VESTIGES OF MORPHOLOGY IN SOME TIBETO-BURMAN LANGUAGES

Eugénie J.A. Henderson

INTRODUCTORY REMARKS

The first point to be made is the distinction between what may be called prosodic and segmental morphology. It seems to me perfectly acceptable that prosodic features such as tone or stress should in themselves be found to operate as morphological devices in the language of any part of the world, and as a member of the so-called London School, I should be inclined to include under 'prosodic' morphology, morphological processes involving the alternation of subsegmental features such as voice or voicelessness, aspiration or absence of aspiration, etc. It seems, however, to be the general view of the majority of the Sino-Tibetan philologists that prosodic morphology must in some sense be regarded as secondary to or derived from what may be called segmental phonology, i.e. that the grammatical use of aspiration, for example, or of tone, is in all probability to be ascribed to the operation of earlier segmental formatives which they have supplanted. I wish to present here some of the vestigial morphological features of Tibeto-Burman languages I have worked with in this latter light, whilst reserving the right to wonder whether our apparent conviction of the primacy of segmental morphology does not derive to a very large degree from our own traditional Indo-European standpoint - a standpoint to some extent challenged by the learning experience of our own children, in whose acquisition of speech tonal features for example, are in the early stages as important as, perhaps more important than, segmental ones.

I propose to exclude from consideration such overt morphological features as prefixes, or verbal particles which could be regarded as morphological elements, in order to concentrate upon phonological features which are an integral part of tonic syllables, and which appear to show signs of having at one time been the expression of live morphological processes. I shall be concerned therefore with

(1) initial consonants
(2) final consonants
(3) tone

1. VESTIGES OF MORPHOLOGY IN INITIAL CONSONANTS

The principal feature that springs to mind in this connection is the well-known though rather limited use in languages like Burmese and Chin of a contrast between unaspirated and aspirated initials to express verbal relationships which may be loosely termed transitive/intransitive, or sometimes causative/noncausative.

Examples from Burmese include such pairs as the following[1]:

(a) kwe: te *to break* (intr.) hkwe: te *to break* (trans.)
(b) kya.te *to drop* (intr.) hkya. te *to drop* (trans.)
(c) pwin. te *to open* (intr.) hpwin. te *to open* (trans.)
(d) nou:te *to be awake* hnou: te *to awaken* (trans.)

Sometimes Burmese spelling shows a similar relationship between pairs of words whose modern spoken form would not lead one to expect it, e.g.

you' te *to be inferior*
hyou' [ʃouʔ] te *to put down*

In Tiddim Chin one finds a few similar pairs, e.g.

(e) ˎkia *to fall* ˎxia *to drop* (tr.), *to fell*
(cp., perhaps, second Burmese example above)
(f) -ka:i *to be suspended* -xa:i *to hang* (trans.)
(g) -ka:k *to dilate* (intr.) -xa:k *to open wide* (trans.)
(h) -tu:k *to roll* (intr.) -xu:k *to roll* (trans.)
(j) ˏpu:k *to fall* (intr.) ˏphu:k *to fell*
(k) ˏka:ŋ *to rise, raise oneself* ˏxa:ŋ *to lift*

Notice the unexpected relationship in (h) between t and x, not the expected th, which in this language is generally accepted as a reflex of earlier *s.

When I had the opportunity to work with a Lushai informant, I was not, unfortunately, looking for such forms. A somewhat cursory examination of Lorrain's dictionary did not produce any likely examples but R.B. Jones has drawn my attention to at least one pair of such forms: tliak[2] *to break* (intr.) and thliak[2] *to break* (tr.), which sug-

gests that others may exist.

Wolfenden[2] and Stern[3] cite further forms for Sizang, another Northern Chin dialect:

(l)	ki:em *to grow less*	khi:em *to decrease, make less*
(m)	kɔm *to assemble, come together*	khɔm *to collect, bring together*
(n)	ka:i *to pull, be suspended*	kha:i *to hang up* (trans.)

