OUT ON A LIMB: ARM, HAND, AND WING

IN SINO-TIBETAN

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This paper is another illustration of the 'organic semantic' approach to Sino-Tibetan [ST] reconstruction (Matisoff 1978, 1980). The key to this method is the recognition that cognate identifications must take account of variation both on the phonological and the semantic levels. On the phonological side, we operate with word-family alternants ('alloforms') that may differ from each other by choice of prefix, voicing of the initial consonant, presence or absence of a medial glide or suffix, etc. Semantically, our etyma may undergo shifts of meaning from point A to point in semantic space.

The theoretical basis for this approach has been developed in detail in Matisoff 1978 (henceforth VST). Here we need make only the following points:

—Alloformic variation in ST follows certain well-established patterns. The recognition of phonological and semantic variation is not an invitation to promiscuity in cognate identification, nor does it imply a disrespect for 'sound laws.'

—Both phonological and semantic variation exist at all time-depths, synchronically as well as in the proto-languages all the way back to Proto-Tibeto-Burman [PTB] and Proto-Sino-Tibetan [PST].

—Different languages (even closely related ones) are quite likely to make different selections from the proto-lexicon in forming compounds. A given compound is liable to reflect an idiosyncratic examination of several different proto-etyma. (E.g., Dimasa baranmar 'wing' is composed of reflexes of our roots 11.2 + 5.3 + 3.2, though this particular combination is

1 Symbols and abbreviations: X = is an alloform of; belongs in the same word-family as; AMD = Amdo-Miri-Dafila; CEMN = Hale, ed. 1973; GSR = Karlgren 1957; JG = Jingphu; LB = Lolo-Burmese; LEO = Matisoff, in prep.; PTB = Proto-Lolo-Burmese; PST = Proto-Sino-Tibetan; PTB = Proto-Tibeto-Burman; ST = Sino-Tibetan; VT = Benedict 1972; TB = Tibeto-Burman; VST = Matisoff 1972; VSTB = Matisoff 1978; WB = Written Burmese; WT = Written Tibetan.

2 This paper was originally presented at the Thirteenth Sino-Tibetan Conference (University of Virginia, 1980). Responding to the precirculated version, Paul Yang produced three pages of "Addenda" which he distributed at the Conference (Yang 1980). Several of his useful suggestions of possible Chinese cognates for our various etyma have been incorporated below, as indicated. I am also indebted to Paul Benedict for comments and criticism, mostly included in a letter (Oct., 1980).

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not found in any other language examined to date.

None of this implies anything strange about PTB or FST. Indo-Europeanists have been operating implicitly on such assumptions for at least 150 years.

In view of the complexity of this sort of investigation, it is wise to concentrate on one relatively well-defined sector of 'semantic space' at a time. Previous studies dealt with the internal organs of the body (UMLU) and words for HAND, HEAD, and SPIRIT ('Bright Beings of the Night'; Matfosh 1980). Here we take up the area of morphemes referring primarily to the upper limbs of the human body (especially ARM, HAND) and the corresponding parts of animal bodies (especially WING). 3

I am going 'out on a limb' in more ways than one. The scope of this study is large, involving forms from over 100 TB languages as well as Chinese. The data on the TB side are of uneven quality, 4 and the details of the Lautogramm (especially as concerns syllable-final developments) are still unknown (at least to me) for some branches of the family. This is therefore to be viewed as a work of degression. I have tried to be conservative in setting up roots and allomorphs, and have sometimes assigned groups of forms to separate proto-entities according to their modern shapes, where more detailed knowledge might permit us to lump them together as descending from the same stem. In a fair number of cases it is impossible to decide between alternative etymologies for a given modern form on the basis of present knowledge.

At any rate, the aim of scientific investigation is to generate falsifiable hypotheses -- i.e., ideas so precise and clear that they can be shown to be either true or false. I ask nothing better than to be corrected!

Some 30 putatively distinct proto-roots (most of them new) have been identified in this semantic area. 5 These differ from one another in genetic/geographical spread (some are represented in many or all branches of TB, while others seem confined to one or two subgroups), in the amount of allomorph variation they display, and in their semantic 'center of gravity' (e.g., some are confined to a narrow range of meaning like 'MUKA/SOKE' or 'WING/FEATHER', while others have 'metamorphosed' to several adjacent points in semantic space). For each proto-root we first give an abstract 'par-allomorphic formula' that represents the whole range of its phonological variation. We then break this down into individual proto-allomorphs, and present the forms which justify each one. We therefore offer a 'metamorphon flowchart' which traces the patterns of semantic association for which the data provide evidence.

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3 I have been interested in the limbs for some time. At the Eighth SF Conference at Berkeley I had circulated a two-page handout on words for HAND and WING (Matfosh 1975). In UMLU (p. 273 (n. 239) and p. 319) I promised to write this paper, but erroneously supposed it would appear in UMLU.

4 For some languages, especially in the Kuki-Chin-Naga branch, such 'luxuries' as tonal indications and glottal stop are not indicated in my sources.

5 By way of comparison, Benedict 1972 [henceforth 'BTC'] offers only about 6 PTB etyma in this semantic area: *patak 'arm, hand' (§86) and *kong 'tampit' (pp. 34, 167, 170, 189) (we consider both of these to be allomorphs of the same word-family, below 1.31, 1.32) (let 'arm length, cubit' (§394; below XVIII); *k-ll-1 k 'kill (tampit; tickle' (§365); not dealt with below): *mua 'palm' (§118; below XXX and IL); and mua 'flat' (§18; below XVIII, 'palm').
1.11 *lak This is the widespread alloform reconstructed in STC #664 on the basis of forms from Written Tibetan (WT), Miri, Chairel, Jinghpaw [59], and Written Burmese [WB]. Throughout TH this alloform means 'hand' or 'arm', referring either to the whole limb or its distal segment.

A. [Lolo-Burmese] (PIB *lak; TCR #166); WB lak, Talak (Mod. [BN 147]); Lahu 132-54 (cf. kh- or k- 'foot'); Nhka-lak; Isso lal-kh6 'lak'; Lp-ke 'lam'; *am (Fraser). k-aj- (Ny-chang), il- (Jul); Nh1 la1404pu155, l1444pu144, l1444py144, l1444py144, Bani la1444e44, Bani la1444e44, Bani la1444e44 (Kao), at1144c1c (Ru and Tai); Isso lal-pu; Wuol la1255; Phunoi la1255; Huey Nh1 lu1255; Mamo la1255; Lu-ch'am la1255; Meso la11.

B. [Bisnayish] WT laq-pa; Sherpa 'lak-pa; Jirel 'lak-pa; Kàika laq; Thulung Rai las.

C. [Aboor-Miri-Dafila] Aboor-Miri al-lik (locrain), Miri alak [SNC]; Gallegg alak; Dafila ala (also al 'foot').

D. [Luizh] Chairel lak (also la 'foot') [SNC]; Lui jak.

E. [Kachinic] Jinghpaw la- (unstressed preformative prefix in words like laph7 'shoulders', laph7 'forearm', laph6 'arm above the elbow', etc.; also occurs in words referring to the lower limb, like laph6 'knee', lapl 'foot and leg', laph6 'kick with heel or hoof', etc.). For Xv. la62 'hand', see *O-lak [below #21]. Note a similar 'prefixization' of this etymon in Phunoi lahâp [above Al].

F. [Naga] Pnom (= Tamulu) lak; Yacham-Tungsa lakpa.

G. [Chinese] 61 la64lak (GSR 928a-b) 'strong, strength, force' ('the graph seems to depict an arm with a hand') is also, in the same phonetic series, 61 *lak/lak x 61 lak (GSR 928c) 'a tenth' (from the ten fingers), and 61 *jâkk en k (GSR 928d) 'space between the fingers (where divination sticks were inserted')

1.12 *yak () This variant is clearly related to the preceding, though it is hard to decide whether to capture this alloformic relationship 'paradigmatically' (by positioning an alternation of two proto-phonemes, *lak x *lak) or 'syntagmatically' (by stuffing both the lateral and palatal elements into a single proto-form (*yak/*yak or *yak)). At any rate, the nucleus of the

6 For a similar semantic association, cf. Japanese uke 'arm' and te 'hand', which may both also be used in the sense of 'ability, competence, skill'.

7 The e- prefix in WT liga 'five', it is tempting to speculate, might also be a reduced version of *lak 'hand'. (Jinghpaw, e.g., has a different prefix, maya-.) For the semantic association between 'hand' and 'five', cf. Proto-Austronesian *lima 'hand; five' [see Benedict 1975, p. 309].
**P2** frequently develops into a front vowel in **P2** (note the Modern Burmese, Lahu, Ahi, and Lul forms), and apparently in Chinese as well (note the **P2** - **P2** alternation in Series 928), a phenomenon which could easily lead to the palatalization of the lateral initial. 8 Though the **P2** alloform may perhaps be considered 'secondary' to the **P2** form, this is a relative matter: both variants go back as far as our reconstructive methods can take us, and many languages have dual sets traceable to each of them.

Even 'more secondary' than **P2** is the alloform with voiced spirant, **P2**. The phonetic difference between **P2** pronounced with local friction (i.e., that slitted spirant [?] that is the voiced homologue of 'ich-Laut' [i]) and a [s] is very slight. In Lahu, for example, (s) is merely the allophone of [y] that appears before the single vowel [h] (Matsumoto 1973, pp. 5-6).

The variant in **P2**, whatever its phonological origin and despite its 'secondaryness', is also of great antiquity (it occurs in Archaic Chinese), and has somehow acquired the semantic increment of 'amput/tickle/side of the body' (which is also shared by some forms in **P2**).

1.121 **P2** A. [Himalayish] Tamang **P2** 'hand'; Thakali **P2** 'id.'; Gurung **P2** 'id.'; Newari **P2** 'amput'; Lepcha **P2** 'tickle' (= Lepcha *hak ult. < *tak or **P2** [below 1.22, 1.33]).

B. [Naga] Konyak (Tablang) **P2** 'hand, arm' (also as 'foot'); Tangsa (Yogli) **P2** 'hand', *yakpham 'arm'; Tawga (Mosang) yakpham 'hand', *yakpham 'arm'; Chang Tik 'hand, arm' (with secondary palatalization of vowel).

C. [Rutish] Mru **P2** 'amput'.

D. [Barish] Dinasa vou 'am' (also as 'foot').

E. [Sinoish] Lahu **P2** 'tickle' (< *P2 **P2**). 10

1.222 **P2** A. [Kuki-Chin-Naga] Lushai **P2** 'amput'; Zeme mi-**P2** 'side of body'; Meimi hezak 'id.'.

