

Subgrouping on the basis of shared phonological innovations: a Lolo-Burmese case study

Author(s): Graham Thurgood

Proceedings of the Eighth Annual Meeting of the Berkeley Linguistics Society (1982), pp. 251-260

Please see “How to cite” in the online sidebar for full citation information.

Please contact BLS regarding any further use of this work. BLS retains copyright for both print and screen forms of the publication. BLS may be contacted via <http://linguistics.berkeley.edu/bls/>.

The Annual Proceedings of the Berkeley Linguistics Society is published online via the Linguistic Society of America's digital publishing platform.

Subgrouping on the basis of shared phonological innovations:
a Lolo-Burmese case study.

Graham Thurgood
CSU Fresno

0. Introduction. Through the imaginative and creative work of a small number of scholars¹ the last two decades have seen enormous progress in the reconstruction of Lolo-Burmese. Although little has been done on some languages, for others the basic sound correspondences have already been outlined, and for still others detailed work has already been done. However, despite the advances obvious elsewhere, subgrouping remains more 'suggestive' than 'definitive', the subgrouping work of Shafer (1938, 1955, 1966-7, 1974), Benedict (1972), Matisoff (1972a), Nishi (1975ab), Bradley (1979ab), and others notwithstanding. Thus, it is not the absence of work that leaves us without a definitive subgrouping; instead, this lack of a consensus is a direct consequence of different ideas about what constitutes evidence. What this paper argues, illustrating with examples from the Loloish component of Lolo-Burmese, is that the most useful and the most valid basis for subgrouping is the presence of shared phonological innovations. Other approaches based on other types of evidence are not only of dubious validity but unnecessary; by itself, the evidence provided by shared innovations constitutes a sufficient basis for a principled preliminary subgrouping of Loloish.

1.0 Lexical approaches. The variable nature of the data sources condemns lexical approaches to failure. Thus, for Akha we have several sources including Paul Lewis' valuable Akha-English Dictionary; on the other hand, for Lü-ch'üan we have only Ma Hsüeh-liang's excellent but obviously lexically restricted annotated translation of the Lolo sacred book Performing Rites, Offering Medicines, and Sacrificing Beasts. Similarly, for Lahu we have through Matisoff's works thousands of forms; however, for Jino we have only the 150 or so words of a recent Chung-ko Yü-wen article. Under these conditions, it makes little sense to talk of subgrouping on basis of lexical criteria such as percentages of shared vocabulary, etc.

2.0 Shared retentions. In the literature, one finds cited as potential subgrouping evidence such shared retentions as *b- > b-, *-a > -a, and *-m > -m. However, this use of retentions is simply fallacious; retentions provide no evidence of a period of common development unique to the languages involved. Here, the burden of proof to the contrary lies with those that suggest the use of retentions as subgrouping evidence.

3.0 Shared innovations. In contrast to shared retentions, shared innovations are potential evidence of periods of common development and thus valuable for subgrouping. Of course, the more common the phonological change, the more likely that shared innovations are due to parallel but independent development, and, the less likely the change, the less likely that the change occurred more than once. A change such as *-a > -ɔ or *-ak > -aʔ, for example, is common enough that parallel independent occurrences are not unexpected; however, changes such as *p- > t- or *mp- > b'- are far less likely to have occurred independently more than once.

A prime example of a shared innovation useful for subgrouping is found in Chart 1 below. In Sani (=Nyi) and Ahi there is a tone split in the devoicing of old voiced initials that is correlated with tone; the old voiced initials devoiced under proto-tone 1 but remained voiced under proto-tone 2. This correlation of a devoicing split with tone