Scholars (Wolfenden[4], Pulleyblank[5]) have ascribed this feature to the loss of a former s-prefix, such as exists and has a similar function in written Tibetan. Compare, for example, Tibetan agyel, gyel *to fall*, sgyel *to throw down* with examples (b) and (e) above. As La Raw Maran and others[6] have shown Kachin still has a ša/ǰa prefix with a causative or transitive function in similar sets of words. It is pertinent to note, furthermore, that in spoken Tibetan the transitive/intransitive relationship is realized as one of absence or presence of aspiration, viz: [ky:gydu:] *he is boiling the water*, but [khy:gy:du:] *the water is boiling* (Sprigg)[7]. Pulleyblank has suggested that this feature might be "an important point from which to start in trying to establish the phonological isoglosses in Tibeto-Burman".[8]

Morphological or quasi-morphological alternation of voiced and voiceless initials is assumed by some scholars for Archaic Chinese, but as far as I am aware there is nothing in Archaic Chinese that corresponds to the s-prefix of Tibetan and Kachin, and the related alternation of aspirated and unaspirated initials in Chin and Burmese. This would therefore seem to be a genuinely Tibeto-Burman grammatical trait. It is possibly significant here that no trace of this trait has so far been reported for Karen. This would appear to support the current view that Karen is to be regarded as Sino-Tibetan but not as Tibeto-Burman (Luce)[9].

Closer examination of Karen might however show up suggestive initial consonant relationships of other kinds, which are clearly linked to tonal features and possibly also to long vanished grammatical formatives of some kind. In Bwe Karen, for instance, in addition to the not uncommon phonetic variation between voiced and voiceless initials, as in ci^{2} and ji^{3}, both meaning *to knead*, one sometimes finds alternation between glottalised and non-glottalised initials, as for example ɓɛ^{1} *to put, lay, keep*, and bɛ^{3}, with the same range of meanings; there is also ɗa^{2} *to cut*, beside da^{2} *to cut a foothold*; ɓwɛ^{1} = *Bwe Karen*, and bwɛ^{2} = *person*, and many more. One suspects a link too between kɔ^{1}, a prenominal prefix, and two preverbal formatives gɔ^{3} and khɔ^{1}. kɔ^{1} denotes future time, as in kɔ^{1}mu^{2}nɛ^{2} *tonight*, kɔ^{1}mo^{1}hɛ^{2} *this (coming) evening*, kɔ^{1}məhɔ^{2} *tomorrow*, kɔ^{1}dəhɔ^{2} *the day after tomorrow*, and also interrogatively kɔ^{1}lɛ^{3} *when?* (of future time, as contrasted with phɔ^{1}lɛ^{3} *when?*

of past time). The two preverbal formatives gɔ^3 and khɔ^1, both referring to future time, are sometimes used interchangeably, but with gɔ^3 indicating probability rather than certainty, e.g. khɔ^{1}ge^{1}phlɔ^2 *It will (certainly) fall* as contrasted with gɔ^{3}ge^{1}phlɔ^2 *It will (probably) fall.* Much more work needs to be done on word-families of this kind. Is it fanciful to seek some link here with the alternation of voiced and voiceless initials proposed for Archaic Chinese words, sometimes in free variation, sometimes with linked but systematically differentiated meanings, together with the high and low tone registers associated with them? Bwe Karen and its closest related dialect Geba are exceptional among Karen languages in preserving the ancient distinction between voiced and voiceless stops, and in having a 3-tone system rather than the 5- or 6-tone system common to the dialects which have lost the old voice distinction. Bwe has voiceless unaspirated stops (p, t, k), voiceless aspirated stops (ph, th, kh), plain voiced stops (b, d, g) and voiced glottalised stops (ɓ, ɗ). The plain voiced stops are associated with the two lower tones (mid and low); all the others, including the glottalised stops, with the two higher tones (high and mid). One might expect therefore that the cognates of pairs like ɗa^2 and da^2, ɓwɛ^1 and bwɛ^2, in other Karen dialects would show a difference in tone, with or without an accompanying difference in initial. There is some hint of this in the tonal variation among semantically linked sets of words recorded by R.B. Jones for Palaychi.[10]

2. VESTIGES OF MORPHOLOGY IN FINAL CONSONANTS

The comparative rarity of forms showing the vestigial remains of the old s-prefix system in Tibeto-Burman languages is perhaps confirmation of Wolfenden's contention that prefixed forms in these languages are in general older than suffixed forms. It is certainly true that, in the Chin languages at least, alternations of final consonants, such as might be supposed to derive from older suffixed elements, are very much more numerous. These principally concern pronominal forms within the verbal phrase and the shape of verb stems themselves. I have given some account elsewhere of both of these characteristics as they occur in Tiddim Chin[11], and so will only summarize them briefly here.