B. [Chinese] 8 **P2** [GS1 866-c] or 撣 [GS1 866, 1-n] 'amput'.

1.2 with dental prefix A number of languages reflect an alloform with dental prefix.*11* The phonetic origin of this prefix is a matter of dear speculation. A remote possibility is that it is an ancient borrowing from Mon-Kham (cf. PMK *tih 'hand'). Rather more likely is that it has some connection with an

8 For a discussion of the theoretical issues involved in 'paradigmatic' vs. 'syntagmatic' reconstruction, see Wheelock 1978.

9 Another highly plausible palatalization-precipitator is the influence of prefixes, at least three of which could be proposed to this root (below). For a conclusive demonstration of the palatalizing effect of the **P2** prefix in Lepcha, see Benedict 1943. See also Phn. 110 (p. 34).

10 The Lahu high-rising tone /*/ reflects a *P2* syllable with original prepalatalized proto-voiced initial and final stop (Matsumoto 1970, 1972).

11 There is no systematic contrast in voicing for prefixes in **P2**, so it makes little difference whether we represent this dental prefix as **P2** or **P2**. We usually conventionally adopt the voiced alternative, probably due to unconscious bias from **P2**.
apparently preflexal dental that occurs before other roots referring to the upper lip in scattered Tibet languages:


1.21 d*laK. The cluster d* is not tolerated in most Tibet languages,12 so that the presence of the dental prefix has favored the palatalization of the root-initial lateral (below 1.22).

In a couple of cases, however, it appears that a language adopted the alternative strategy of metathesizing the dental prefix with the lateral initial. This provides a rather neat explanation for a form which has puzzled Tibeto-Burmanists for some time, *tsaL 'hand'.13 It also gives very well with the reconstructed pronunciation of the Hsi-hsiang (Tangut) character 궈 'hand' adopted in Kepping 1975 (p. 223); *tsaL.14 We refer both of these forms to a prototype *d*laK.

1.22 d*yok. The clearest reflex of this allophonic Gyarung tayLK 'hand' (cited in STC, n. 108).15

On the Chinese side, Benedict has persuasively identified his PTH root *g*laK with the Chinese word for WING, 翅, reconstructed by Karlgen as 翅/g/k (GSR 1956). However, the presence of the word 翅 is 'kai/g/qik 'the sound of marching' in the same phonetic series [954g-h] leads Benedict to prefer the reconstruction *g*laK/g/k for WING also.16 In our terms, it makes little difference whether we refer this Chinese word to an immediate prototype *g*yok or *g*yok [below 1.32], since there is ample evidence that both prefixes occurred with our etymology *d*laK/g/k.

1.23 d*laK. Yet another strategy for reconciling the dental prefix with this root is exemplified by the curious Namsang (e Nocte) form d*ak 'hand' (alongside da 'foot'). In this case it appears that the prefix has 'pre-empted' or driven

12 An exception is the Loloish language Sani (= Nyi), which has developed d*I from d*I (= e.g. 'bee' PLA tyaL > Nyi dI-ma).

13 I much prefer this to the 'hypothetical' after liquids' that I suggested in my portion of STC n. 102 (p. 32), or to Benedict's attempt [STC, notes 109, 137] to explain it via a development *g*laK > lhaK (why should a velar prefix have had such an effect?). Still another explanation (also much less plausible than metathesis in my view) would be to derive *tsaL from the prefix preposed variant *d*laK (below 1.22) to which the unattested -I- (< lha) was later prepended, i.e. from an 'insestuous' rhyming compound of the form *g*laK-lhaK, where the allophons of the same etymon co-occurred. [For a brief discussion of such rhyming compounds see VSN, p. 119.]

14 This is according to the reconstructive scheme of M. V. Sofronov. This etymology is reconstructed as *ha in Nihidza 1966 (p. 349, §39-061).

15 This is confirmed by T. Nuyan (1978), who cites the Choos-kiya Gyarung dialect form tayL 'arm', alongside tayak 'lid'.

16 STC, n. 458a (p. 171). Benedict (n.c.) now agrees with the reconstruction in GSB, assuming that it is underlain by an earlier *g*laK. The allophonic *tI- he derives from an alternant with preflexal *s*- (*kaLg).
out the original root initial. 17

1.3 with velar prefix

1.31 *g-1ak This is the overall PST and PTB reconstruction set up in STC, though, as we are discovering, it is a considerable oversimplification — *g-1ak is only one allomorph among many.

This allomorph is directly represented by a Chinese form in a phonetic series where Earlgren explicitly reconstructs an l-cluster for the archaising stage: ṣgīka/klaq (GR 765b) ‘armpit’. 18

The Gyarung form tekhye (data by Kun Chang) ‘upper arm’, referred to in STC (n. 103, p. 34), may now be interpreted as deriving from a doubly-prefixed prototype, *g-1ak-il (see above 1.2). 19

1.32 *g-yak and *g-with

1.321 Yang (1980) offers a large number of Chinese forms, some of which seem to fit in nicely with the velar-prefixal and j-initial branch of this lanular word-family:

Bṃ *γīka/klaq ‘leg, foot’ (GR #776g) < PST *γ-yak (Yang; see below 1.5);

J and J *γīka/klaq both hands joined; grasp with both hands; double-handful (GR #1017a-c).

[Less likely candidates suggested by Yang include:

J *γīla/γiau, γiau- ‘the right hand; on the right’ (GR #995l); 20

J *γīla/γiau ‘waist; elbow’ (GR #1073a);

J *γiia/γiau ‘hand’ (GR #1101b). 21

Alongside Bṃ *γīka/klaq ‘wing’ (above 1.22), Yang cites two other Chinese

17 The mechanism of ‘prefix preemption’ was first discussed in Hattisoff 1972b, and again in “Quo Vadimus” (HS 1973, published version 1979) and VSTB.

18 This is now seen to be a doublet of ṣg < *xak < γak (above 1.121). It should be noted that similar forms meaning ‘armpit’ or ‘tickle’ also occur outside of GT, e.g. Kham klak, Indonesian ketik ‘armpit’ (Yang 1971), Cham kalök ‘tickle’ (Benedict 1975, p. 418).

19 Reprefixation is also common in such Ruki-Chin-Maya languages as Yungbuhl Maya, where one encounters doubly-prefixed verbs like bθerelak ‘lick’ < *γ-er-m-yak (Petrigrew 1918, p. 364; see STC #211 and TSR #797).

20 The right hand is the ‘hand par excellence’. See n. 42 below. Benedict declares Chinese ביע to be directly cognate to PST *g-yak (STC #96 and pp. 168,187) ‘rights’. Nowhere does Benedict suggest a relationship between this root and *g-1ak ‘hand’ (UTC #66). If they were really related, compounds like NT yag-yak and NT lak-ya would be ‘incestuous’ — i.e. contain two elements that are both co-allomorphs of the same word-family. See VSTB pp. 118-9.

21 This word is assigned to quite a separate root in STC (PST *fuw) to which I would now also like to assign J as well. See 8.1 and note 46, below.
synonyms: 船 *612/gal- [GSR #864a] and *616/gal- [GSR #866a], the latter with the double reading *gal-li- and *gal-gi-, deriving all three of these winged words from a doubly-prefixed prototype, *gal-yak *gal-yak.

Finally, Yang adds (p. 198) an interesting group of forms from GSR Series #864a:

支技, and 枝 *404/zh544 ‘branch; limb of a tree’ [GSR #864a-c]:


These he derives from Proto-Chinese *tshing, ultimately also from a doubly-prefixed GST prototype *ty-yak. On the WH side, we may compare these to such forms as Padam (Ahir-Niri) *tshing, Meetei pekak and tshingkak, and Chang Naga pykak ‘branch’ (Marrison 1967), and possibly also to the Lolo-Burmese set for BRANCH reconstructed as *yak in TTR #143 (e.g. Zebak, Lahu *yak ‘branch’, *yak-yak ‘double (i.e. branched) finge’, *yak-yak ‘double toe’); though the lack of a *y- here is a problem. (Perhaps the erethal vowel prefix preempted the root-initial *y- in Lolo-Burmese.)

1.322 A direct reflex of the *ty-yak alloform is WH gyak-kali1 ‘amput’, one of a triplet of WH forms including chak-kali1 (below 1.41) and jak-kali1 ‘id.’.

From AMPUT, the notion of TICKLE is but a gesture away in semantic space, and it is tempting to bring in here another group of forms meaning ‘tickle’ or ‘itch’, with no final opposition, reconstructed as *yak (GSR #451): WH gyakya ‘tickle; itch’; *yak, *yak ‘itch’. To complicate matters further, there is a logical semantic progression from these tickle notions to the idea of ‘ashamed; shy, bashful’, as represented by a root reconstructed separately in GSR #452 as *nyak (GSR #509) ‘ashamed, bashful’, Lepcha nak ‘ashamed, shy’, Tangkhal alaba ‘shame; embarrassment’). The semantic interconnection is most apparent in the Lepcha forms, as pointed out by Benedict (p.o., 1980): Lep. LAK *yak ‘tickle; be ticklish; sensitive’, *nyak (mi ‘body’) ‘be bashful; feel shame, as girls before strangers’.22

Presumably the common meaning here is ‘with branching toes’ (so-called either because they are splashed out from the pressure of standing on tip toe or because they are especially numerous).

22 Also Wb 1149 ‘tidi! ‘tickle’, for the etymology of -kal1, see GSR #265 and n. 199 (where I cite Lahu pa-11-k1 ‘amput’ and kh-11-yak ~ kh-11-yak ‘tickle’. Yang (1971) has collected similar binomial forms meaning ‘amput’ or ‘tickle’ from many modern Chinese dialects, e.g. ke-11 (written ke11) ‘tickle’ (Dharmendra 2001: 10).

23 Lepcha 1067 ‘feel shame’. Another set of forms meaning ‘shame; ashamed, shy’ is reconstructed in GSR #431 as deriving from an etymon *yak (e.g. Wb hark, Bunun fak, Nikir serek, which Benedict hesitates to assign to the same word-family as *yak [GSR #452], though he does posit a similar *y- *y- *y- interchange for fok *yak ‘different’ in TTR #98 and n. 110; see note 26, above).

