piece; Medial; Friction versus Non-friction

Grammatically, this type of piece comprises verb and present nominalizing particle; *e.g.* [bapfa, thoβa, rbja:], as in:

[ybjaru khoŋ bɔɔqlana bapfa met]	they do not come down from the pasture in summer
[rawalpindij taza tfuli thoβa met]	you cannot get fresh apricots in Rawalpindi
[khosi ʃɔqʃɔq rbja: met]	he does not write letters.

The characteristic junction features of the particle and each of the fifteen types of verb are:

1: lab. + plos. + voicelsns.,	labden. + fric. + voicelsns.	[pf]
2: lab. + nas.,	labden. + fric. + voicelsns.	[mf]

²⁷ Cf. also his *Balti Grammar*, pp. 43, 63: 'shakh̄suk, chhamsuk, jiksuk, langsuk, iksed, shakh̄sed'. See also no. 30.

3: vel. + plos. + voicelsns.,	labden. + fric. + voicelsns.	[kf] ²⁸
uvul. + plos. + voicelsns.,	labden. + fric. + voicelsns.	[χf] ²⁹
4: vel. + nas.,	labden. + fric. + voicelsns.	[ŋf] ²⁸
vow. + nas. + length,	labden. + fric. + voicelsns.	[V̇:f] ²⁹
5: lab. + plos. + voice		[b]
lab. + fric. + voice		[β]
6: lab. + nas.		[m]
7: vel. + occ. + voicelsns.,	lab. + plos. + voicelsns.	[kp] ²⁸
uvul. + occ. + voicelsns.,	lab. + plos. + voicelsns.	[qp] ²⁹
8: vel. + nas.,	lab. + nas.	[ŋm] ²⁸
vow. + nas. + length,	lab. + nas.	[V̇:m] ²⁹
9: alv. + flap + voice,	lab. + plos. + voice	[rb]
10: alv. + lat. + voice,	lab. + plos. + voice	[lb]
11: alv. + fric. + voicelsns.,	lab. + plos. + voicelsns.	[sp]
12: dent. + occ. + voicelsns.,	lab. + plos. + voicelsns.	[tp]
13: dent. + nas.,	lab. + nas.	[nm]
14: alv. + occ. + voicelsns.	+ retro., lab. + plos. + voicelsns.	[t̄p]
15: vow. + length + voice		[a:];

e.g.

1: [bapfa] ³⁰	coming down	9: [zerba]	saying
2: [damfa] ³⁰	assembling	10: [dɔlba] ³¹	coming untied
3: [ʒikfa] ³⁰	being afraid	11: [tʃhespa]	trusting
[ʃaxfa] ³⁰	going (hon.)	12: [tʃatpa]	cutting
4: [spuŋfa] ³⁰	piling up	13: [minma]	giving
[lā:fa] ³⁰	getting up	14: [khatpa]	stammering
5: [thɔb/βa]	getting	15: [rbja:]	writing
6: [zdama]	collecting	[za:]	eating
7: [dukpa]	sitting	[bja:]	doing
[jaqpa]	putting	[rkwa:]	digging, stealing.
8: [thuŋma]	drinking		
[tā:ma]	sending		

It is clear from the list of characteristic features and the supporting examples that the features of the particle cannot be considered independently of the fifteen types of verb: its features are related to final features of the verb syllable.

In spite of the absence of the assibilation feature ([-Cs -V̇:s]) that

²⁸ Close word.

²⁹ Open word.

³⁰ Read gives "baba", "dama", "jikpa", "shakh̄pa", "spungma", and "langma" (p. 97) and "langpa" (p. 43) (for the absence of "s" from the infinitive see *Balti Grammar*, p. 43). Z. regarded these as Khapalu-dialect forms.

³¹ Khapalu dialect [gɔ-] and [kɔ-] regularly correspond to Skardu [dɔ-] and [tɔ-].

characterized them in pieces of types I-III and, optionally, in type IV, verb syllables of types 1-4 can still be grouped together on the basis of the labiodentality and matching features ([pf mf k/χf ɲf V:f]) that characterize their junction with the nominalizing-particle syllable, and are distinguished from verb syllables of all other types by this feature.