2.1. *PRONOMINAL INFLECTIONS*

In formal literary Chin there is commonly a pronominal prefix before the verb and a phrase sentence final particle after it, e.g.

(a) kă -pai ˎhi *I go* or *I went*

The negative particle ˎkei or the future particle ˎdi:ŋ may be inserted

between the verb and the following phrase-final particle, e.g.

(b) kă -pai ˊkei ˋhi *I didn't go*

(c) kă -pai ˊdi:ŋ ˋhi *I will go*

In colloquial style, however, the pronominal prefix and the phrase-final particle are omitted, and a pronominal suffix takes their place, viz.

(a) above becomes -pai ˋiŋ

Literary	nă -pai ˋhi	*you went*	becomes colloquial	-pai _tɛʔ
Literary	ă -pai ˋhi	*he went*	becomes colloquial	-pai
Literary	ĭ -pai ˋhi	*we* incl. *went*	becomes colloquial	-pai ˋhaŋ
Literary	kă -pai _uʔ ˋhi	*we* excl. *went*	becomes colloquial	-pai ˋuŋ
Literary	nă -pai _uʔ ˋhi	*you* pl. *went*	becomes colloquial	-pai _uʔ _tɛʔ
Literary	ă -pai _uʔ ˋhi	*they went*	becomes colloquial	-pai _uʔ

So far these all appear to be independent pronominal suffixes of the kind that I excluded from my study at the beginning of this paper. Upon examination of other colloquial verb forms, however, it turns out that certain inflexional elements may perhaps be descerned within some of these forms themselves, as for example the final velar nasal, which is regularly associated with first person forms, either singular or plural.

Compare:

Literary	Colloquial	
kă -pai ˊdi:ŋ ˋhi	-pai ˊniŋ	*I will go*
kă -pai ˊdi:ŋ -uʔ ˋhi	-pai ˋnu:ŋ	*We* (excl.) *will go*
kă -pai ˊkei ˋhi	-pai ˊkeŋ	*I didn't go*
ĭ -pai ˊkei ˋhi	-pai ˋxaŋ	*We* (incl.) *didn't go*

In the colloquial suffixes above there appears to be fusion of the future or negative formative, which is reflected in the first part of the syllable, with the pronominal element in the final consonant. There are a great many other such forms in colloquial usage.

2.2. *VERBAL INFLECTIONS*

Such accounts as we have of Lushai and of the Northern and Central Chin languages all bear witness to a widespread if rudimentary system of verbal inflection by which the great majority of verbs have at least two, and sometimes three, stems associated with different sets of grammatical contexts. The principal and most regular phonological device used nowadays to differentiate such stems is undoubtedly tonal variation - of which I shall say more below. Tonal variation is often accompanied

by variation in final consonants and sometimes the inflection is expressed by variation in the final consonant (or absence of consonant) alone, without accompanying tone change, as in the following examples from Tiddim Chin:

e.g.	Stem I	Stem II	
(a)	-gɔ:	-gɔ:t	*to dry up*
(b)	-pua	-puak	*to carry*
(c)	ˎha:	ˎha:t	*to be solid*
(d)	ˎpha:	ˎpha:k	*to overtake*
(e)	ˎnɛ:	ˎnɛ:k	*to eat*
(f)	ˎla:	ˎla:k	*to take*
(g)	ˎka:	ˎka:t	*to be forked*
(h)	ˎpa:	ˎpa:t	*to be thin*
(j)	_that	_tha?	*to kill*
(k)	_sut	_su?	*to snatch*
(l)	_sat	_sa?	*to jerk*
(m)	_tat	_ta?	*to strike against*
(n)	_kap	_ka?	*to cry*
(o)	_sak	_sa?	*to be hard*
(p)	_pak	_pa?	*to immerse*
(q)	_lak	_la?	*to show* etc.