PLB	Sani (Ma)	Nyi (Shafer)	Ahi (Yüan)	Ahi (Shafer)	'gloss'
*duŋ ¹	tʏ 33	tu-	to 33	to-	'wing'
*byam ¹	tʏt 33		tr 33		'to fly'
*dzam ¹	tsɿ 33	tsö-	tsz 33	tsö-	'bridge'
*guŋ ¹	ku 33	kə-	kr 33		'body'
*m-dʒi ¹	tsz̄ 33		tʃi 33		'rice wine'
*dza ¹	tʃa 33	tʃa-	tʃo 33	tʃo-	'rice; food'
*dʒway ¹	tʃz̄ 33	tʃə-		tʃə-	'tusk'
*gray ¹	tʃæ 33	kə-		tʃə-	'star'
*dəw ¹				tö-	'short'
*du ¹		tu-			'nephew'
*gun ¹	qr 33		kr 33		'use up'
*m-dʒa ¹	tʃa 33				'sparrow'
*bum ¹	pr 33		po 33		'divide; pile up'

*bəw ²	bɿ 11	bu/	bu 21	bö/bu/	'insect'
*dza ²	dʒa 11	dʒa/		dʒo/	'eat'
*ba ²	bə 11	bə/		bo/	'thin'
*gra ²	gə 11	gə/		dʒo/	'hear'
*bay ²	bz̄ 11	bi/			'give'
*gray ²	dʒz̄ 11	dʒə/		dʒi/	'copper'
*dzim ²	dʒz̄ 11				'unripe, raw'
*bya ²	dɿa 11	dɿa/	do 21	do/	'bee'
*dan ²	do 11	do/	du 21	du/	'word; speech'
*ba ²	bə 11	bə/		bo/	'chin; cheek'
*graw ²	gɿ 11	gu/	dʒz̄ 21	dʒö/	'nerve; vein; sinew'
*bəw ²	bɿ 11	(bu-)		bu/	'carry on back'
*bəw ²	bɿ 11	bö/	bu 21	bu/	'long'
*dum ²	dɿ 11				'blunt'
*dzəw ²	dʒz̄ 11	'an official'			'govern'
*gam ²			gr 21	gö/	'give'
*ban ²	bo 11	(na-bo/)		(no-bu-)	'deaf'

Chart 1. Sani (Nyi) and Ahi devoicing split correlated with tone.
Thurgood (1980:212) contains a discussion of this change.

is quite unexpected typologically since consonants usually affect tone but not vice versa. In effect, however, this characterization is deceptive since each of the 'tones' has its own distinct phonation type and it is the phonation types that affected the variable devoicing of initials. In any case, the fact that Sani and Ahi share this particular

is strong evidence for subgrouping them together.

From a practical viewpoint, such relatively-uncommon innovations are an efficient starting place for an analysis since they are the least likely to have evolved independently. Nonetheless, a single phonological change—no matter how rare and unique—is not by itself a sufficient basis for subgrouping. Even the unique Sani-Ahi split needs substantiation from additional shared innovations. In this case, it is easy to find further evidence; for example, only Sani and Ahi share the change $*-ak > -e/-\epsilon$ (Chart 2) and, in addition, numerous other sound changes can be found that are shared only by these two or only by these two and the two languages at the immediately above level of subgrouping.

PLB	Written Burmese	Sani	Ahi	Nasu	Lu-ch'üan	'gloss'
*V-pak	phak	p'e 22s	phie 44s	p'a 44s ^T	p'a 55c	'leaf' #29 <u>305</u>
*zak	sak	ze 22s	ze 44s	dza 55	za 55c	'descend' #121 <u>653</u>
*mak	mak	me 22s	mie 44s	ma 55		'soldier, war' #135 <u>172</u>
*C-sak	sak	se 22s	se 44s	sa 55	sa 55c	'breathe' #123 <u>138</u>
*m-tak	tak	de 44		da 44 ^T	da 22s	'climb' #98

Chart 2. Front vowel reflexes of PLB $*-ak$.

Notes: The forms listed above are only a subset of the data. The significance of the change is that it divides the Sani-Ahi-Nasu-Lü-ch'üan subgroup into Sani-Ahi and Nasu-Lü-ch'üan.

The numbers preceded by # are from Matisoff 1972a; the numbers underlined are from Bradley 1979a. *C- and *V- are a consonantal and a vocalic tone lowering prefix.

This change is discussed in Thurgood and Javkin (1975).