In TTR #182, I cite several curiously parallel Loloish binomes meaning ‘ashamed’, where the second element is of unknown meaning (e.g. Lahu yad-k1, Akha shak-da, Lisu sad-ta1). The first syllables derive mostly from a prototype with a precluding *y-prefix, though the Lahu form comes from *yak, not *yak. There seems little doubt that *yak and *yak are merely co-

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Benedict (p.c.) regards *-lak 'hand' and *-yak 'armpit' as two totally distinct roots, with the latter deriving from a non-bodypart area of semantic space, thus:

I. *y-yak (= *y-rak)
   
   HAND/SHY               SENSITIVE
   ASHAMED     ==>  TICKISH  ==>  TICLE-PLACE
   ITCHY
   ARM/IT

II. *y-lak
   
   HAND/ARM

However, I feel it to be equally possible that the concrete bodypart notion of ARM/IT was historically prior to the notion of TICLE, and was from the beginning associated with the equally concrete bodypart ARM, so that all these forms belong ultimately to the same word-family, thus:

   HAND/ARM
   */y- l ak
   
   ARM/IT  ==>  TICLE  ==>  SENSITIVE  ==>  HAND/SHY
   ASHAMED
   ITCHY

Perhaps the final increment of meaning toward ASHAMED/SHY was provided by the mysterious dental-initial etymon that appears in Lololish compound-formations (note 23).

Historical semantic problems of this complexity are difficult to resolve in the current state of our knowledge. Phonologically similar roots may always "contaminate" each other semantically, until the question of ultimate relationship becomes moot.

1.4 with fused (affricated) initial A number of forms in this word-family, with meanings ranging from 'hand, arm' to 'cubit, arm length' or to 'armpit, tinkle' appear with affricated initials in various TB languages. These are undoubtedly secondary to prototypes in *-yak, but could descend equally well from prototypes with dental or velar prefix (*y-yak or *y-yak [above 1.22, 1.23]).

Doubtless like WB gyaq/-gyak- [above 1.322] are especially interesting, since they capture this fusional process in midstream.

1.41
   
   *y-yak  <  **y- [d] -yak

   allophones of the same etymon.

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A. [Barish] Garo dfa\k 'arm' (also dfa\k 'foot'); Along daf 'hand, arm'; Warnng
cak-dog 'id.'
B. [Naga] Barpara (= Wanche) t\ak 'arm, hand' (also t\ak 'foot') [SRC p. 34].
Harrison cites both Wanche t\ak 'arm' and d\ak 'arm', the latter to be assigned
to *d\ak-yak (below VIII).
C. [Himalayish] Lepcha jak 'tickle' (\ak id.). This doublet reflects a
proto-alternation between prefixed and unprefixed alloforms, and is semantically
akin to \ak chak-\k 'amput' (above 1.322).
D. [Lolosh] Lahu \g, \g' 'cubit, length from elbow to fingertips' (the
voiced initial reflects a PB 'prenasalized initial'); Ahka \g\k 'id.'; Sani \g\k 'id.'; Lisu \g\k 'length of the outstretched fingers'.

These forms are all presented in TNR \#100, where they are reconstructed as
PB *yak * y\ak (though of course N\ak * y\ak would do equally well).
Note that all these languages have forms meaning 'hand' that reflect the
unprefixed alloform *jak (above 1.1(A)): Lahu \g\k, etc.

1.5 'hand' and 'foot'. Benedict was the first to point out [SRC, n. 108 (p.
34)] the 'curious series' of parallel forms for 'hand' and 'foot' in certain
Western \g\k languages, where the main difference between the pairs of forms
in the lack of a consonant in 'foot'. Thus:

Miri d\ak 'hand' (\ak \lak) / gla 'foot' Tbleng (Konyak) yak 'hand' ('\lak)
/ ya 'foot' Namsang (Nocete) d\ak 'hand' (\lak \lak) / da 'foot'.

Garo d\ak 'hand' (\lak \lak) / \lak 'foot'.

However these forms for 'foot' are to be explained (they certainly seem
secondary to those for 'hand') the parallel alternation-patterns are a neat
confirmation of the 'co-allofamy' of the lateral, palatal, dental, and
affricated variants of this etymon. 25

1.6 with labial prefix: *\ak Finally, several interesting forms point to a
prototype with labial prefix, *\ak. Chief among these is \g\k p\ak 'hand
(respect language)', which we claim is a doublet of the ordinary Tibetan word
for hand, Lungpa (*\ak). 26

Other prime candidates for this etymology are Chinese \g\k 'pin/ pi-
[GSR 653c] 'arm'; Lepcha a-\k pek 'forearm' (for \g\k, see below 1.2.2); and
Lahu gbuk-pek 'forearm'.

The morpheme source of our putative labial prefix is a matter of

25 Fraser's symbol 'ch' represents a plain initial, the aspirated one being
transcribed by the triphon 'hch'.
26 We have seen [above 1.11 (8)] that the Jingphaw prefix j\l- \l-(\lak)
also occurs in words referring to the lower limbs. Cf. also Chinese
\lak 'foot' (\lak-p\ak) adduced by Yang [above 1.33].
27 Tibetan does not tolerate clusters of aspirates with \l-, so it does not
matter whether we ascribe \g\k p\ak to *\ak or *p\ak.

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speculation, though there is possible some connection with the unstressed variant of the root *ba [below 11.2].

II. *uak or *pirak 'leaf; flat object; flat of hand, palm'

The forms just discussed [above 1.6] are to be distinguished from an etymon which occurs in the second syllable of certain compounds meaning 'hand' or 'palm', i.e.

(a) in LoLoish compounds meaning specifically 'hand' (as opposed to 'arm'),
where the first syllable is from *ukx:
- Lisa 1k6-ukx2 (Fraser), 1k5-pha2 (Nur-chang); Sani 1k2p-xa4 [the
tones all point to a syllable-final stop];

(b) in Himalayish and Kuki-Chin compounds glossed as 'palm', where the first
syllable is from *ukx [below XVI]:
- Chepang krutpak; Metheil khubak; Lushai kut-pha7 (also ke-pha7
'sole');

(c) in Nag, Barish, and Abor-Niri-Dafli compounds for 'palm', where the first
syllable is from some allomorph of *ask or *pak:
- Phon laksha, Ronjak yoksha, Garo dik-al-pha (also dax-pha 'sole!'),
Abor-Niri 1k6-pak & 1k6-pha 'palm'(also 1k5-pha 'sole');28

(d) Mikir: has a compound doublet, ri-pak & ri-pak, glossed as 'hand (distinct
from arm)' [Walker 1925, p. 148].29

It seems clear that these forms are traceable to an etymon like *pak,
whose basic meaning is LEAF10 or, more generally, FLAT OBJECT. The Mikir
morpheme -pak is glossed as 'num. part., flat things!' [Walker, p. 119].31

28 To these we may certainly add Noshang yoksha, glossed 'hand' in Marrison 1967,
though he leaves the Noshang row blank under the item 'pala' [see n. 51]; as
well as Wang ur-pha 'pala', with its characteristic first element [see below
4.6]. The lack of a final stop in this group of forms is a problem although
it is certainly possible that some final glottal stops have gone unrecorded
in the sources, and suggests an allomorph *pak which might ultimately be relatable
to the root we set up separately as *pala & *pala [below, XXX]. This is
more or less the line taken in BTC [478 and T. 267].

29 ri-pak is also glossed 'palm' [Walker 1925, p. 360], where it is given as a
synonym of the more specific Mikir word for 'palm', ri-deog [see below, XXVII].
The morpheme gi- is practically an isolate in BTC [below, XXV]. The Mikir word
for 'sole' is keem-pak.

30 Cf. PTH *tr-pak 'leaf' [BTC 840 and n. 77] and PUK *y-pak 'leaf' [MS 429].

31 This is confirmed in Grinnell 1918, who glosses -pak as 'leaf, e.g. a leaf
sachen'. It is well known that morphemes whose original meanings are the
plant-parts LONG, FOLIAGE, and STEM are often generalized for use as classifiers
for PLANT, AHERBS, and ELONGATED objects, respectively [see Aima, Beder,
and Conklin 1975]. The lines of the palm and the veins of the back of the hand
irresistibly suggest the venation of a leaf. For further evidence of the
semantic connection between PALM and FLAT OBJECT, see the root *pala X plain,
below XXVIII].

---------430---------
There is also some evidence for an -t- in this 'flat' root: �� IX paak 6 break 'breath, width';32 and Jirej lāqame parāden 'palm of the hand' (lāqame is the 'genitive' form of lāq- 'hand').33

It is tempting to try to explain the Milki doublet -yāk-yāk in terms of an alternation between this -pak root (> Mkh. -pek) and the labial-prefix ed etymology *-yāk [above 1.6] (> Mkh. -pek), though this is perhaps far-fetched.

III.  

d o d  
t t 

This root, which does not appear in STC, usually means Mkkā, but sometimes BANAS or CIVIT. The cognates usually reflect a *voiced initial, though a *voiceless allophone is also attested. The rhyme is usually -m, though several languages point to a variant in -ag.

3.1. *tak

A. [Lo-Lomonesse] �� toq 'measure in cubits', 7ag (1) 'a cubit (measure of length equal to 2 spans)'; (2) 'wing', tamii 6 tama (1) 'elbow' (2) 'measure of arm from elbow to end of middle finger', 7ahii 6kak 'wing', 7hiyey 'id.', 7hiye 'id.', 7ahii 6jīl-6q 6 jīl-6q 'id.', 7ahii 6ji-6q 'wing' (also 6q 'feather'); Ahkha 6-6q 'wing' (spelled 6-6q in Lewis transcription).

All these languages except Lisi and Ahka regularly reflect PEB and PTH *voiced stops by voiceless unaspirates. All these forms reflect PEB Tone 1', except for Lahu, which points to a PEB Tone 2, an allophone with preglottalized initial. The Lahu vowel in /t/ comes from *-ag.

B. [Barish] Manasa 6q-6q 'hand, arm'.


IV.  

k g (r) 6 6 6  

This etymology [not in STC] seems confined to Kuki-Chin and Himalayish, though there is possibly a burmesse form which can also be related to it. The -t- shows up only in a few languages, but cannot be ignored. Semantically this

32 It was the -t- in the NB forms which led us to reconstruct the PEB root *tak as *tak *tak as 'break' ('flat; broad; a plank' [MNH 4111] with that medial. In the I did not recognize an allophonic relationship between this root and IRAF [92].

33 Note that the -q of Jirej (and of MB low-pā, etc.) is the old PTH 'gender-like' noun-suffix (partner of -q), and has nothing whatever to do with the present discussion.

We must also refrain from bringing in the NB forms p'ey-pā and p'ey-qp 'shoulder, upper arm', since the semantic leap is too large; these are rounded body-parts, not flat ones [see below, XVIII]. (G. Duffich points out a Mon-Khmer root *tak, found in Waic and Ailin, meaning 'shoulder'.)
root is firmly anchored in the HAND/ARM area.