These forms are so varied that I find it difficult to think of a historical solution in terms of, say, suffixation. There seems to be a certain underlying regularity in that all the long open Stem I forms (a) to (h) have a corresponding Stem II with long vowel and final -t or -k, whereas all the short closed Stem I forms (j) to (q) ending in -p, -t, or -k have a Stem II with final glottal stop. L.G. Löffler[12], who has investigated comparable material in Lushai, has pointed out that the set with the long Stem II forms in final -t are always intransitive, those in final -k always transitive, which clearly suggests the possibility of earlier suffixed forms and which could account for the absence of final -p in Stem II verbs of this kind. There are, however, apparent counter-examples, such as ˎxa:, ˎxa:k *to be bitter*, and ˎsia, ˎsiat *to spoil*. Caution would seem to be advisable until cognate forms in other Tibeto-Burman languages can be identified. R.B. Jones[13] cites a number of Lushai forms, verbs and verbal nouns, in which there is alternation of final vowel and final -k. The final -k forms here appear to parallel the Tiddim Chin use of Stem II forms for verbal nouns[14], but do not suggest any regular association with transitive or intransitive verbs. Cp. pe^4 *to give*, pek^2 *gift;* tlu^4 *to fall down*, tluk^2 *fallen;* zu^4 *to drink*, zuk^2 *drunk;* pua^4 *to carry on the back*,

puak^{2} *carried;* lua^{4} *to vomit,* luak^{2} *vomit;* su^{4} *to wash (clothes),* suk^{2} *washed.*

3. VESTIGES OF MORPHOLOGY IN TONAL VARIATION

What may be termed the regular inflection of Tiddim Chin verbs operates as follows:

All verbs whose Stem I has a level or rising tone have a falling tone in Stem II, **without** consonant change. There is an interesting exception to this 'nonconsonant change' rule in that verbs whose Stem I consists of a syllable closed by a velar nasal regularly have an alveolar nasal in Stem II:

e.g.	**Stem I**	**Stem II**	
(a)	ˏxa:ŋ	ˎxa:n	*to lift up*
(b)	ˏpa:ŋ	ˎpa:n	*to defend*
(c)	ˏza:ŋ	ˎza:n	*to be light*
(d)	-tuaŋ	ˎtuan	*to perch*
(e)	ˏgaŋ	ˎgan	*to be profuse* etc.

A similar pattern obtains in Lushai and Sizang, and has been reported for Tibetan and some Naga languages.[15] It would seem not unreasonable to suppose that some suffixed element, presumably a dental, might have been at work here. Pulleyblank has indeed suggested that some of the other consonant changes in the Chin verb suggest 'suffixation comparable to Tibetan final -s and da-drag.'[16] These changes are regularly found when the Stem I form has a falling tone already. Stem II then has a falling or low tone plus the homorganic stop corresponding to the continuant final of Stem I.

The vowel of a Stem II of this type is always short and the pitch low level as contrasted with the falling pitch of Stem I. This low level pitch may, however, be regarded as the allotonic variant of the falling tone appropriate to short stopped syllables so that no tone change need be postulated for such forms. Morphologically the relevant features appear to be the shortening of the vowel and the final stop, viz:

(f)	ˎkam	_kap	*to be dispersed*
(g)	ˎla:m	_lap	*to lift up*
(h)	ˎgɛ:m	_gɛp	*to creep up on*
(j)	ˎi:m	_ip	*to keep secret*
(k)	ˎam	_ap	*to be perplexed*
(l)	ˎla:n	_lat	*to gape*
(m)	ˎman	_mat	*to cost*
(n)	ˎba:n	_bat	*to reach for*

(o)	ˎpan	_pat	*to start*
(p)	ˎlaŋ	_lat	*to appear*
(q)	ˎnaŋ	_nat	*to be weak*
(r)	ˎda:ŋ	_dat	*to be pale*
(s)	ˎbaŋ	_bat	*to be like*
(t)	ˎci:	_ci?	*to say*
(u)	ˎhi:	_hi?	*to be*
(v)	ˎmu:	_mu?	*to see*
(w)	ˎgai	_gai?	*to consume*
(x)	ˎba:l	_bal?	*to be covered with juice*
(y)	ˎdol	_dol?	*to be damp* etc.

It will be seen that once again the Stem II form of verbs with a velar final in Stem I has the corresponding alveolar. There seems to be strong support here for the hypothesis of a dental suffixal element in Stem II, since a verb form ending in a velar nasal and having a falling tone may always be assumed to be a Stem I form, and never a Stem II form.

Compare such sets as

	Stem I	Stem II	
(a)	-da:ŋ	ˎda:n	*to be infrequent*
(b)	but ˎda:ŋ	_dat	*to be pale*
(c)	-naŋ	ˎnan	*to defend*
(d)	but ˎnaŋ	_nat	*to be weak*

If the suffix theory is to hold water, it seems to me that there are four factors to be explained here:

(i) the falling tone in forms (a) and (c) above,
(ii) the accompanying change from velar to alveolar nasal in (a) and (c),
(iii) the further change from nasal to stop in (b) and (d),
(iv) the shortness of the vowel in syllables affected by (iii) above.