From a practical point of view, the more common a change, the less useful it becomes for initial subgrouping. The change $*-a > -o$ or $-o$, for instance, is found in Ahi $-o$, Mpi $-o$, Kao's Hani $-o$, Nasu $-o$ and $-u$, and Woni $-o$. This change occurred independently at least two if not three times.

4.0 Subgrouping Loloish. A thorough and definitive subgrouping of Loloish is not completed but, on the basis of the evidence provided by shared phonological innovations, a preliminary subgrouping has been done. What follows is that subgrouping.

4.1 The Sani-Ahi/Nasu-Lu-ch'üan connection. Sani and Ahi were connected by Charts 1 and 2 found in section 3. Both languages are part of a larger subgroup which includes in addition Nasu and Lu-ch'üan. This four language grouping has in common the shared innovations $*pl- > t-$ (Chart 3) and $*my- > n-$ (Chart 4) in addition to more common changes.

PLB	Written Burmese	Sani	Ahi	Nasu	'gloss'
*plu ¹	phru	ʔz 33	t'o 22	t'u 24	'white, silver'
*plu _ŋ ²		ʔo 11 ne 44	t'u 21 nie 44	t'o 44 na32s	'face'
*C-plek	phrac	ʔa 22s	t'a 44s	t'a 55	'become' #68
*blek		du 22s	di 44s		
*m-prin ¹	prañ	tʔ 33			'pus'
*byam ¹	pyam	tʔ 33	tʔ 22	d'ɛ 24/213	'to fly'
*m-bli _ŋ ³		dɪ 33	dɛ 44	dɛ 44/də 213	'full'
*bya ²	pya:	dɪa 11	do 11	d'ɪ 33	'bee'
*m-bya _ŋ ¹	pyaŋ: ^T			d'a 24	'lazy'

Chart 3. Dental reflexes of original bilabial clusters. Lu-ch'üan would also be expected to have dental reflexes. This parallels the behavior of *my- and *mr- clusters which also have a dental or alveopalatal reflex in these languages.

For an explanation of this change, see Ohala (1978).

PLB	Written Burmese	Sani	Ahi	Nasu	Lu-Ch'üan	Lisu	Lahu	Phunoi	Bisu	Mpi	Akha	'gloss'
*myok	myok	nu 55	nu 55		ŋu 55c	chya ² -mye ⁶ mɔʔ			mjò		myo _ɔ	'monkey' #133
*(s-)myak	myak	ne 44	nie 44	na 32s	na 22s	myá ³	mɛʔ		mɛ-hm̄		mya [^]	'eye' #145
*mra _ŋ ²	mraŋ:	m̄ 55 ^T		mu 33 ^T		a ¹ mu ⁵	f-m̄	m̄	ʔa m̄ŋ	mjuŋ ²	məh _v	'horse' 6
*mra ²		na 55 ^T			ŋu 33	myá ⁵	má	bé hno/ be hnu	ʔaŋ bjá	mja ¹	mya _v	'many'
*mruk		ŋu 55 ^I				maw ⁶	múʔ		m̄-ká		mo _ɔ	'to weed; grass' #138
*mwat	mwat	ŋ 22s	ni 44s	ñi 55		mrghe ⁶	m̄ʔ		bè		meh _ɔ	'hungry' #132
*mra _ŋ ³	mraŋʔ	m̄ 44				mu ³	mu	mu	hm̄ŋ<*1	mjoŋ ⁵ <*1	a ^v mah	'high' 758
*mra _ŋ ¹	mraŋ	ŋ 44				maw ⁴	m̄	hm̄jã	hm̄jãŋ	mjaŋ	maw ^v	'see' 596
*s-mra ²	hmya:	na 55				mya ⁵ <*mra ²						'arrow'

Chart 4.

Reflexes of *my- & *mr- clusters.

Notes: Numbers preceded by # are the numbers used in Matisoff 1972a; numbers underlined are the numbers from Bradley 1979a.

For an explanation of this change, see Ohala (1978).

The close relationship of Nasu and Lu-ch'üan within the subgroup is reflected in the shared otherwise unique aspirated reflexes for *m-pak type initials (Chart 5).