The remaining types of verb can also be grouped together by junction features:

- | | | |
|-------------------|-------------------------------|-----------------|
| i. 7, 11, 12, 14: | voicelessness, labial plosion | [k/qp sp tp [p] |
| ii. 6, 8, 13: | nasality | [m ɲm V:m nm] |
| iii. 9, 10: | voice, labial plosion | [rb lb] |
| iv. 5, 6: | single consonant | [b/β m] |
| v. 15: | monosyllabicity | [-a:]. |

The junction features serve to unite the particle syllable, or to fuse it (type-15 verb), with the appropriate type of verb syllable.

In all five of the preceding types of piece (I-V) the "assibilated" verbs (types 1-4) are, optionally (IV) or necessarily (I-III, V), distinguished from verbs of the other types (5-15) either by the assibilation feature ([-Cs -V:s]; I-IV), which includes alveolar friction ([s]), or by friction located elsewhere (labio-dental, [f]; V); but there is also a type of piece from which distinctive features are invariably absent, and verbs of types 1, 2, and 4 are not distinguished by syllable-final features from verbs of types 5, 6, and 8 respectively; this is also true of close-word verbs of types 3 and 7.

VI. Type-VI Piece; Medial; Assibilated verbs not distinguished

The type-VI piece is exemplified, at (A), by words comprising a verb and the particle syllable [pa]; e.g.

[khoŋ mi bappa]	they would not come down
[khola mi thoppa]	he would not find it
[khosi las mi bjaspa]	he would not work.

In this type of piece the characteristic syllable-final features of the fifteen types of verb, and the associated initial features of the particle syllable, are the following, the initial features of the particle syllable being constant (labiality + voicelessness + plosion, [p]) in every case:

A. Verb + [pa]

1: lab. + occ. + voicelsns.	[pp]
2: lab. + nas.	[mp]
3: vel. + occ. + voicelsns.	[kp] ³²
uvul. + fric. + voice/sns.	[χp] ³³

³² Close word.

³³ Open word.

4: vel. + nas.	[ɲp]
5: lab. + occ. + voicelsns.	[pp]
6: lab. + nas.	[mp]
7: vel. + occ. + voicelsns.	[kp] ³²
uvul. + occ. + voicelsns.	[qp] ³³
8: vel. + nas.	[ɲp]
9: alv. + flap + voice	[rp]
10: alv. + lat. + voice	[lp]
11: alv. + fric. + voicelsns.	[sp]
12: dent. + occ. + voicelsns.	[tp]
13: dent. + nas.	[np]
14: alv. + occ. + voicelsns. + retro.	[tp]
15: vow. + voice + length	[i:/u:/e:/o:/a:p]; e.g.

1: [mi bappa]	would not come down
2: [mi phampa]	would not be defeated
3: [mi zikpa]	would not be afraid
[mi ʃaxpa]	would not go (hon.)
4: [mi lanpa]	would not get up
5: [mi thoppa]	would not find
6: [mi tsempa]	would not stitch
7: [mi dukpa]	would not sit
[mi jaqpa]	would not put
8: [mi tanpa]	would not send
9: [mi zerpa]	would not speak (cf. V)
10: [mi rgjalpa]	would not win
11: [mi ʃespa]	would not know
12: [mi tʃatpa]	would not cut
13: [mi minpa]	would not give
14: [mi khatpa]	would not stammer
15: [mi phe:pa]	would not open
[mi bja:pa]	would not do.

For the sake of completeness a brief series of examples in which the "assibilated" verbs (1-4) have neither the assibilation feature (I-IV) nor the fricative junction feature (V), and in which, therefore, verbs of types 1, 2, and 4 are not distinguished by syllable-final features from verbs of types 5, 6, and 8, are now given, together with any characteristic features of each of the fifteen types of verb that have not already been given (B-P):

B. [-s]

1: [baps]	came down	5: [thops]	got
11: [ʃes]	knew	14: [khatʃs]	stammered;

C. [-sɛt]

1: [bapset]	have come down	5: [thopset]	have found
-------------	----------------	--------------	------------