4.1 *rut [Kuki-Chin or 'Meishu'] *rut 'hand'.

4.2 *sot [Himalayish] Chrupa *sot 'hand, arm'; Gurung *ba(khryng 'arm'.

4.3 *sot [Himalayish] Kanauri *gudh 'hand, arm'; Nagari *sot 'hand'.

4.4 *sot [Kuki-Chin] Lushai, Lai, Laizo, Chinbok, Bamun *sot; Nagem, Tiddim Chin *sot; Meithel *so; [from compounds]; Anal *sot (all 'hand'); Maring *sot 'hand', Khushang 'arm'; Puiron *sot 'hand, arm', Khory *sot 'hand'.

4.5 *so? There is a Burmese morpheme which might possibly be related to this etymology: *sukho (c - sound) (1) 'unit, individual thing' (2) 'the present time'; *suktur 'ld.' (a yakku in sense (2)); *sukho 'seven' [in composition with snta 'Go']. The semantic developments here might involve the fingers of the hand as a 'unit' in counting (5 + 2 = 7, as well as the association between the hands and the present moment (the moment 'at hand'; cf. French maintenant 'now' [lit. 'holding in the hand'] and Lohu lak- 'hand', lak-hé 'immediately').

4.6 There is a mysterious form for 'hand' in Nung/Trung is an isolate in all of Tb. Given the fact that our present etymology sometimes appears with non-stop initials (b- or r-), from which it is but a short step to zero-initial, there is a remote possibility that the -l final might somehow be an allophonic variant of the -l found elsewhere.  

\[
\begin{align*}
& y \\
& x
\end{align*}
\]

This etymology (not in STC) usually means 'wing', but sometimes 'hand' or 'arm'. It is confined mostly to Bechuan, Naga, and Mw languages, but there is one good-looking cognate from Himalayish (Kanauri). The forms mostly show a velar initial followed by y or r. In a number of languages the velar is absent and the resonant appears as the root-initial, which indicates that the velar is prefixal (see above 4.1). There is also a group with velar initial but no following y or r (below 5.5) which we provisionally interpret as 'prefix-prefixed' forms, though it may eventually prove preferable to assign them rather to a different etymology (below VI).

5.1 * ray [Naga] Mancho rang 'wing'; Noocre arrang 'lie.'; Tangsa (Moengan) warong 'lid.' (wu 'bird').

5.2 * ray [Naga] Koryak, Pone yang 'wing'.

34 The m- is a productive prefix with body-part words in Nagari, and corresponds in this function to Meithel mi-, Mziene and Zeme (Sapce) mi-, and Benga ny- or. Shaffer has tried to derive this from TB *muru 'hand', a view rejected by Benedict, who interprets it as a more general pronominal element [STC n. 329, p. 118].

The Lithuanian bok-pes 'hand' has the same initial as the Nagari form, but the velar final leads us to assign it to a different etymology [8.32].

Benedict [p.c.] also cites the form ur from the Rawang dialect of Nung.
5.3 *k-yan [Barish] Atong ga-yan, Nanang ka-yan, Garo gray, Kachari gary. Dinama bapanarphong [all 'wing'].

[And] Monga gaang 'hand', gareng par 'pain'.

5.4 *k-yan [Nagala] Yinchungr deang 'wing'; Sangoat p'karyang 'arm'; Mrong, niba-kengilek 'arm'; Tangkhul angachang 'wing' [Tangkhul has no k- cluster].36

[Himalayish] Kanauri padh 'wing'.

Yang (1980) makes an interesting comparison of this allophone with Chinese 翅 'fan wing'; he reconstructs BP *p'kayang, pointing out that the same phonetic ').' occurs in a word reconstructed with velar initial, 龃 'kayang' [ISSR #711].

5.5 *k-yan or *kam [Kuki-Naga] Khoirao akhang, Yacham tنسa shikang, Neuanghali sufang, A Cangeli tashikang [all 'wing'].

These forms are either from a prefix pre-syntactic variant of V, or else to be related rather to the group assembled as V, below.

Chang Naga has a form k'ak 'wing', which may be a stop-finalised allophone of this group of forms or else assignable to the PB root *kâk 'branch, fork' [ISSR #325].

V. k w a g

This etymon (not in STC) seems to mean basically 'upper arm', though the putative Mikir reflex means 'wing'. It is attested in Kuki-Naga, Tibetan, Chinese, and maybe Tochonish. The *p- medial appears as such in Chinese and Ntengl and is implied by the vocalism of the Tibetan and Mikir forms. The Naren form looks like it before here, but the Lauynesete are not known. This set of forms is perhaps ultimately related to V, above (especially 5.2).

Chinese 翅 Hsung/Keung [ISSR 8876] 'arm, esp. the upper arm, from elbow to shoulder'; MT p'yan-gom 'upper arm' (g'on 'upper part' [note voiced initial]); Ntengl [Naga] slowing 'arm'; Mikir kong, wongkong, avongkong 'wing'; Naran (Kukish) wai-chu-kong 'arm'; Jg. (Naran, p. 136) alu-kong  allu (Hanson).

The vowel of the second syllable of labh l37-qq 'whole arm (shoulder to wrist)' could reflect *-an, and its tone testify to a PB *prelocalised initial, so that *-q could be from PB *'qam or *'qam. Labh sometimes responds to *k with q,37 so we might prefer to assign this labh form to 5.4

36 The *-yan may be related to PB *-yan 'bird' [ISSR #141]; the Tangkhul word for 'bird' is yanga.
37 The three solid Labhvelar roots reconstructed so far where Labh has a labial are DDG [PB *al-yu> Lh. pyl], NDDG [PB *al-yu> Lh. pyl], and DDNB [PB *al-yi> Lh. pyl]  [see Mattoff 1978b (pp. 6-7) and 1980 [1981], as well as my Note 16 to Benedict 1979].
rather than VI,38

VII.

\[ g \quad w \quad a \quad n \]

This root (not in STC) is set up on the basis of forms from Kuki-Naga, Hinali, and Chinese. It seems quite distinct from VI, in that it consistently has \( g \) (not \( g' \)). Note especially the different Nenyi forms under VI and VII.

7.1 *wan The unprefixed alloform is reflected by Khoiwa *wan 'hand', Lotha Naga 'mam', and Chinese 龍 or _SHARED- [SCR 260 n.m] 'wrist'.

7.2 *g-wan Ntenyi agam (also akhen) 'hand' [alongside Savang 'arm', above VI]; Lepcha agam 'fin', go-gan 'fish-fin'.

The semantic connection between 'wrist' (Chinese) and 'fin' (Lepcha) is not bad, since both are mobile articulating parts, and that is perhaps the essential semantic component of this root.

VIII.

\[ g \quad toya \quad m \]

This etymon is reconstructed on the basis of forms from all over Sino-Tibetan, the alloforms falling into two major groups: with open final and with velar stop final. The root-initial is a bilabial or affricate. Since I do not yet know much about the rhyme developments in many of the relevant languages,39 it is very possible that some of the forms in \( g \) assigned to this etymon belong rather to an alloform of our next proto-construct, \( *(tj)j\)ya [below, IX].

8.1 *tyaw (\( *t\)j\)\( y\)aw \( *t\)\( m\)aw) The important Chinese word \( *t\)\( m\)aw/d\( m\)aw [SCR #1001a] 'hand' is equated with Proto-Karen *\( t\)\( m\)aw 'hand' by Benedict, and both are assigned to PBT *\( t\)\( m\)aw, which we here reinterpret as *tyaw.40

To this same root we assign Lotha Naga echo 'wing' and Maran wai-chu-kang 'arm'.41 Tacson (= Digaro) a\( y\)aw 'hand' (perhaps from an immediate prototype

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38 Another possibility is that the second syllable of Lahu 13-p\( w\) 13-p\( r\)aw 'segment of the arm, forearm or upper arm' could be the direct reflex of this *\( p\)aw- etymon, though it is at least as likely that it belongs with the root *\( p\)aw set up below [XV].

39 The Naga rhymes in particular appear to be at least as complex as the rhyme developments in Loloish — which is saying something! See now French 1963.

40 STC, n. 455 (p. 170). Jones 1961 [p. 144] sets up the Proto-Karen form as *\( s\)\( m\)aw, on the basis of Taungthu \( s\)\( m\)aw, Pa\( p\)aw, Rho (Houllier) \( s\)\( m\)aw, (Bassein) \( s\)\( m\)aw, and Falaychi \( s\)\( m\)aw.

Chinese \( *t\)\( s\)\( w\)aw/t\( s\)\( w\)aw [SCR 431-b] 'thumb' is considered by Benedict to represent a variant of this root with the -m 'dual' suffix, *\( t\)\( m\)aw [STC n. 426, p. 158]. This character is used in compounds in the sense of 'hand', and is graphically related to \( *m\)aw (SCR, p. 119).

As we have seen [above 1.321] Yang (1960) reconstructs \( *t\)\( s\)\( m\)aw differently, though in this case the etymology proposed in STC seems clearly preferable.

We are indebted to Yang, however, for pointing out the phonological similarity between \( *t\)\( s\)\( m\)aw and \( *t\)\( m\)aw/d\( m\)aw 'wrist, elbow' [SCR #1073a], which certainly looks like it also derives from some alloform of *tyaw.

41 Lepcha pl\( k\)\( m\)aw 'arm' also looks like it fits in somewhere (< *\( t\)\( m\)aw), with the final nasal possibly reflecting the same dual suffix as in Chinese [n].
8.2 *kw(ri)-tayaw or *kuk(ri)-tayaw Several languages have dissyllabic forms meaning 'wing' or 'feather', whose first syllables begin with a velar and have vowels ranging from u and o to i:

Karenni 'wing'; Mao dagho 'id.1'; Limbu kuko 'feather' (also kului 'wing'); Sango of kung 'wing'.

The second syllables here are derivable either from *tayaw (or *tayaw or *tayaw) or from some alloform or other of IX, below. The first syllables we assign to a separate root, *kw(ri) *kuk(ri) this dissyllabic prototype, where the first syllable was reduced or 'prefixixed' and in the process pre-empted the root-initial *k(ri)-tayaw > *k(ri)-kuro.

8.3 *p(ri)-tayaw The alloforms of this root with velar final also show variation of the initial consonant, with the reflexes ranging from simple sibilants to affricates (dental or palatal). This, of course, is a familiar and well-attested variational pattern in Th1 and is captured formulatively by the notation *p(ri)tayaw*.

8.31 *tayaw Rantawa [Himalayash] tehuk 'arm, hand'; Wandoq [Naga] chuk 'arm' [also Wandoq tak 'arm' and chuk 'hand'] (see above 1.41b).