Not being myself a language historian, in the comments that follow I am asking for answers rather than hoping to supply them:

(i) If final -s or -h historically had the efffect of inducing a falling pitch, as has, I believe, been supposed by Haudricourt[17] and others, a final suffixed -s might perhaps, as Pulleyblank has already suggested,[18] account quite neatly for the falling tone (or its allotone the low level) in the Stem II of the majority of Tiddim Chin verbs. It is clear from Stern's material that a falling tone is also present in a number of Sizang Stem II verbs also, but in how great a proportion is

not clear from the evidence available. The regrettable absence of tone marking in Lorrain's dictionary makes it impossible to discover how prevalent is the use of the falling tone in this grammatical context in Lushai until more evidence comes to hand.

(ii) The change from velar to alveolar nasal seems also fairly readily attributable to the operation of a suffixed dental element which did not affect stem finals with labial nasals, nor with velar final stops (this latter is perhaps more difficult to understand!):

		Stem I	Stem II	
Compare	(e)	ˏxa:ŋ	ˎxa:n	*to lift up*
but	(f)	ˏxa:k	ˎxa:k	*to close*

(iii) The change from continuant to stop in verbs with falling tone in Stem I could also, I imagine, be plausibly accounted for by the operation of a final voiceless (i.e. *-s) suffix or by something akin to da-drag, which I take it is assumed to represent a dental stop of some kind. The difficulty here as I see it is to reconcile (ii) and (iii), which suggest that two morphological processes must have been at work rather than one. We cannot surely maintain that -naŋ + *-s → ˎnan, whereas ˎnaŋ + *-s → _nat.[19]

Further fodder for morphological speculation is supplied by some of the other derivation processes connected with the Chin verb. Stem II regularly supplies the form for verbal nouns, e.g.

	Stem I	Stem II		Noun	
(g)	-la:m	ˎla:m	*to dance*	ˎla:m	*a dance*
(h)	-na:k	ˎna:k	*to breathe*	ˎna:k	*nose*
(j)	-man	_mat	*to catch* (irreg.)	_mat	*prisoner*

Does older Tibetan and Chinese practice suggest that the same suffix as in the verb might have been at work here? It is perhaps of interest that the Chin nominalising suffix that may be used to form verbal nouns (always based upon the Stem II form of the verb) is -na:, which itself may be regarded as a tonally inflected form of ˎna: *thing, object* (see below).

A further derivation process is that of forming causatives or benefactives from Stemm II, e.g.

	Stem I	Stem II	
(k)	-ta:ŋ	ˎta:n	*to be bright*
Derived form:	ˎta:n	_tat	*to flash a light at s.*
(l)	-nam	ˎnam	*to smell* (intr.)
Derived form:	ˎnam	_nap	*to smell* (tr.)
(m)	ˏdim	ˎdim	*to be full*
Derived form:	ˎdim	_dip	*to fill*

	Stem I	Stem II	
(n)	ˏlam	ˎlam	*to earn for oneself*
Derived form:	ˎlam	ˍlap	*to earn for someone else*

All the above verbs, primary or derived, form their second stems perfectly regularly, taking the Stem I as the base; the Stem I of the derived form being the Stem II of the primary form in each case. Occasionally the Stem II of the derived form does not undergo the process whereby the continuant final becomes the corresponding stop, so that we have:

	Stem I	Stem II	
(o)	ˏdaŋ	ˎdan	*to be different*
but	ˎdan	ˎdan	*to differentiate*
		(not *ˍdat)	
(p)	-dam	ˎdam	*to be well*
but	ˎdam	ˎdam	*to heal*
		(not *ˍdap)	

As Pulleyblank has said,[20] the complications and irregularities of the Chin verbal system suggest that this system 'stands a better chance of reflecting features of common Tibeto-Burman' than the relatively regular system of tonal inflection found in Tiddim Chin nouns (of which more later). One would be glad, however, to discover traces of this putative verb morphology in other Tibeto-Burman languages. Kachin is said to have traces of it, but so far as I am aware there is nothing comparable in Burmese, except perhaps in the rare cases of semantically related verbal forms differentiated by tone, such as hcai'/hcain. *hollow-topped/to be concave*; ngoun/ngoun. *to hold in the mouth/to hold the head down;* etc.[21] Karen, though more remotely related, has a few tonal features which may perhaps be connected - e.g. the tonal variant forms cited by R.B. Jones for Palaychi.[22] Perhaps the tonal variation which is sometimes a part of the Bwe Karen compounding process is also relevant here, e.g. (where ^{1} = high level, ^{2} = mid level, ^{3} = low level):