PLB	Sani	Ahi	Nasu	Lu-ch'üan	'gloss'
*m-pup	br 44	bu 44	b'u 32s		'satiated' #86
*m-puk	gu 44		g'u 32s		'write; make spots' #89
*m-pok		ba 44	b'ə-32s		'shoot' #108
*m-tsak				nts'a 22s	'a drop; to drip' #82
*m-dži ¹	tsz̥ 33	tʃi 33	dʒ'i 21	nts'z̥ ʔ	'rice wine'
*m-taŋ ¹			d'ɔ 213	nt'e ʔ	'drink'
*m-pyaŋ ¹			d'a 24		'lazy'

Chart 5. Aspirated reflexes of *m-pak proveniences. Those *m-prefixed voiceless initials which are clusters have unaspirated reflexes.

In addition, Nasu and Lu-ch'üan have both merged the tonal reflexes of *s-mak and *s-bak syllables with the tonal reflexes of *C-pak, *C-sak, *rak, *bak, *zak, and *mak syllables (Chart 6).

4.2 The Sani-Ahi-Nasu-Lu-ch'üan/Lisu-Lahu connection. This still higher level grouping is substantiated by the patterns of tonal reflexes of the formerly checked syllables (Chart 6). For all six languages, there is a three-way tonal split rather than the two-way split found elsewhere in Loloish. In addition the chart shows three other developments of no use for subgrouping: Nasu has innovated a unique 34 tone from *ryak syllables, Lisu has innovated a 3 tone from *(s-)mak and *m-pak syllables, and Lahu has extended its 35 high-rising tone to syllables of the structure *ryak and *C-sak. Aside from these three independent, non-shared innovations, the common tonal splits constitute evidence for subgrouping these six languages together.

4.3 Phunoi and Bisu. The development of certain nasals into corresponding homorganic voiced stops, whatever its ultimate phonological explanation may be, subgroups Phunoi, Bisu, and, according to Bradley, Pyen together (Chart 7). This subgrouping is substantiated by their

<u>Initial Class</u>	<u>Sani</u>	<u>Ahi</u>	<u>Nasu</u>	<u>Lu-ch'üan</u>	<u>Lisu</u>	<u>Lahu</u>
*s- bak mak	55	55	55	55c	1	' (35)
*pak *sak *k-rak *s-pak	44	44	32s	22s	2	^? (54s)
*(s-)mak *m-pak					3	
*ryak	22s	44s	34	55c	6	' (35)
*C-sak			55			^? (21s)
*C-pak *rak *bak *zak *mak						

Chart 6.

Tonogenetic Developments of the Checked Proveniences.

Notes: The original syllable is represented here with an *-ak rhyme since the final rhyme variations had no variable effect on reflexes. The tone marks are Chao tone symbols in which the starting point and the ending point of the tone are marked with 1 being low and 5 being high. The -s designates 'stopped' and the -c designates 'constricted'.

*s- = PLB spirantal prefix *(s-) = Proto-Loloish spirantal prefix *C- = tone lowering prefix

similar reflexes for *-im (> -um/-u) and *-ip (> -up/-u) (see Chart 8). The Akha treatment of *-ip (> -u) suggests but certainly does not prove a connection with the Phunoi-Bisu-Pyen subgroup (Chart 3).

4.4 A preliminary subgrouping. In addition to these shared innovations, others are found amply documented in the literature. On the basis of these as well as on the evidence presented here, a preliminary subgrouping can be made (Chart 9).

5.0 Conclusion. This paper first argued that shared phonological innovations should constitute the major if not the sole basis for the subgrouping of Lolo-Burmese. Further, it was argued that at least from a practical viewpoint the more unusual the shared development, the greater its potential value for subgrouping and vice versa. Finally, on the basis of shared phonological innovations, a preliminary subgrouping was done of Lolo-Burmese.

Footnote

¹Burling 1967; Shafer 1966-7, 1974; Benedict 1972; Matisoff 1972a; Nishida 1966ab, 1967, 1975; Nishi 1975ab; Bradley 1979ab; Wheatley 1980; and others.