8.32 *tayaw WT sug-pa 'hand (medical)' [* *tayaw], alongside WT sog-pa [ * *tayaw] 'wing; wing-feather, pinion' and chupa 'side of body'; Sherpa pulok 'wing', pungk 'feather' (showing similar unexplained variation between palatal/dental and voiced/voiceless initial; initial p/pt 'wing' (also pukpa 'feather').

Special problems are presented by Limbu huk, hup-pa 'arm, hand' (the initial has 'laryngealized' -- see n. 29 above), and by Phunoi kamp 'hand', where the final has perhaps acculturated to the preceding rounded vowel.

IX.

\[
\begin{align*}
\text{m a} & \quad \text{t} \quad \text{s} \\
\text{n} & \quad \text{t} & \quad \text{a} \\
\text{y} & \quad \text{y} & \quad \text{a}
\end{align*}
\]

This *tayaw mostly means 'wing', but sometimes 'hand/arm'. It is attested sporadically all over Th1, and I have the feeling that many more cognates remain.

All the other Karen dialects cited in Jones 1961 have words for 'wing' with the first syllables like dir- or dir- (from a separate root, [Jones 8219, pp. 129-9], here assigned to koi, below. The Palaychi forms chuk 'hand' and chuk 'wing' look like co-alloforms.

See, e.g., Ernst pp. 24-6, and Matsuo 1974, pp. 156-7.

Yang [p.c. 1980] here makes an excellent comparison with Chinese *tsiau /tsiauk 'foot' [GSR 81219a]. If Chinese p/pt 'hand' ( *tayaw) and p/pt 'foot' ( *tayaw) are indeed co-alloforms, that would make Chinese look very much like the languages of section 1.5 (above) -- where, however, it is HAND (not FOOT) that gets the final -t!

Yang also cites M. *tiau/giau 'foot' [GSR 890a], with the 'mysterious' Archaic initial *g-, which also clearly belongs somewhere in this family.

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42

43

44
to be discovered. It presents some of the most interesting allomorphic patterns of any of our roots.

9.1 *me-za Manpuri (Western) mma 'wing'; Maring and 'id.'; Angami d-za 
'id.'

(It is very possible that some or all of the forms in -z given under 8.2 belong here instead.)

9.2 *ge-la Lakher mar-thiie 'the fin of a fish; a bird's wing' (Lorress 1951, 
p. 204).45 Luzhai, Lai, Laiiz thia 'wing'; Thong (Mongish) ulu 'elem' 
'saw'; Neiari jet 'hand, arm' (also INK, with unexplained dental 
suffix); Talihe ghe-na 'palm', thie-ne-pang 'soap' (alongside lea 'hand' < *jala).

Most interesting of all is the reconstructed pronunciation of the Hsi-hsia 
(= Tungut) character Kg 'wing', given by Sofronov as *hii.46 This 
fits *-la perfectly, since as Nishida has demonstrated, pm *-a regularly 
becomes Hsi-hsia (and Towi) *-a.

9.3 *sfa To this allomorph we tentatively assign Meiyi shicha 'wing' and 
Hsiao and 'id.'; and perhaps also Yachen-Tunga shiking 'wing' and Bo Chungyi 
si-ta 'id.'

5.4 *tsa With equal tentativeness we suggest as possible reflexes of this 
alloform Ao Mongsen tacha, otscha 'wing' (as well as tiacha 'arm'); Lianpui = 
Tsoi-tso (Khonma) ... 'hand'; and Angami de (Khomna), while (Khonma) 'hand'.49

Finally, we may here bring in another Hsi-hsia form. The character Kg 'wing' is reconstructed as *mo as by Sofronov [see n. 47], and may reflect a 
prototype *mo-ta, which is quite close to our own TMB reconstruction for this 
type. The two Hsi-hsia words for WING, reconstructed *hii and *mo-ta, would then be doublets (i.e., coallescent).

X. K(w)l X K(u)y

We set up this root to account for a number of forms with velar initial 
plus high vowel. Sometimes this vowel turns up as -w, sometimes as -y, and 
sometimes as a diphthong containing both vowels simultaneously.

45 This form is in the transcription developed in our Berkeley field-methods 
course on Angami (1974-5). Marrison 1967 gives *hii (Khonma dialect) and 
me (Khonma dialect). Angami 2 (Marrison's *M') is a frequent reflex of 
TMB *-az [Matisoff 1980, p. 14].

46 The vowel -za is unexplained, in view of the Lakher forms this tongue, zowa, 
and thia 'spirit, soul, god', both also from something like PM *-a-j [see 
Matisoff 1980]. Note the reinforcement of the semantic association WING = WING 
TMB implied above (7.2).

47 Personal communication. In 1976, Professor Sofronov was kind enough to enter 
his reconstructions for all the Tungut body-part words in the glossary of my 

48 Nishida 1975, p. 1. Examples include TMB *sya 'flesh' < Hsi-hsia *ta[la]; TMB 
*tsa 'child, son > Hsi-hsia *ts[ea], etc.

49 Angami -ie is sometimes the reflex of PM *-iy [Matisoff 1980, p. 10], and no 
doubt has other proveniences as well.

---436---
With high diphthongal nucleus:

(Cinh) Khu "hand"; Zotung khui "id.

[Himalayish] Sumwar ggi "hand"; Kham (of Nepal) gwi "id.

[Nanusishi] Trung a'sulul right hand.50

It is worth mentioning that Karlgren's Archaic Chinese reconstruction of "feather; wing" is "gel" (> Eng. "fly") (GSR 98a-b), which looks mighty close to these TB diphthongal forms.51

With front vowel:

[Himalayish] Bading qgi "hand" (alongside damrlo ge "right hand" and perro ge "left hand").52

[Kuki-Chin] Marum kiso "wing"; Kham pambhi "id.

[Naga] Rengma seki "wing"; Ntenyi akisha "id.

Sama ashchibho "wing" perhaps fits here (with reduplication and secondary palatalization?), though of course many other hypotheses are possible.

With back vowel:

[Himalayish] Lepcha pâku, pêku "wing"; Limbu ku-lôp "wing", ku-co "feather": Chagpa ma-ko "small feather"

[Luish] Sak ta-kô, tân, tahu "arm"; Kedu tâhu "id."; Lui tâhu, tahu "id." (note the consistent presence of the dental prefix in Luish (above 1.2)).

Benedict (1974e) cites a Chinese form from Karlgren 1923 that appears in the Shu Wen but not in any text, uestas. It is glossed either "root of a feather" (with the reading "g'i/g'ou") or 'short wing of a bird' (with the reading "g'iu/g'iu"). Benedict suggests a PST reconstruction of "te-gou or "te-gou" for this (perhaps chimerical) morpheme.53

Since uesta means "hand" (above 4.6), Trung kui probably means "right", though this is perhaps not a fatal objection to including the form here. The semantic shift HAND ----> ROOTSIDE is quite plausible, given that the right hand is the 'hand par excellence'. See note 20, above.

Benedict derives this word rather from PST "gou-gou" [see our root XXII, below].

All forms from Michailovsky and Masadon 1974.

Note the putative Kham doublet: kiu "hand" & pabhi "wing".

Note that by our analysis both the Rengma and Ntenyi forms are compounds consisting of the morphemes 9.3 and 10.2, though in opposite orders. (This is entirely plausible -- cf. the discussion of 'compound families' in XVIII, pp. 58 ff., et passim.)

While on the subject of Chinese feathers, we might mention an exotic Tibetan/Chinese pair of cognates identified in Benedict 1974e: Wû sog "a large feather, esp. quill-feather, used for an ornament of arrows, as a charm, etc." /Chinese Gês "g'iu/g'iu/g'iu" (GSR 1164b) "long tail feather". Although only these two forms have been uncovered so far, the semantic fit is extremely good, and Benedict suggests PST "g'iu/g'iu" for the etymon. (We may add the observation --437--
10.4 Forms in "ai:

Finally, there are some Barish forms for 'arm/hand' with a diphthong written "-ai" or "-ay", which are perhaps relatable to the group cited in 10.1.

Boro okgyi, k-skyi 'arm, hand', mok-skyi 'hand'; Kharchi ok-ai? 'id.' These may ultimately be relatable to the group cited in 10.1 (above) or the forms in 12.1 (below).

XII.

kar and kan

This root appears mostly in Himalayish, and usually means 'wing'. It is not yet clear whether the forms in -ay go back to the same stem as those in -ai.

11.1 "Kar

[Himalayish] Khali-igung khar 'hand', khar 'arm', phlenkhar 'palm'; Magari ni-khar 'wing'; Khams (Nepal) kar 'wing' (also khar 'branch'); Tshakali than-kar 'wing'. Kalbe korga 'id.'

Possibly related is Mikir phang-ker 'shoulder, bust, upper arm.'

11.2 "Kar

[Kokis-Naga] Liangmai poken 'wing'; Nsungmeli poken 'id.'; some poken 'id.'

There is a good-looking Chinese cognate: 布 ou-si-im, [GSR 140 l-qi] 'pigeon feather; wing to fly'. The Chinese -ou sometimes reflects BT -oi [SRC n. 460, p. 172], and the same development has occurred in several TB languages, notably Jinghpaw [SV, p. 15], so that it is possible that 11.1 and 11.2 are co-allotones.

Some slight evidence that these are rather two separate roots is provided by two TB languages which do preserve -ou as such: Boro okjatl 'upper part of arm' and Mikir rikan 'forearm' (alongside pheung-ling, assigned to 11.1). These forms may of course be entirely unrelated to those for 'wing' (the semantic fit is not too good), so we prefer to leave the relationship of 11.1 and 11.2 'up in the face' for the time being.

XIII.

ka-t

This root is apparently distinct from XII, though some open-syllables forms included here might eventually be better assigned to "Kar (11.1). The denial stop that turns up in some forms appears to be surificial. Most of the exemplars of this root are in Naga languages, though a form of key importance occurs in Lepcha (Himalayish).

12.1 "ka Lepcha ka?, a-ka 'hand'; Yachung tsa kha 'id.'; N. Changki teka that this phonetic series also contains the word ka- in the MT form; 

56 In this connection, Yang (1980) also cites Chinese 休 *kuan/si/ to fly about' [RSR #256a] and 休 *REM/ xm/ 'rustling wings' [RSR #346g].
ID: } Yacham-Tengsa taka 'wings' (alongside takhat 'hand'); Taron arto-yal 
'palm'.
12.2 ≤KAT Yacham-Tengsa takhat 'hand' (alongside taka 'wing'); Ao Mongsen 
tegtek 'id'; Meluri setek 'id.'