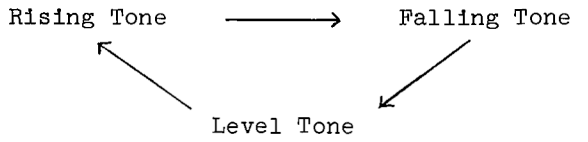
(q)	ɗɔ^{2}	*to speak*	beside	ɗɔ^{1}ʃa^{2}	*to tell*
(r)	la^{2}	*to descend*	beside	la^{1}de^{3}	*to fall*
(s)	ca^{2}	*to see*	beside	ca^{1}lɛ^{2}	*to search*
(t)	ɗa^{2}	*to cut*	beside	ɗa^{1}thɛ^{1}pha^{2}	*to cut off*

What is particularly striking, however, is the way in which the uses of Chin Stem II forms - as verbal nouns, causatives, in compounding, etc. - resemble those of the derived **chiuh-sheng** forms in classical Chinese, as described by Downer[23]. The relationship between the derived **chiuh-sheng** forms and the corresponding basic forms was evidently one of tonal contrast, sometimes associated with an alternation between

voiced and voiceless initials, and possibly in some instances with the loss of a former suffix.[24] Downer argues that morphological derivation by tonal variation may date back to Archaic Chinese and is thus a very old feature in the Sino-Tibetan language family. Karlgren's reconstructions suggest an alternation not of tones but of voiced and voiceless final stops. Either way, there is evidence for the very ancient origins of such forms in Chin and allied languages.

3.1. *TONAL ALTERNATION IN THE NOUN IN TIDDIM CHIN*

For those unfamiliar with the account I have given of this phenomenon elsewhere,[25] a brief summary may be of interest here, in case similarities are forthcoming from other languages. Tiddim Chin nouns and pronouns have two alternating forms, the commonest of which I shall refer to as the 'direct' form, the less common as the 'oblique' form. The alternation is tonal, and the forms are mutually predictable. (This is in contrast to the verbal forms, in which Stem II may be predicted from Stem I but not vice versa). The tonal variant found in a given context is grammatically not phonetically determined, and is thus not to be confused with tone sandhi, such as is common in other languages of the family. The tonal relationship between the direct and oblique forms of nouns is illustrated by the diagram below, a direct rising tone implying a falling oblique tone, a direct falling tone implying a level oblique tone, and a direct level tone implying a rising oblique tone:



In nouns of more than one syllable the tonal alternation affects the last syllable only. The oblique form of nouns is found (i) in genitival constructions, (ii) before certain suffixes, (iii) in certain compound nouns, and (iv) is possibly also used in the case of nouns of inanimate or abstract reference to express what appears to be a lexico-semantic rather than a grammatical relationship between the two forms.

Examples will make this clearer:

(i) In genitival constructions

	Direct form	Oblique form of first noun
(a)	˪ha:u ˪gou *Haugo* (a name)	˪ha:u -gou ˋʔwi *Haugo's dog*
(b)	˪vul zăˊ -thaŋ *Vul Za Thang* (a name)	˪vul zăˊ ˋthaŋ ˋʔwi *Vul Za Thang's dog*

	Direct form	Oblique form of first noun
(c)	-ga:l ˏtɛ:	-ga:l ˎtɛ: -xuaŋ
	The enemies	*The enemies' drum*

(ii) Before certain suffixes

The oblique form is obligatory before certain postnominal suffixes, such as the masculine and feminine suffixes ˏpa: and ˏnu:, but not before others, such as the pluralising suffix ˏtɛ:.