PLB	Written Burmese	Phunoi	Bisu	Mpi	'gloss'
*myok	myok	dà bà		sa ² po? ⁴ lo ²	'monkey' <u>23</u> , #133
(*s-)myak	myak	ʔǎ bja	mè hnw	n ⁴ tsho? ⁴	'eye' <u>91</u> , #145
*s-mra ²	hmra:	bəla	blə	mjo ²	'arrow' <u>266</u>
(*s-)mak	ʔip mak	jùp ba ba	mè búñ búñ	man? ³	'dream' <u>586</u> , #144
*mruk		bò bo	mòkà	nan? ⁶	'to weed; grass' <u>302/621</u> #138
*mwat	mwat	hǎ bàt	hǎn bè	mja? ¹	'hungry' #132, <u>637</u>
*C-mi ²	mi:	bì	bì tho	mi ²	'fire' <u>329</u>
*maw ²	mui	mòthà	mùñ	'smoke' mi ² khwi ²	'sky' <u>321/333</u>
*nat	nat	dət		nx? ²	'spirit' <u>361</u> , #136
(*s-)nak	nak	ʔǎ da,		nan? ³	'black' #142, <u>503</u>
*nyaw ¹	nyui 'brown'	ʔǎ hjǎ		ni ⁵	'blue, green' <u>508</u>

Chart 7.

Reflexes of *C-prefixed nasals.

Notes: In the above for which it is known from other evidence that the prefix is spirantal are marked with *s- or (*s-); if the other evidence only indicates that the prefix was consonantal but of undetermined quality, it is marked with *C-; and, if the Phunoi and Bisu are the only evidence for the prefix it is unmarked.

Numbers preceded by # are the numbers used in Matisoff 1972a; numbers underlined are the numbers from Bradley 1979a.

PLB	Written Burmese	Lahu	Phunoi	Bisu	Akha	Mpi	'gloss'
*yim ¹	ʔim	yè	júm	júm	ym ^v	ʔin? ⁶	'house' <u>341</u>
*blim ²	pim: prim:			piùm	bym ^v		'taro' <u>285</u>
*dim ¹	tim				dm ^v		'cloud' <u>320-2</u>
*dzim ²	tsim	ǎ-cʔ	chùm		jm ^v	ti ⁵	'unripe; raw, green' <u>764A</u>
*nim ^{1/3}	nim/nim'	nè< *1	hnúm	hpum	nym ^v	niñ ^{3/5}	'low; short' <u>759 755</u>
*yip	ʔip	yʔ?	yùp	yù	yu ^v	ʔiʔ ¹	'sleep' #180 <u>735 773C</u>
*zum ²	sum:	yê	sə		zm ^v		'to use' <u>710</u>
*sum ²	sum:	ʒē	sùm	sum	sm ^v	siñ ⁶	'three' <u>480</u>
*dum ²	tum:				dm ^v	tu ³	'blunt' <u>542</u>
*tsum ¹	chum: ^T			tshúm	təm ^v		'rice pounder' <u>240B</u>
*dzum ¹	cum	ǎ-cc					'pair' <u>420A</u>
*lum ¹		lè	lúm	lúm	lm ^v	liñ ⁶	'warm' <u>516</u>
*pum ¹	pum		pùm ^T		bym ^v		'pile up' <u>627A</u>

Chart 8. Phunoi, Bisu, and Akha reflexes of *-im, *-ip, and *-um.