11: [br̥sɛt]	has been flavoured	12: [tʃatset]	have cut;
D. [-sukpana]			
1: [bapsukpana]	if he were to come down	5: [thɔpsukpana]	if he were to find;
E. [-sa]			
1: [bapsa]	a way down	5: [tapsa]	a place for sowing;
F. [-sɲi]			
1: [bapsɲi]	want to come down	5: [ʃtapsɲi]	want to teach;
G. [-se]			
1: [bapsena]	having come down	5: [ʃtapsena]	having taught
7: [jaχse]	having put;		
H. [-ʃik]			
1: [bɔpʃik]	let's go down	5: [rdɔpʃik]	let's kill
15: [bɔʃʃik]	let's do (not *[bɔsʃik]);		
I. [-tʃa]			
1: [baptʃa]	about to come down	5: [rdaptʃa]	about to kill;
J. [-tʃas]			
4: [tʃh̥5:tʃas]	something to jump	8: [ts̥5:tʃas]	something to sell;
K. [-ʒɔχ]			
1: [babʒɔχ]	way of getting down	5: [ʃtsabʒɔχ]	way of teaching;
L. [-bzo]			
1: [babzo]	way of coming down	5: [ʃtsabzo]	way of teaching; <i>cf.</i>
15: [bjabzo]	way of doing;		
M. [-lux] ³⁴			
2: [zɔmlux]	agreement	6: [xsamlux]	manner of thought;
N. [-f/pi]			
1: [bapfi]	the man who came down	5: [ʃtsapfi]	the lesson you taught
(mju:)		(sabaqpo)]	
15: [bjaspi]	the work you did;		
(laspo)]			
O. [-kha]			
1: [bapkha]	before getting down	5: [thɔpkha]	just before getting
(ma ru:)]		(ma ru:)]	
3: [tʃhakkha]	before it breaks;		
(ma ru:)]			
P. [-khan]			
1: [bapkhan]	someone coming down	5: [tapkhan]	someone sowing.

³⁴ Also [-kh].

In particular, the features exemplified in (B) and (C) provide syntagmatic grounds for grouping type-11 verbs differently from type-12 and type-14 verbs:

B. 11: [ʃɛs] (not *[ʃɛss]) v. 14: [khaʃs] ([ʃs] v. [ʃs])
C. 11: [br̥sɛt] (not *[br̥sɛt]) v. 12: [tʃatset] ([ʃs] v. [ʃs]).

These differences in grouping, considered in conjunction with earlier groupings, foreshadow a prosodic analysis based on intrasyllabic and inter-syllabic relationships of syntagmatic features. The consolidated groupings for the fifteen types of verb within pieces of types I-VI are:

(i) 1-4; (ii) 5; (iii) 6; (iv) 7; (v) 8; (vi) 9-10; (vii) 11; (viii) 12; (ix) 13; (x) 14; (xi) 15.

All the examples in (VI) are of medial features; but the same features also occur in word-final position (type-VII piece).

VII. Type-VII Piece; Word-final; Assibilated Verbs not distinguished

This type of piece is illustrated first from causative clauses, containing forms of the auxiliary verb [tʃuk], which follows the main verb; *e.g.*
[[khosi lü:la rilana] bap tʃugət] he makes the sheep come down from the hill
[[khola gɔntʃaskun] tsem tʃuk] make him sew the clothes
[[mosi ŋala] tri tʃuks] she made me ask.

The characteristic syllable-final features of the fifteen types of verb in this type of piece are:

1: lab. + occ. + voicelsns.	[p]
2: lab. + nas.	[m]
3: vel. + plos. + voicelsns. uvul. + fric. + voicelsns.	[kh] ³⁵ [χ] ³⁶
4: vow. + nas. + length	[V̆:] ³⁷
5: lab. + occ. + voicelsns.	[p]
6: lab. + nas.	[m]
7: vel. + occ. + voicelsns. uvul. + occ. + voicelsns.	[k] ³⁵ [q] ³⁶
8: vow. + nas. + length	[V̆:] ³⁷
9: alv. + flap + voice	[r]
10: alv. + lat. + voice	[l]
11: alv. + fric. + voicelsns.	[s]
12: dent. + occ. + voicelsns.	[t]
13: dent. + nas.	[n]
14: alv. + occ. + voicelsns. + retro.	[t]

³⁵ Close word.³⁶ Open word.³⁷ See n. 21.