Compare:

	Direct Form	Direct Form + suffix	Oblique Form + suffix
(d)	-ga:l	-ga:l ˏtɛ:	ˏga:l ˏpa:
	war, enemy	*enemies*	*an enemy*

If a noun with a postnominal suffix enters into a construction that requires an oblique form the suffix is treated as the last syllable of the relevant nominal form and is varied tonally in the same way as the last syllable of nouns:

Compare:

	Direct	:	Oblique	:	Direct	
(e)	-ga:l		ˎtɛ:		-xuaŋ	*The enemies' drum*
	Oblique	**:**	**Oblique**	**:**	**Direct**	
(f)	ˏga:l		ˎpa:		-xuaŋ	*The enemy's* (singular) *drum*

In (e) above, -ga:l is the direct form appropriate before the suffix ˏtɛ:, while ˎtɛ: is the oblique form of the suffix ˏtɛ: appropriate to the expression of the genitival relation between -ga:l ˏtɛ: and -xuaŋ. In (f) both ˏga:l and ˎpa: are oblique forms, the first by reason of its position preceding the suffix ˏpa:, and the second by reason of the genitival relation between ˏga:l ˏpa: and -xuaŋ.

(iii) In compounding

A single example in my material - which is all too thin for any but the most tentative generalisations here - suggests that in certain compound nouns consisting of a noun + a verb the oblique form of the noun is used. The example is ˎmi: -hiŋ *human being* which seems clearly to derive from ˏmi: *person* and -hiŋ *to be alive*. In the noun + noun compounds occurring in my material both nouns are in the direct form.

(iv) Lexico-semantic relationships

In one or two interesting cases, all (perhaps fortuitously) referring to temporal expressions, it is possible to suggest very tentatively that we may have direct/oblique tonal alternation with lexical function:

e.g.

	Direct		Oblique	
(h)	ˎza:n	*night*	-za:n	*yesterday*
(j)	-zi:ŋ	*morning*	ă ˏzi:ŋ	*next morning*
(k)	ˏtu:	*now*	ˎtu: ˏni:	*today*
	-ni:	*day*		

Alternation of this kind defies explanation in terms of the working of some lost segmental formative. Pulleyblank has pointed out that its regularity "suggests that there has been innovation and analogical extension at a comparatively recent date."[26] I must confess to a certain unease here in that the innovation seems, as far as has been reported so far, to be confined to Tiddim Chin. Theodore Stern specifically looked for similar behaviour in Sizang, a fairly closely related dialect, but found none. I should be greatly reassured if some similar system were to turn up elsewhere in the family. The nearest similar case seems to be the use of the so-called 'induced creaky tone' tone'[27] which is found in some of the same grammatical contexts as Tiddim Chin oblique forms, viz:

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(l)	min:	*you*	but	min. tha:	*your son*
(m)	hsain	*shop*	but	hsain. hyin:	*owner of the shop*
(n)	hsăya	*teacher*	but	hsăya. ka:	*teacher's car*
(o)	di lu	*this man*	but	di lu. ka:	*this man's car*

Mrs Allott points out that it is possible in such expressions to use the suffix ye. after the first nouns, in addition to the use of 'induced creaky tone', and that it has been suggested that the latter may derive historically from a former possessive suffix, such as Tibetan kyi, gyi, i. In the earliest Burmese inscription (c. A.D. 1113), however, the most usual way of showing possession was through tonal alternation of the type described above.

Before certain suffixes or particles

'Induced creaky tone' is reported by Allott in the last syllable of expressions suffixed by the 'sentence particle' -kou, e.g.

seităna	*generosity*	but	seităna. kou măhyi. hpu	*(he) is not at all a generous person.* etc.

She reports similar tonal behavior in pronouns, names, titles and kinship terms followed by the 'noun-marker' -kou (which she distinguishes from the -kou cited in the previous paragraph), or by the 'noun-marker' -hma.

In compounding

The first elements in some compound numeral expressions in Burmese are marked by 'induced creaky tone', as are the first elements of many reduplicated expressions, e.g.

(tă)hse *ten* but hse. thoun: *thirteen*

hpyu *white* but măhpyu. tăhpyu *whitish* etc.

This fairly extensive use of a particular tone in Burmese for grammatical purposes, though superficially similar in some respects to the tonal variation reported for the Chin noun, is in fact much more readily explained by the postulation of an earlier suffix than is the Chin phenomenon.