The fronting of to K before a dental final (as in Ao Mongsen and Meluri) 
is a common development in Tb.58 This leads us also to assign Lucha deze 'hand' 
and Sanpam the 'id.' to 'kat,' even though no final consonant appears overtly 
in these forms.

This suffixal -t is apparently the same element that we found in the 
Nemuri doublet bhá & bhú 'hand, arm' [above 9.2].

XIII. 

A number of forms for 'hand/arm' in Kuki-Naga languages have forms with 
labial initial plus -s as their main root syllable (13.1). Other languages 
have a similar syllable at initial element in compounds meaning 'wing' (13.2). 
Still another group of Kuki-Chin forms have labial initials and in -sy (13.3).
13.1 žh' & Lohar ḅa 'arm'; Nong oba 'hand, arm'; Khasama ḅa 'hand'; Maram aya 
'id.'; Zeme siba 'hand, arm'; Zeme sips 'id.'

In Hinalsish we find compounds for 'arm' whose first syllables apparently 
reflect the same etymon:
Gaik, Jirel ṭaung 'arm'; Gurung ḱaṅhro 'id.'

However, these forms with voiceless initial59 may have been influenced by Nepali 
phāchar 'arm,' like Sansar phāchar 'arm'.
13.2 žh' & ḙ' Words for WING in several Kuki-Chin-Naga, Barish, and 
Hinalsish languages have a first syllable that appears to be a reduced variant 
of 13.1 The destressing would account for the voiced & voiceless alternation, 
which is typical of TB 'minor syllables'.

Kuki-Chin-Naga: Liangzai, püchung mikan; Zone pikan (alongside mipa 'hand, 
arm'); Patur, mabang; Kumi pahi.

[barish] Dinaa Ḟagar ṭhong.

57 Lepcha retains PB *-z as much, which leads us to consider *ha to be a 
separate etymon from 'Kac' (1.1). Semantically, *Kac usually means 'wing',
while *ha usually means 'hand'.
58 It occurred, e.g., in Lhasa Tibetan [MY kongal 'eight' > Lhasa ke₂] and in 
Lahu [PB eet, leen > D. e'.]
59 Our root ḅa is distinct from a root with voiceless labial initial in the same 
general semantic area, *pha & fọp 'pia' (below, 880). Marrison (p. 117) 
gives yapha for Tanpa Moshang 'hand', though this is clearly the same 
formation as Konyak yapha 'palm' [K yapha 'hand'] and Hom Aka pha 'palm' [K akh 
'hand']. See note 23, above.

It is conceivable that there is some connection between 13.1 and the 
homophonous root *ha 'carry' [SYC 261].

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[Himalay(ish) Kanauri *pa* Thulung Rai *tophle* Newari *pantu* Lepcha *phu*]

13.3 *han* [Kuki-Chin] Tiddim Chin *bam* 'arm'; Lushai *dan* 'arm', pas-paum 'muscle of upper arm' [for 2nd syllable see below, XVIII]; Nyasse, Lai, Laiuo *ham* 'arm'; Meowghiem *bhan* 'hand', bengom 'arm'; also Lui passkha 'id.'; Wolholi *phum'om 'id.' (the latter two with assimilation to the initial initial of the following syllable). 61

The Khumi form *bam* 'arm' must have a similar origin. We may assume assimilation to a following labial, then loss of the second syllable in the compound.

It is possible that the final nasal in *bam* reflects an ancient PST suffix, for which there is considerable independent evidence [SIN, pp. 99–100].

XIV.

bi-n or be-n

A number of forms meaning 'hand, arm' in Kuki-Naga languages have labial initials and front vowels, with or without a final -n. It is very possible that these will be relatable to *bam* once the Langogetse are better known. For now we list them separately here.

14.1 With modern open syllables (bi, be): Angami (Rhonoma) bi 'hand', (Kohima) ubi 'id.'; Chokri use 'id.'; Tengma nje 'hand, arm' (with nasal body-part prefix (above, n. 29)).

14.2 With nasal-finalized syllables (bin, ben, pen): Liangmai chakin 'hand'; Ao (Chinl) tokem 'arm'; (Konya) tugen 'id.' [also *maha*, above 5.4].

XV.

p

This root has been uncovered in a few Kuki-Chin-Naga languages, and there is a good-looking Lahu (Loloish) cognate. The basic meaning seems to be 'segment of the arm'.

Tangkhol *pem* 'hand', pongthi 'arm'; Maring khotang 'arm' (for the first syllable, see 4.4 above); Nikir ping-kor 'upper arm' (also ri-pong 'id.', with last syllable from XVI, below); Lahu *tham* is *tham* 'arm';

60 The Lepcha variant *phun* - seems to be a resyllabification of the unstressed prefix *ph-. The same alternation occurs before a number of Lepcha roots. (Wolholi) glosses *phun* - as 'idee quoi phun' [p. 276]. A similar example of prefix resyllabification is đăngphas, *phun* - 'borees' < PST *phun* [SIN #145].

On the other hand, Lepcha *phun* - could be a direct reflex of our etymology XVI, below.

It is interesting to speculate that this morpheme *phun* - might be the source of the labial prefix discussed under *pum* [above 1.16].

61 The syllables *pas-pan* reflect a quite separate root, below XVIII.

Lahu *ph- w* is an idiosyncratic alternating pattern (along with *ph*, *w* - *w*) peculiar to Lahu, clearly of secondary origin with respect to PST. See Mattheson 1973, p.19.

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segment of the arm (either shoulder to elbow or elbow to wrist). 63, 64

XVI.

p u n

This etymon seems never to mean merely 'hand', but always the whole arm or its proximal segment. Since this is quite close to the meaning of, and the two putative etyma differ only in vowels, it is certainly possible that there is a more general root of which XV and XVI are both merely alloforms. [Note, e.g., the Mikir forms, one in 3 and one in 2.]

Wt dpam-ba 'shoulder' (perhaps with the prefix discussed above, 1.2), dpam-pa la 'upper-arm bone', dpam-pa la 'upper and lower arm'; Kada tapang 'arm' (with the same prefix); Ka'ba, Jirel pang 'arm' (for first element see 13.1); Abor-Hiri la-pang 'arm'; Mucu pang 'arm' (with voiced initial); Mikir ri-pong 'upper arm' (alongside phang-ko 'ld.' 4.1; XV); Edo Mikel la 'arm' (the same formation as in Abor-Hiri). 65

Loloish forms like Lisu lāp-4 'arm', Ahl lāy4 (also lāy4 pa55 'id.' [see below, XIX]) and Lahu lāy-p4 [above, XV and n. 55] are also compounded with the same first element as in Abor-Hiri and Idu, and their second syllables may belong under this etymon.

Another possible cognate is Lepeh phākku & phāsu 'wing; fin', though we have suggested an alternative explanation above [n. 55].

XVII.

m- u k

We tentatively set up this root on the basis of forms from Jinggaw and Lepeh. Given the frequency of the allophonic alternation between homorganic final stops and nasals in Th, 66 it is quite possible that this etymon should be combined with XVI into the same word-family.

Lepeh phākku 'forearm' (for the second element see p-yak, above 1.6); Jinggaw mājū 'wing' (poetic couplet of mādū, above VI). 67

63 A (perhaps less likely) possibility is that this Lahu syllable derives rather from Nan (above, VI and n. 32). Or, since Lahu 3 sometimes derives from a back vowel plus velar nasal, our root XVI might prove to be the better etymology. At any rate the two Lahu forms lāy-p2 and lāy-p3 must both be accounted for.
64 Yang (1960) cites Peking Mandarin 坐 (kho)jang 'shoulder' and 觔 (chung) 'wing', where the second element has the same phonetic as other members of GRR Series #740, with the basic meaning of gardens: e.g., 740 bl 'yang'; 740 bl 'yang 'side-room'; 740 bl 'yang 'side, on all sides'; 740 bl 'yang 'at the side of; assist'.
65 Without intimate knowledge of the Lautgesetze, we cannot of course be sure that Idu-p2 does not descend rather from XV (above) or lāy [below, XVII].
66 See Th., p. 23-5.
67 The final -p is of course not indicated in Hannon 1906 (who didn't bother with tones or glottal stops), but is supplied in Maran's revised and enlarged

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This root, which seems usually to refer to the upper arm, looks like it is definitely related to *mbu 'swell' ([STC 172]) 'to swell; be plump or protuberant', the tertium comparationis being the curve of the biceps. This etymology is quite distinct from *mbu (13.-3.), with which it forms compounds. It occurs mostly in Kuki-Chin-Naga, but also in Jinghpaw and probably in Lolo-Burmese as well.

Lushai kuan 'swell', pan-puhu 'muscle of upper arm'; Muangmawi biam 'arm', Reithel pahbim 'id.', Liangmai mgn 'id.', 68 Tungma yohkhum (Nashat), yóchhim (Vogti) 'id.'; Jinghpaw báh 'forearm'.

Also related is the second syllable of Lahu kóp-čí 'flexible part of leg, calf'. (Lahu -čí is the regular reflex of *čí, as in 31. 'warm' < PEB *čí ([STC 381]).) 69

XIX.

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b

b

On top of all the other roots already reconstructed with labial initial (XII.-XIII.), one more may also be necessary, this time with final -čí or -číw (with no following nasal or stop). Here we merely list the modern forms that are open syllables, but more detailed information on the Lautgesetze may push some of them into one of our nasal-finned roots.

(Nagai) Angami bu (Khonoma), ubu (Kohima) 'arm'; Chokri ubo 'id.'; Sema aghi 'hand, arm' (with vocalisation of initial); Sangtam pág (for second element see above 6.4).

(Kachinish) Jg. lágó 'the arm above the elbow (putative seat of strength)'.

There is also a group of Loloish compounds for 'hand' (apparently as opposed to 'arm'), whose first element is from *lák (11.1A)) and whose second syllables begin with labials and have tones characteristic of non-stopped syllables (< PEB Tones 1 or 2). Again, a nasal-finned provenience for these forms, while unlikely, cannot be excluded. Nevertheless, we include them here:

(a) < PEB Tone 1: Mn. lág-čí 'hand'; Akha láč-čí 'back of hand';
(b) < PEB Tone 2: Bisu láč-čí 'hand';
(c) PEB tone not yet determined: Mn. líč-čí 65 (also líč-čí 64) see XVI above); NB lák-čí 'back of hand' (with destressing or 'prefixization' of the syllable).

68 Dictionary.

69 The initial nasal in Liangmai is undoubtedly a prefixation of the final consonant of the now-vanished first element of a compound with *mbu-, as in Lushai, Muangmawi, and Reithel.