15: vow.	± voice	± shortns.	[i/u/e/o/a];
<i>e.g.</i>			
1: [bap tʃuget]	makes them come down	10: [tɔl tʃuk]	make him untie
2: [dam tʃuget]	makes them assemble	11: [trɔs tʃuktuk]	will warm
3: [ʒikh tʃuktuk]	shall make him frightened	12: [tʃat ma tʃuk]	do not let him chop
[ʃax tʃuget]	makes him go	13: [min tʃuk]	let me give
4: [lā: tʃuget]	make him get up	14: [khat tʃuget]	makes him stammer
5: [rdap tʃuget]	makes him kill	15: [tri tʃuks]	made me ask
6: [tsem tʃuk]	make him sew	[rku tʃuks]	made me steal
7: [duk tʃuk]	make him sit	[rtse tʃuktuk]	will make him dance ³⁸
[jaq tʃuk]	make him put	[rko mi tʃuk]	shall not make him dig
8: [tā: tʃuktuk]	shall make him post	[za mi tʃuk]	shall not make him eat
9: [zer tʃuk]	make him speak	[bja mi tʃuk]	shall not make him do.

The characteristic features stated here, and the supporting examples, show that verbs of types 1, 2, and 4 are not distinguished in the type-VII piece from verbs of types 5, 6, and 8 respectively; type-3 verbs, on the other hand, continue to be distinguished from type-7 verbs, though not by the assibilation feature [k/χs] that distinguished them in pieces of types I-V. Z., however, thought that there were speakers who used verbs of types 1-4 with the same features in the type-VII piece as were stated for them in the type-I piece, and volunteered the following examples:

1: [bap/ɸs tʃuget]	makes them come down
2: [dams tʃuget]	makes them assemble
3: [ʒuks tʃuget]	makes them get in
[dɔχs tʃuget]	makes them annoy
4: [lā:s tʃuget]	makes them stand up;

but his own usage is as stated earlier in this section.

The syllable-final features stated earlier in this section also apply to the first word of the verbal phrase in emphatic negative imperative clauses (*cf.* also I, C); *e.g.*

1: [bap (ma bɔps)]	do not come down
2: [dam (ma dɔms)]	do not assemble
3: [ʒikh (ma ʒiks he)] ³⁹	do not be frightened

³⁸ *I.e.* will teach him a lesson.

³⁹ Close word.

[ʃax (ma ʃɔχs)] ⁴⁰	do not go (hon.)
4: [lā: (ma lɔ:s)]	do not get up
5: [ltsap (ma ltsɔp)]	do not teach
6: [zdam (ma zdɔm)]	do not collect
7: [duk (ma duk)]	do not sit
[jaq (ma jɔq)]	do not put
8: [tjā: (ma tjɔ:)]	do not hit.

The syllable-final features stated for the fifteen types of verb in the type-VII piece close this survey of phonetic variation in these types of verb, and open the way to a phonological analysis of them.

Prosodic Analysis

The type-VII piece completes one of the tasks undertaken in this article, that of stating the syllable-final variations in phonetic form of the "assibilated" verbs (types 1-4) and of displaying the degree to which they are distinguished from other types of verb, whether by assibilation ([-Cs -V̄:s]) or by other features ([-pf- -mf- -k/χf- ɲ/V̄:f-]); in the course of this study it also proved necessary to state the syllable-final variations in phonetic form of the contrasting non-"assibilated" verbs (types 5-15). It remains to subject these variant features of all fifteen types of verb to prosodic analysis.

In preparation for this type of phonological analysis attention has already been drawn to syntagmatically associated features, both (i) those within the syllable, where alveolar friction ([s]), for example, is associated with a preceding nasal consonant or a long nasal vowel (type-I piece, verbs of types 1-4), and (ii) those extending over syllable boundaries (pieces of types II, III, and V, but especially the two last). In accordance with their similarity in respect of these syntagmatic associations of features the fifteen types of verb have been put into groups; and these various groupings combined into a single set of eleven groups at the end of section VI, which remains unaffected by section VII. The syntagmatic associations of features that are responsible for these eleven groups are:

verb	piece					VI, B	group
	I	II	III	IV	V		
1:	[ps	pse	psu	p(s)n	pf	[ps]	i
2:	[ms	mse	msu	m(s)n	mf	[ms]	i
3:	[ks	kse	ksu	kh/sn	kf	[ks] ⁴¹	i
	[χs	χse	χsu	χ(s)n	χf	[χs] ⁴²	i

⁴⁰ Open word.