POSTSCRIPT

Since the substance of this paper was first conceived four or five years ago there have been important developments in Sino-Tibetan historical linguistics which prompt me to add two brief comments.
(1) It now seems to be accepted by scholars like Pulleyblank, Bodman and Benedict that *s-prefixes must be reconstructed for Old Chinese, and probably for the Sino-Tibetan proto-language itself. It is also assumed that the causative *s-prefix is an original Sino-Tibetan feature, not confined to Tibeto-Burman as suggested on page 3 above.[28]
(2) Recent work by Weidert on Lushai confirms the occurrence of tonal alternations in Lushai kinship terms, personal names, etc. which are sufficiently similar to those observed for Tiddim Chin to allay the 'unease' I formerly felt at the apparently quite exceptional behaviour of Tiddim in this respect (see page 13 above).[29]

N O T E S

1. The Burmese examples in the paper are transcribed according to the system used in Anna J. Allott, 'Grammatical Tone in Modern Spoken Burmese', *Wissenschaftliche Zeitschrift der Karl-Mark Universität Leipzig*, 1967.

2. Stuart N. Wolfenden, *Outline of Tibeto-Burman Linguistic Morphology*, pp.185-6.

3. Theodore Stern, 'A provisional sketch of Sizang (Siyin) Chin', *Asia Major (New Series)*, X, 2, p.251.

4. Op. cit. pp.185 and 199-200.

5. E.G. Pulleyblank, review of Henderson's *Tiddim Chin* in BSOAS, XXIX, Pt 2, p.422.

6. cp. Wolfenden, op. cit. pp.85-6, 199-201; H.F. Hertz, *A Practical handbook of the Kachin or Chingpaw Language*, p.15; Professor La Raw Maran in verbal communication.

7. For this and other examples see R.K. Sprigg, 'Verbal Phrases in Lhasa Tibetan - I', BSOAS XVI, Pt I, pp.155-6.

8. Op. cit. p.422.

9. See G.H. Luce, *Phases of Pre-Pagân Burma: Language and History* (forthcoming).

10. R.B. Jones, *Karen Linguistic Studies*, pp.77-8.

11. Eugénie J.A. Henderson, *Tiddim Chin*, O.U.P. 1965, pp.72-89, and 108-113.

12. In a personal communication.

13. In a personal communication. The translation of the final -k forms in these examples by nouns or past participles in English appears to parallel the Tiddim Chin use of the Stem II form for verbal nouns. See Henderson, *Tiddim Chin*, pp.86-9.

14. See Henderson, *Tiddim Chin*, pp.86-9.

15. Verbal report from N.C. Bodman and J. Matisoff, respectively.

16. Op. cit. p.423.

17. A. Haudricourt, 'De l'origine des tons en vietnamien', *Journal Asiatique*, 1954, pp.80-2.

18. Op. cit. p.423.

19. L.G. Löffler, in a personal communication dated March 1972, says that he would indeed maintain this, 'although I would prefer a dental instead of -s'. He suggests that Stem II is to be derived from 'a voiced (phonetically low) dental final, say $\overset{*}{-}$d', which in the example under discussion gave rise to the developments:

1. Stem II *naṅd or náṅd → *naṅ' → nàn;
2. Stem I *naṅ' → nàṅ, Stem II *naṅ'd → *naṅd' → *nàn' → nàt.

The 'stopped nasals' proposed as intermediate stages are attested by Löffler as occurring in Bawm, a Chin language of the Chittagong Hill Tracts.

20. Op. cit. p.422.

21. See Anna J. Allott, op. cit. pp.159-161.

22. Op. cit. pp.77-8.

23. G.B. Downer, 'Derivation by tone-change in Classical Chinese', BSOAS XXII, Pt 2.

24. See A. Haudricourt, 'Comment reconstruire le chinois archaique', *Linguistics Today*, ed. Martinet and Weinreich, p.244.

25. In Eugénie J.A. Henderson *Tiddim Chin*, pp.69-71.

26. Op. cit., p.422.

27. See Anna J. Allott, op. cit. pp.159-160.

28. See N.C. Bodman, 'Old Chinese s-Clusters, Some Dialect Alternations, and Traces of the Sino-Tibetan s-Causative', paper submitted to Fifth International Conference on Sino-Tibetan Language and Linguistic Studies, Ann Arbor, 1972; E.G. Pulleyblank, 'Some New Hypotheses concerning Word Families in Chinese', *Journal of Chinese Linguistics*, 1, 1, 1973; P.K. Benedict, 'The Chinese s-orgy: further adventures and misadventures', paper submitted to Eighth ILCSTLL, Berkeley, 1975.

29. Alfons Weidert, *Componential Analysis of Lushai Phonology*, Amsterdam, 1975.