Lahu kóp means 'foot, leg'. There is no homologous Lahu formation like *mbu-čí-čí 'flexible part of arm'.
Finally, there is a set of Himalayan forms with an element -pu- in compounds meaning 'wing' or 'feather':

Nepali pa-pa-ti 'wing'; Sherpa pa-ba-ba 'wing', pa-ba-ta 'feather'; Jirel pa-pa-ta 'feather'.

Much 'microlinguistic' work remains to be done before all these labial-initialised roots (XIII-XX) are straightened out.

This well-attested root occurs mostly in Himalayan, and is firmly in the semantic area of WING/FEATHER, with connections to the notions of waving, flapping, or fluttering.70

The root-initial is sometimes a simple lateral, but often a -q- glide can also be inferred, so that this symen and its relatives provide further evidence for 1/y interchange in Th. Two prefixes are associated with the root in its meaning 'wing, feather': an -gy- and a -pu-.

20.1 *lap [Himalayan] Limbu ku-lap 'wing'; Thulung Rai ku-pa-ter 'id.' [71]

[NMD] Abebe-Niri a-lap 'id.' Gallong ale-m lap 'id.'

20.2 [Himalayan] Khaling lep-ti 'wing' [S. and I. Toha 1975], 'feather'

[CEDYN IV, p. 51], lep-ti 'wing' [CEDYN IV, p. 93].

The -tq- is inferred from the Khaling front vowel, though it may of course prove to be the case that PTB -n- regularly develops into Khaling -q- anyway.

20.3 *q-lap Lepcha lnap 'clip'; WT hub-bub-n 'flutter to and fro'.

Paradoxically, the presence of a -q- in Lepcha does not necessarily imply a -tq- at an earlier stage. As Benedict showed long ago, Lepcha -q- is often a secondary development from an *tq- prefix.72

The WT voiceless lateral also points to an *tq- prefix, though WT does of course have the cluster gl- as well. Perhaps the degree of morphemic binding between the two consonantts plays a role, so that the 'intrinsalic' PTB cluster *gl- > WT gl, while PTB prefixed *tg- plus l > WT hl (*sal- > WT hl).73

20.4 *tg-lap WT labh-na 'wing; petal, leaf; fan (Cossia de Korós); flag

70 Benedict [p.c.] now suggests a connection between this root and *[q]-lap

71 'leaf' [STC 423].

72 We resolutely deny any connection with Greek pterón or ptórux. For the second element in the Thulung compound, see XXI below.

73 Benedict 1943. See n. 6.

74 WT word-families contain other puzzling doubles where voiceless laterals alternate with different-prefix-plus-lateral, e.g. glos-pa # glos-pa 'loose, relaxed; loosen; be easy, unconcerned' < PTB *glos-pa # *glos-pa [see STC 120].
This reconstruction is motivated partly by the obvious allomonic relationship between this form and MT yel-ho-x ṣup-ho 'a fan; fancying, waving', where a ɣ appears overtly.\(^{74,75}\)

For thoughts on the 'paradigmatic' vs. 'syntagmatic' reconstruction of laryal/palatal entities, see the discussion of *laq/yaq (above 1.12).

20.5 *p-lap [Himalayish] Raya blop 'feather'; Chepang ṭāph 'wing'. Note that the Chepang form shows prefix preemption.\(^76\)

20.6 *p-li-lap [Himalayish] Tamang ṭāph; Gurung ṭāph; Sunwar ṭāph; [all 'wing'].

We cannot tell yet whether the prototype of these three forms had a simple *-l- glide (Ybn., Gur. *-l-, Sun. *-l-), or whether a complex *-ly- was involved.

The laryal prefix in 20.5-6 is plausibly to be identified with the element *h- in *-k- discussed above (13.2), which also appears in words for 'wing'. The Newari form pāpūti 'wing' is to be analyzed in these same terms, as pā-pu-ṭi [see above, XIX], and not as pā-pu-ti.

It is probably no more than a coincidence that the *pul prefixes of the present root looks very similar to the TB root *bhab 'fly' (SCE, pp. 29, 51), even though homorganic final stop/nasal alternation is common in TB stems [see above, XVII] and the semantic connection between 'fly' and 'wing' is close (cf. Jingpaw pūh ‘fly’ [← *pulh], māhpān ‘wing’ [← *pul-ān]).

XXI.

This root is tentatively set up on the basis of forms from Himalayish, Karen, and Naga languages. It is firmly in ornithological semantic space, always overtaking the meaning 'wing' or 'feather'.

[Himalayish] Thulung Rai lap-ṭe ṭ ‘wing'; Khaling 'lepti ‘wing, feather'; Newari pāpūti 'wing'.

[Karen(C)] Spaw (Moulmein, Bassein) ʔiʔsʰ̥ː; Pho (Moulmein) ʔiʔsʰ̥ː; (mausain) ʔiʔsʰ̥ː; Tawngthu ʔiʔ [all 'wing'].

[Naga] Ao Changšii ti 'feather'; Bengsa ʔeʔoʔa 'feather' (also ʔeʔə 'bird').

XXII.

\(\text{ŋa and \text{ŋu}}\)

\(^{74}\) See SCE #92. In Katzin 1972b (p. 282) I identified MT bhoḥ ḥab 'to winnow, fan' as still another allomorph in this complex word-family.

\(^{75}\) Yang (1980) has discovered two good-looking Chinese cognates here, ㄍㄝㄕ regulators 'to practice flying' (OSR 4690a) and ㄍㄝㄕ戍 'to fly' (OSR 4693a), which he derives from Proto-Chinese *s-g-ṣ-lin ‘to fly’.\(^{76}\)

\(^{76}\) Interestingly enough, it was also Chepang which developed a prefix-preempted form in the TB root for LBN, *p-ṣap (Chepang pəph), that is discussed at length in VSB, pp. 113–23 (esp. p. 117). TB languages obviously have different preceptive propensities.
With the utmost caution I would like to offer another pair of related roots which are 'strictly for the birds'. From the limited and ill-understood data available to me from Naga languages, it looks as if there was an underlying 'elaborate expression' of the form *au-*au, where the two elements both meant either 'bird' or 'feather', and the compound as a whole meant something like 'feathered creatures in general; denizens of the sky'.

22.1 *au- Nteny awu 'bird', awu 'id.', [Y-aau(h)au], awu-awu 'feather'(with any 'mothers')?77 An Mongon 'feather'; also perhaps Benga tenka 'feather', Tangkud wandu 'id.'78

22.2 *au- This is how Benedict79 reconstructs Proto-Chinese *au- 'feather'. Karlson's reconstruction *auwa/jwau [GSR 91b-b] looks closer to our etymology *au-(w)au, awu, as noted above (40.1).

22.3 *au- Tangsa (Moshang) vu 'bird', (Yoglu) vu 'bird', vu-ron 'wing'; Khoirao awu 'feather'; Wanchho vu 'bird' (< *aw[2]-); Nteny awu 'bird' (< *aw[2]-awu); Chong vu 'bird', awu 'feather' (? < *au-awu; *bird's hand'; see above 40.1).80 Also perhaps Monga ci-lo 'wing' (? < *au-wu).

22.4 *au- Liangmai kauh 'feather'.

This putative root has so far only been noted in two obscure languages of Arunachal Pradesh. We invite further cognate identifications:

Monga ci-lo 'wing'; Tawson (= Digaro) tai I80 'feather',

XXIV.

This root is set up in STC #394 as *au-k on the basis of Kiranti (Lambichong, Chingtang, Yachka) muk 'arm, hand'; Garo muk 'cubit'; Mizo mu 'arm-length'; and Mibat muk 'measure with breadth of fist'.

So these we may add Nru muk 'lower arm', as well as a group of forms with final nasal which speak for a nasal-finalised allophone *au-

WB muk 'the arm', lak-muk 'upper arm', muk-xau 'upper arm close to shoulder'; Jinghpaw lang-muk 'forearm [arcbic] (tone of any not

77 I.e., "bird-its principal part"; the use of monophones for 'mother' to mean 'principal or characteristic part' is widespread in Southeast Asian languages. Chang Naga uses the cognate syllable -au as a common noun-formative, bleached of even this semantic content. See Malinoff 1980, pp. 35-6.

78 The Tangkud word for 'bird' is vasa, which presents us with a dilemma: are the va- of vasa and the -a of vasa co-allophones of this morpheme *au-, or is only one of them a genuine reflex of this stymo while the other is a mere look-alike?

79 P.C., Aug.-Sept., 1974. Benedict speculates that this is a loan from Austro-Thai into Chinese, since there is a similar Ram-Sai form. In view of the many likely TB candidates for cognacy, however, it seems to me that we are dealing with a genuine R&P and PB root.

80 Benedict (p.c. 1980) suggests that the second syllable of Chang au-wi derives rather from *auj < *au1 + *au2 'body hair' [STC #2].
This tantalizing etymology has so far only surfaced in Mikir and Tamang:

Mikir ri 'hand', eri 'arm', ri-pak & ri-pek 'hand', rikan 'forearm' [Grunenner has \( \text{ri} \) 'hand', \( \text{pRi} \) 'forearm' (p. 208)]; Tamang nilir 'arm'.

This etymon appears in the second syllable of identical compound formations in two widely separated TB languages:

[Lololish] Akba l\( \text{h} \)-\( \text{th} \) 'forearm'; [Abor-Miri-Gafila] Galong l\( \text{a} \)-\( \text{l} \)-\( \text{t} \) 'lower arm' (alongside \( \text{la} \)-\( \text{t} \) 'arm').

The semantics are so close, the phonological fit so good, and the morphemic structure of the compound so identical, that the root *\( \text{ri} \) may be set up for TB as a whole. This is a good example of how sometimes even a tiny bit of evidence can go a long way.\(^{81}\)

This etymology (like XXVII-XXX below) refers specifically to the palm of the hand (or the sole of the foot). It is attested in Himalayish and Mikir, and there is an excellent Chinese cognate.

Mikir ri-deng 'palm'; Hayu ple-t'en 'id.'; Tamang y\( \text{h} \)-\( \text{t} \)-\( \text{h} \)-\( \text{t} \) 'id.'; Thakali y\( \text{h} \)-\( \text{t} \)\-\( \text{h} \)-\( \text{t} \) 'id.'; Kalke h\( \text{n} \)-\( \text{d} \)-\( \text{n} \)-\( \text{d} \) (apparently with secondary palatalization) 'id.'

Also showing palatalization of the initial is Chinese \( \text{p'am} \) 'palm' [GSR 725j].\(^{82}\)

This root occurs with the meaning 'palm' in Himalayish (and perhaps Nunglish), and shows variation between final \( \text{p} \) and \( \text{m} \).