⁴¹ Close word.

⁴² Open word.

⁴³ These features have not been specially noted for close-word verbs in this type of piece, but have the support of other types of piece.

verb	piece						group
4:	[ŋ ^s [V̇:s]	ŋse V̇:se	ŋsu V̇:su	ŋ(s)n V̇:(s)n	ŋf ⁴³ V̇:f	ŋs] ⁴³ V̇:s] ⁴²	i i
5:	[p	bε	ptu	pñ	b/β	ps]	ii
6:	[m	mε	mnu	mñ	m	ms]	iii
7:	[k [q	gε kε	ktu qtu	kñ qñ	kp qp	ks] ⁴¹ qs] ⁴²	iv iv
8:	[ŋ [V̇:	ŋε ŋε	ŋnu V̇:nu	ŋñ V̇:n	ŋm V̇:m	ŋs] ⁴³ V̇:s] ⁴²	v v
9:	[r	rε	ru	rñ	rb	rs]	vi
10:	[l	lε	lu	lñ	lb	ls]	vi
11:	[s	sε	su	sñ	sp	s]	vii
12:	[t	dε	du	tñ	tp	ts]	viii
13:	[n	nε	nu	nñ	nm	ns]	ix
14:	[t	rε	ru	tñ	tp	ts]	x
15:	[V	ε	ε	sn	V:	s]	xi.

The eleven groups mean that there are syntagmatic grounds for distinguishing the verbs of each group from the verbs of the other ten groups in at least one of the six types of piece exemplified above. At this stage the following types of verb are grouped together: i. types 1-4, vi. types 9-10; each of the remaining nine groups comprises verbs of a single type.

Thus, on the evidence so far presented, an eleven-term prosodic system would be needed in order to account for syntagmatic associations of features in the syllable final of the verb syllable itself and in the final of the verb syllable in conjunction with a following particle. Since it is concerned with related vowel and consonant qualities, this system might appropriately be named the quality system.

Where more than one type of verb is comprised in a single group (or term), any further phonological distinctions would then be the subject of phonematic analysis. Accordingly, a four-term phonematic system would be set up for the four types of verb (1-4) distinguished within the group-i prosodic class (they might be named P, M, K, and J), and a two-term for

the two types of verb (9-10) distinguished in the group-vi class (they might be named R and L); but there is still one more set of syntagmatically associated features to be taken into account.

This set of features is drawn from the verb syllable alone. In verb syllables of types 1-14 certain final consonants are appropriate to different ranges of vowel features from certain others, and verbs of type 15 (vowel-final) have a different range again. The vowel-consonant relationships are exemplified here in the form appropriate to the type-I piece; but the vowel range of type-15 verbs is taken from the type-VII piece (a more detailed phonetic transcription is given in this table; the eleven groupings previously arrived at have been added, as a right-hand column, for comparison):

	verb	type of vowel					group	
		1	2	3	4	5		
a.	1:	[l	o	ε	-	a/a/Λ	-ps] ⁴⁴	i
	2:	[l	o	ε	o/ɔ	a/a/Λ	-ms]	i
	5:	[l	o	ε	o/ɔ	a/a/Λ	-p]	ii
	6:	[l	o	ε	o/ɔ	a/a/Λ	-m]	iii
	9:	[l	o	ε	o/ɔ	a/a/Λ	-r]	vi
b.	3:	[l	o		[o/ɔ	a/a	-ks]	i
					[o/ɔ	a/a	-xs]	i
	7:	[l	o		[o/ɔ	a/a	-k]	iv
					[o/ɔ	a/a	-q]	iv
c.	4:	[l	o		[ɜ:	ā:	-ŋs] ⁴⁵	i
					[ɜ:	ā:	-s]	i
	8:	[l	o		[ɜ:	ā:]	-ŋ] ⁴⁵	v
					[ɜ:	ā:]		v
d.	10:	[l	o	ε	ɔ	ε/e	-l]	vi
	11:	[l	o	ε	ɔ	ε/e	-s]	vii
	12:	[l	o	ε	ɔ	ε/e	-t]	viii
	13:	[l	o	ε	ɔ	ε/e	-n]	ix
	14:	[-	-	-	-	ε/e	-t]	x
e.	15:	[i	u	ε	o	a/a]		xi.