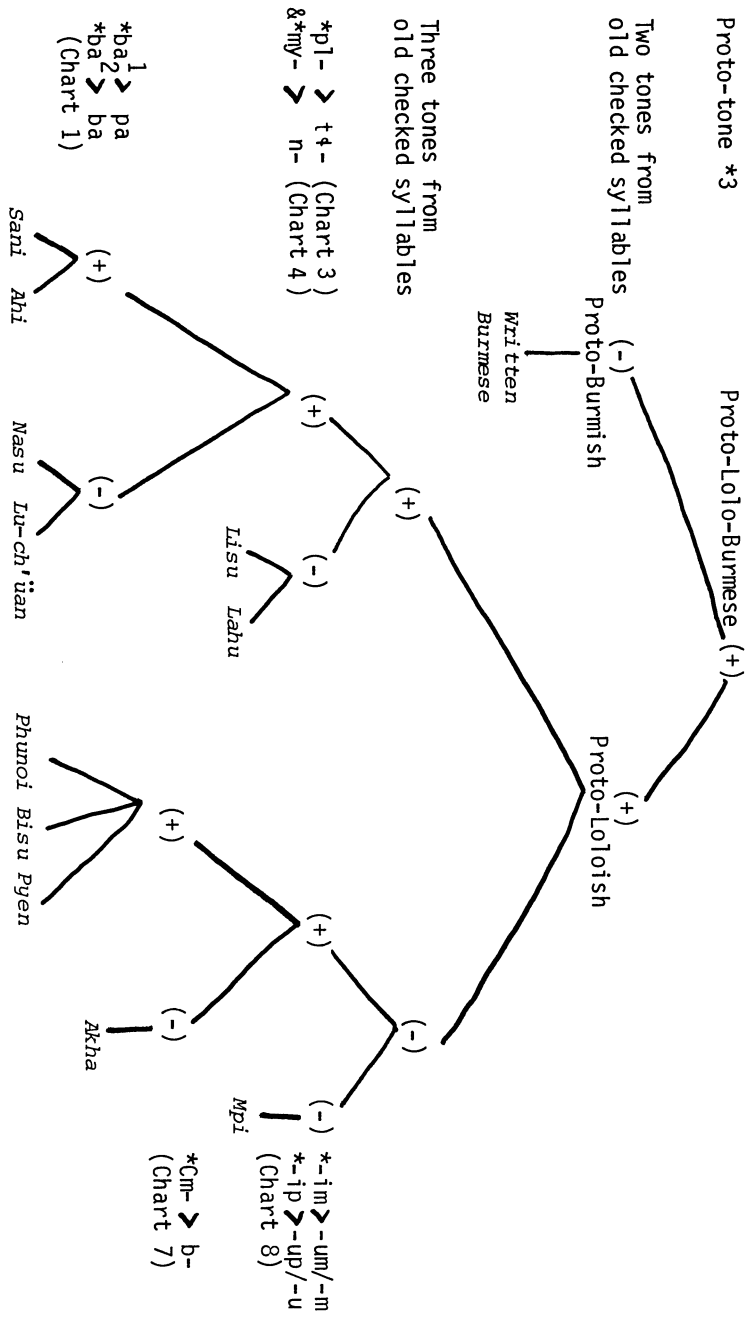


Chart 9: A preliminary subgrouping of Lolo-Burmese. Note that the position of Akha on the chart is only intended to be suggestive.