[Himalayish] Hayu ple-t'en 'palm'; Khaling ph\( \text{l} \)-\( \text{m} \)-\( \text{k} \)-\( \text{h} \) 'id.'; Thulung Rai ph\( \text{l} \)-\( \text{m} \)-\( \text{h} \) 'palm' (Rai 1944); bophi\( \text{m} \) '\( \text{w} \)-\( \text{i} \)-\( \text{g} \)' (Allen 1975) [also ple, plene, ple\( \text{m} \) 'flat' (Allen)].\(^{83}\)

[Nunglish] Trung \( \text{a} \)-\( \text{m} \)-\( \text{kh} \) 'palm'.

This root is obviously the same etymology as the group of forms assembled in

\(^{81}\) One may speculate that there is some connection between this etymology and PBD *\( \text{tik} \) 'neck' [SGT 392] ('hand-neck' = 'forearm'), though much more evidence would be needed to establish this.

\(^{82}\) Is it mere coincidence that the Chinese word for 'sole' reconstructs identically, except with a final velar stop instead of nasal? Cf. \( \text{pi} \) or \( \text{m} \) *\( \text{tik} \)-\( \text{link} \) 'sole' [GSR 7951].

\(^{83}\) See Lüch \( \text{h} \)-\( \text{u} \)-\( \text{t} \)-\( \text{t} \)-\( \text{a} \)-\( \text{m} \)-\( \text{e} \) 'palm', see XXIX and n. 73, below.

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STC #138 ('pleng 'flat surface; plank'). As the Thulung words for 'flat' just cited show, even in the sense of 'flat' we must posit *-ŋ -ŋ variation in this word-family.

**tal**

Still another root for 'palm' is to be found in Himalayish languages, this time with dental initial and a lateral final attested directly in WT. (It appears to be quite distinct from XXVII.)

WT *tal*-mo 'palm'; Khun (Nepal) lap-ŋ 'lid.' [*tal-tal]; Sunwar tā-ŋla (for second element see below, XXX); Limbu tāŋpe (*tal-pe, with the second syllable probably the same element as in Limbu hukpe 'hand'), perhaps a reflex of *pleng (*pleng (XXVIII)).

It is also possible that the second syllables of Loho lā-tā-sq 'palm'; kha-tā-sq 'sole' may be related, though the sparse traces of PIB *-ŋ in Loloish are far from having been worked out.

XXX.

Finally, there is a set of forms meaning 'palm' beginning with a labial and showing overt traces of a glide (−ŋ, −ŋ, or −ŋ) plus −ŋ. One of these (WB bh wa) Benedict has grouped into STC #418 with a bunch of forms which I prefer to assign rather to *pak 'leaf; flat object; palm' (above, II).85

My approach here is to distinguish two separate roots, *pak and *plŋ,86 with the first showing affinities for LEPH/PLAT OBJECT, while the second seems to mean PALM specifically. Heuristically, forms are assigned to the present root if they show overt evidence of a glide; otherwise they are assigned to *pak, even though the sources show no evidence of a final stop. The last word has yet to be said on this complex problem.

[Himalayish] Guarung yo-ŋlb; Sunwar tā-ŋla; Magari huplŋ.87

[Ruki-Chin-Naga] Lakher ku-paš (also pei-paš 'sole'); Tangkhul pāy-nyāy (with assimilation to the final nasal of the preceding syllable) (all "palm");

[Lolo–Bumens] WB phaŋ, bhaŋ "palm, sole".

84 It is also possible, of course, that Limbu pe in both tāŋpe 'palm' and hukpe 'hand' is from *paŋ [below, XXX], especially in view of the similar Magari formation huplŋ 'palm'.
85 STC #418 cites only the forms from Nurb, Miri, WB, and Garo, as well as the problematic Jinghpaw form in -ŋ [below]. The stop-finalized forms from Lishai and Nikir are presented as a problem in STC n. 286. The forms with medial glide from Gurung, Magari, Sunwar, Tangkhul, Limbu, and Lakher given in the present section are not in STC.
86 Where "C" stands for a glide (−ŋ, −ŋ, or −ŋ).
87 Newari pāg-lāh(t) 'palm', being a Himalayish form, might also be brought in here, though it shows no trace of a glide.

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Putative Chinese relatives offered in STC [notes 463, 487] are ฤ ฤ 'width'; ฤası 'breath of four fingers' [GSR 101f]; ฤ ฤası 'palm' in Karlgren 1923); and ฤ ฤ 'grip in the hand' [GSR 39b].

The problematic final -n in the Jinchow form logbęn 'palm, sole' (cited already in STC 7418) might be the 'dual' suffix [above, n. 54; STC n. 428, p. 158].

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As is our custom in these 'organic semantic' studies, we here offer a 'metastatic flowchart' that indicates schematically the semantic associations revealed by the data.

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88 For similar charts mapping (a) the internal organs of the body, and (b) nocturnal celestial bodies and spirits, see VENABLES, Figure 19 (p. 229) and Matisoff 1980, p. 39, respectively.
LANGUAGES AND SOURCES USED IN THIS STUDY

Abo-Wiri (Lorror 1907); Ati (Yilan Chia-hua 1953 [see TSN]); Akha (Lewis 1960 [see TSN]); Anal (Ovo 1965); Anangmi (Kemono, Kohima) (Marrison 1967); Matissoff 1986); Ao (Chungl, Mengsen) (Marrison 1967); Aznom (Burling 1959); Bavling (Michalowski and Macdonald 1974); Bwa (Boettger 1974); Bwala (Michalowski 1974b); Bumi (Schwarl 1979); Burs (Niilidha 1966/67 [see TSN]); Boro [Bodo] (Burling 1959; Bhat 1960); Bumose (Judson 1893; Benedict, ed. 1976 [see TSN]); Chang (Marrison 1967); Chegap (CSDPN); Chirbok (Ovo 1965); Chirlop (STD); Chines (Karlgren 1923, 1957 [GSR]; Benedict 1972 [STD]; Benedict 1974a; Yang 1975); Chukhi (Marrison 1967); Dafa [STD]; Diaama (STD); Gallong (Das Gupta 1943); Garo (Burling 1959; STD); Goryung (CSDPN); Goyarung [+Goyarung] (Chang 1948; Nagano 1978); Han (Kao Bua-nien 1955; Hu and Tai 1964 [see TSN]); Hayu (Michalowski 1974c); Hir-hisna [+ Tangul] (Niilidha 1966, 1975; Citroen 1972; Keegling 1975); Idu Mishmi (Anonymous 1962); Jingpaw [= Kachin] (Hanson 1906; STD); Matissof 1974; Maren (in prep.); Jirsel (CSDPN); Kachari (Burling 1959); Kado (Leffler 1964); Kalke (CSDPN); Kanuri (Joshu 1969; Bailey 1911); Karen (Jones 1961; Benedict 1979); Keshuma (Marrison 1967); Khaul (CSDPN; Thoba and Toha 1975); Kham [of Nepal] (CSDPN; Watters and Watters 1973); Khirao (Marrison 1967); Khami (Ovo 1965); Kiranti [STD] Konyak (Marrison 1967); Lahu (Matissof 1969, 1970, 1973 [see TSN; LED]); Lai (Ovo 1965); Lano (Ovo 1965; Osborne 1975); Lakhier [Mara] (Lorror 1951); Lepcha (Haimarwong and Grubwedoel 1988; Benedict 1943); Liangmai (Marrison 1967); Limbu (Chomjong, n.d.); Lisu (Fraser 1922; Ji Yu-fu 1948; Xu Lin and Ou Yizi 1959 [see TSN]); Lotha (Marrison 1967); Lu-chi Ban Lolo (Ma Hsa-rh-Liang [see TSN]); Lui (Leffler 1964; Lushai (Lorror 1940)); Macar (CSDPN); Miao (Marrison 1967); Marx (Marrison 1967); Meithai [Manipur] (Petitgrew 1912; Marrison 1967); P.C. Thoxlam, pers. comm.; Mekuri (Marrison 1967); Mikir (Walker 1925; Grubwedoel 1978); Monga (Das Gupta 1968); Moso (Li Lin-tsan, Chang Ch'ung and Ho Ta'ei 1967 [see TSN]); Mpi (Glimman 1976; Matissof 1978b); Mru (Leffler 1966); Mume (Marrison 1967); Nasu (Kao Bua-nien 1955 [see TSN]); Newari (CSDPN); Ngaw (Ovo 1965); Noote [Nansang] (Marrison 1967; Das Gupta 1971; STD); Niugan (Marrison 1967); Niangyi (Marrison 1967); Nung (see Trung); Padam (Marrison 1967); Palangi Karen (Jones 1961); Phi Karen (Jones 1961); Pim (Marrison 1967); Phumo 'Bradley' 1977); Puiren (Marrison 1967); Rengma (Marrison 1967); Sak (Leffler 1964); Same (Marrison 1967); Sani [Sali Lolo] (Ma Hsa-rh-Liang 1915 [see Hu Xueliang 1955]; Sema (Marrison 1967); Sipan [see Sunjawi] (CSDPN); Shamang (CSDPN); Shengang (Petitgrew 1912; Marrison 1967); Bhat 1969; Matissof 1972b); Sampa (Bwala [see Trung]); Sarang (Marrison 1967); Sanyi (Leffler 1964); Senu (Marrison 1967); Sema (Marrison 1967); Shengang (CSDPN); Sunjawi (CSDPN); Tang (Petitgrew 1912; Marrison 1967); Bhat 1969; Matissof 1972b); Tenya (Bwala [see Trung]); Terong (Petitgrew 1912; Marrison 1967); Tai [Digaro] (Chakravarty et al. 1963); Tanghthu Karen (Jones 1961); Thakali (CSDPN); Thuling Rai (Rai 1944; Allen 1975); Thai (Kean de Kong 1834; Jäschke 1881); Titirino Chin (Ovo 1965; Henderson 1965); Trung [= Tung] (Lo Ch'ang-p'ai 1949); Wannag (Burling 1959); Wango (Marrison 1967); Yonk Lan Chia-hua 1947 [see TSN]); Yachom-Rengma (Marrison 1967); Yanchung'-S (Marrison 1967); Zeme (Marrison 1967); Zotung (Ovo 1965).

For an alphabetic/genetic listing of TB languages and dialects, see Matissof 1980b. For complete references see the Bibliography.

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LINGUISTICS OF THE SINO-TIBETAN AREA: THE STATE OF THE ART
PAPERS PRESENTED TO PAUL K. BENEDICT FOR HIS 71st BIRTHDAY

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