⁴⁴ The variation shown for vowels of types 4 and 5 is relatable to features of the initial consonant, especially palatality and non-palatality.

⁴⁵ [ɜ:s] and [ā:s], and [ɜ:] and [ā:], may also be heard in some fast-tempo utterances for type-4 and type-8 verbs respectively.

The above table shows (i) different vowel features for type-15 verbs from almost all of the other types of verbs, all of which can be described phonetically as consonant-final types except some examples of type 8 (3: ā:); (ii) the absence of a type-3 vowel ([ɛ]) from sections (b) and (c), thereby reducing the vowel range for verbs belonging to those sections (verbs of types 3, 4, 7, and 8) to four;⁴⁶ (iii) differences in degree of frontness and closeness for vowels of types 4 and 5 as between sections (a-c) and section (d); and (iv) nasality and length of vowel as features of certain types of verb (4, 8) in section (c).

On the basis of the fourfold difference (a)-(d) in the mutual expectation of final consonant and range of vowel, or of vowel and length+nasality (section c), a further four-term prosodic system is required for closed verb syllables (1-14). To some extent this new system coincides with prosodic distinctions already recognized through the eleven-term prosodic system (quality) proposed above; but in some respects it cuts across it. Thus, verbs of types 3 (section b) and 4 (section c) now need to be prosodically distinguished from verbs of types 1 and 2 (section a) and from each other; and so do verbs of type 9 (section a) from those of type 10 (section d). One way of dealing with the overlapping between the two types of syntagmatic distinction, the elevenfold (i-xi) and the fourfold (a-d), would be to amalgamate them into a single (fourteen-term) prosodic system; but this would obscure the high degree of similarity in the characteristic features of verbs of types 1-4 ("assibilated"), as opposed to types 5-14 and type 15, in all the seven types of piece I-VII (not to mention the fact that "assibilantion" appears to be a phonological exponent of the grammatical category intransitivity); equally, it would obscure the remarkable similarity in vowel range shared by verbs of types 10-14, and especially the relative frontness of their vowels of types 4 and 5 ([ɔ̄ ɛ]).

A more satisfactory solution therefore seems to be to keep the two sets of syntagmatic relations distinct. Accordingly, the eleven-term quality system is set up both for monosyllabic pieces exemplifying a verb syllable alone (type-I and type-VII piece) and for pieces exemplifying both verb and (following) particle (disyllabic pieces where the verb is of one of the types 1-14 but monosyllabic where it is of type 15), while the four-term system would deal solely with the relations of vowel features with final-consonant features and with vocalic nasality, and would apply only to monosyllabic (verb) pieces, and even then only when the verb was drawn from types 1-14. This latter system might suitably be called the final system.

⁴⁶ Forms such as [ljax(mə)] "good" (written Tibetan *legs*), [jaxs] "go"/"come" (hon.) (written Tibetan *gshegs*), and [tjā:] (written Tibetan *rdeg(s)*) provide the key to the fate of an earlier fifth type of vowel, with, presumably, features of an [ɛ] type, in Balti syllables of type (b) here.