Bibliography

- Benedict, Paul. 1972. Sino-Tibetan: A Conspectus. Contributing editor: James A. Matisoff. Cambridge University Press: U.K.
- Bradley, David. 1973. Phunoi today. International Conference on Sino-Tibetan Languages and Linguistics (ICSTLL) VI. San Diego.
- _____. 1979a. Proto-Loloish. Scandinavian Institute of Asian Studies Monograph Series, No. 39. Curzon Press: London and Malmö.
- _____. 1979b. Lahu Dialects. Oriental Monograph, No. 23. Australian National University: Canberra.
- Burling, Robbins. 1967. Proto-Lolo-Burmese. IJAL Vol. 33, No. 2, Part II, Bloomington, Ind. Published simultaneously by Mouton and Company: The Hague.
- Kao Hua-nien. 1955. Yang-wu Ha-ni yü ch'u-t'an [Preliminary investigation of the Hani language of Yang-wu]. Chung-shan Ta-hsüeh Hsüeh-pao [Chungshan University Journal].
- Lewis, Paul. 1968. Akha-English Dictionary. Data paper No. 70. Southeast Asia Program, Cornell University, Ithaca, N.Y.
- Ma Hsüeh-liang. 1951. Sa-ni Yi-yü yen-chiu [A study of Sani, a Yi dialect]. Publication of the Chinese Scientific Institute. Peking: Advanced Studies Publishing House.
- _____. n.d. Lo-wen "Tso-chi, hsien-yao, kung-sheng ching" i-chu [Annotated translation of the Lolo sacred book Performing Rites, Offering Medicines, and Sacrificing Beasts]. Publication of the Bureau of History and Linguistics of the State Central Research Institute. Vol. 20.
- Matisoff, James A. 1972a. The Loloish Tonal Split Revisited. Center for South and Southeast Asia Studies, Research Monograph No. 7. Berkeley.
- _____. 1972b. "Lahu nominalization, relativization, and genitivization". In J. Kimball (ed.) Syntax and Semantics. Vol. 1.237-57. Seminar Press: New York.
- _____. 1979. "Problems and progress in Lolo-Burmese: Quo Vadimus? LTBA 4.2.11-43.
- Nishi, Yoshio. 1975a. "Old Burmese ry-: A remark on PLB resonant initials". Shiroku 8.1-13.
- _____. 1975b. "Hani and Akha—problems of the subgrouping in Lolo-Burmese and Proto-Lolo-Burmese initials". CAAAL 2.53-82.
- Nishida, T. 1966a. "A study of the Bisu language". Tōnan Azia Kenkyū [TAK] 4.1.65-87.
- _____. 1966b. "The lineage of Bisu". TAK 4.3.42-68.
- _____. 1967. "The lineage of Bisu (continued)". TAK 4.5.52-68.
- _____. 1975. Hsihsia, Tosu and Lolo-Burmese. MS. ICSTLL VIII. Berkeley.
- Ohala, John. 1978. "Southern Bantu vs. the world: the case of palatalization of labials". BLS 4.370-86.
- Shafer, Robert. 1938. "Phunoi and Akha tones". Sino-Tibetica 4. Berkeley.
- _____. 1955. "Classification of the Sino-Tibetan languages". Word 11.94-111.

- _____. 1966-7, 1974. Introduction to Sino-Tibetan. Parts I-V. Otto Harrassowitz: Wiesbaden.
- Thurgood, Graham. 1974. "Lolo-Burmese Rhymes". LTBA 1.98-108.
- _____. 1977a. "Lisu and Proto-Lolo-Burmese". Acta Orientalia 28.147-207.
- _____. 1977b. "Burmese Historical Morphology". BLS 3. 685-91.
- _____. 1978. "Thematicization and aspects of the verbal morphology in Burmese: the principles of organization". BLS 4.254-67.
- _____. 1980. "Consonants, phonation types, and pitch height". CAAAL 13.207-19.
- _____. 1981a. Notes on the Origins of Burmese Creaky Tone. Monumenta Serindica Monograph Series No. 9. Institute for the Study of Languages and Cultures of Asia and Africa (Tokyo).
- _____. 1981b. "The historical development of the Akha evidentials system". BLS 7.295-302.
- _____. 1981c. "Review of David Bradley's Proto-Loloish". BSOAS 44.3.91-2.
- _____. 1981d. "Review of James A. Matisoff's Variational Semantics in Tibeto-Burman: the "organic" approach to linguistic comparison". Indian Linguistics 40.3.116-7.
- _____. 1982a. "A note on linguistic 'epistemology': the nature and origins of the Akha evidentials system". Evidentiality: the linguistic coding of epistemology. Edited by Johanna Nichols and Wallace Chafe. Ablex. (forthcoming)
- _____. 1982b. "The Sino-Tibetan copula *way". Cahiers de linguistique: asie orientale. (to appear in March)
- _____, and Hector Javkin. 1975. "An acoustic explanation of a sound change". Journal of Phonetics 3.3.161-5.
- Wheatley, Julian K. 1980. Loss of the "register" distinction in Hani dialects of Loloish: examination of evidence presented in Hu and Dai, 1964. MS. ICSTLL XIII. Charlottesville.

[February 10, 1982]