Suitable names for the eleven terms of the quality system, reflecting the orthographic and phonetic associations of its eleven terms, would be:

(i ii iii iv v vi vii viii ix x xi)
f b m g ŋ l s d n t v;⁴⁷

and the four terms of the final system might be named:

(a) (b) (c) (d)
b g ŋ f,

"b" being from "backing", and "f" from "fronting", while g and ŋ are so named on orthographic and phonetic grounds.⁴⁸

Any verb syllable can be classified in terms of the quality system, as f, b, m, etc., according to which of the eleven prosodic types of piece it is exemplifiable in, and any verb except a type-15 verb in terms of the final system too, as b, g, ŋ, or f, in accordance with its vowel and final-consonant features. The relations between the terms of the two systems are as follows:

verb type:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
quality:	f	f	f	f	b	m	g	ŋ	l	l	s	d	n	t	v
final:	b	b	g	ŋ	b	b	g	ŋ	b	f	f	f	f	f	f

Jointly, the two prosodic systems are now sufficient to distinguish any of the fifteen types of verb from any other except for verbs of types 1 and 2, which are both f and b (final). Since the syllable-final features of this pair of verb types are not affected by any further prosodic analysis, the syllable-final differences between them are stated as the exponents of phonematic units, a two-term phonematic system being set up for this purpose:

prosodic classification	phonematic term	exponent	verb type
bj	B	plos./occ., ⁴⁹ voicelsns.	1
bj	M	nas.	2

Appendix: "Assibilated" Verbs (f)

The following are the verbs that Z. recognized as "assibilated" (types 1-4); they are cited in the form appropriate to the type-I piece:

(bj)B (type-1)

[pips] hide (intrans.), [tshups] cloud over, frown, [nups]⁵⁰ wester, set, [theps] reach to, [baps] descend, [rgaps]⁵¹ bow;

(bj)M (type-2)

[khums] get twisted, cower, [skums] scowl, [zems] feel shy, [ŋjems] be

⁴⁷ l is named from *liquid* ([-l -r]).

⁴⁸ The mnemonic advantages of using the symbols g and ŋ in this system as well as in the eleven-term system outweigh the disadvantages of having symbols of identical shape in different systems.

⁴⁹ According to type of piece (for occlusion see the type-IV).

⁵⁰ Also type-5 ([nup]).

⁵¹ [zgaps] for some speakers.

acquainted, [sɛms] get frightened, [phams] be defeated, [tʃhams] be finished, [dams] assemble (intr.), [skams] dry up, [zɡams] stare, [ɡams] swallow, [rams] get scorched, [thams] hold, fight, [bams] faint, be angry, [sɲjams] be smooth, [skɔms] be thirsty, [khɔms] achieve salvation, [zɔms] be in agreement, [ɲɔms] quench, feel proud, [ʃɔms] wither, [kjɔms] get stiff with cold;

gf (type-3)

[dɪks]⁵² fit, [ʒiks] fear, [thiks] drip, [riks] be admired, [tshiks] get scorched, [tʃiks] be same as, [ʒuks] get into, [ɡuks] get bent, surrender, [khuks] be in control, ([ɲjit]) sleep, [tshuks] settle down, [kjaɣs] feel cold, [rjaɣs] begin, [tʃhaɣs] get broken, [traɣs] increase, win, [baɣs] taste, [rgjaɣs] flourish, [faɣs] go/come (hon.), [taɣs] name, garland, [thaɣs] weave, grind, [tʃhɔɣs] be enough, [gjaɣs] be earlier, [khɔɣs] cough, [drɔɣs] scream, [tɔɣs] be hungry, [dɔɣs] be irritated;

ɲʃ (type-4)

[riɲs] be eager, [spuɲs]⁵³ pile up, [kjã:s] get stiff, [xjã:s] be in the habit of, [ʃkã:s] swell up, [drã:s]⁵⁴ belch, [bɪã:s] cry for, [lã:s] get up, [sɲã:s] be dumbfounded, [gã:s] get full, [ɣdjã:s] hope, [ʃã:s] clot, [skjã:s] be undisciplined, [thã:s] be clear, free of cloud, [tshã:s] be finished, [dɪã:s]⁵⁵ get cold, [tʃhã:s] jump.

⁵² Khapalu dialect: [gɪ-]; see n. 31.

⁵³ Doubtful; possibly type-8 ([spuɲ]).

⁵⁴ Khapalu dialect: [dɪ-]. Khapalu-dialect [dɪ-] and [tɪ-] regularly correspond to the Skardu [dr-] and [tr-] (*cf.* n. 31).

⁵⁵ Khapalu dialect: [gɪ-]; see n. 31.