THE SUBGROUPING OF JINO

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In 1981 both Benedict (1981ms.) and Bradley (1981ms; published 1983) had the insight to suggest that Jino is a Central Loloish language, despite having nothing more to work with than Gai's limited and phonetically inaccurate 1981 material. Working with the data in Gai 1981, my own attempt to carefully establish regular sound correspondences led me to write (1985:454): 'not only does Jino lack systematic regular correspondences with PLB, but it also has a perfective not characteristic of Loloish languages'. Much of my rejection of Bradley's and Benedict's subgrouping was based on the fact that the tonal correspondences so typical of Proto-Lolo-Burmese (PLB) languages were conspicuously absent. Specifically, it had no regular correspondences for the three open tones reconstructed for PLB; in Loloish, not only are regular reflexes typical of all but the northern Yi dialects, but the presence of an identifiable reflex of proto-tone 3 is almost a prerequisite for PLB membership. For these and other reasons, it seemed to me that the data did not support Loloish membership.

Since then the same author (Gai 1986) has published an expanded and corrected description of Jino, one that fully substantiates the intuitions of Benedict and Bradley. On the basis of the new material, regular PLB correspondences for the tones, initials, and finals can be worked out, establishing Jino as unquestionably Loloish. This is significant since, as Benedict (1981) notes, Jino is 'hardly just another Central Lolo language'.

1. Tonal correspondences

Jino[1] is a language 'blessed' with an abundance of tone sandhi rules; for CV + CV sequences, Gai (1986:11-12) lists no fewer than eleven sandhi rules. And, it is likely that all the rules have not yet been fully worked out; for instance, examine Gai's rules (6) and (11):

(6) *44 + 42* → *33 + 44*
(11) *44 + 42* → *44 + 44*

David Bradley, Eugénie J.A. Henderson and Martine Mazaudon eds,
Prosodic analysis and Asian linguistics: to honour R.K. Sprigg, 251-258.
Pacific Linguistics, C-104, 1988

In both rules the initial sequence is apparently identical, but in (6) the outcome is *33 + 44,* while in (11) the outcome is *44 + 44.* Despite minor reservations, however, application of the sandhi rules which Gai posits allows the tonal correspondences between proto-Lolo-Burmese Burmese and Jino to be analysed in a straightforward manner.

Not all the tones found marking PLB cognates in the lexicon represent inherited tonal reflexes. In addition to the tone sandhi changes discussed above, other sandhi rules have obviously been in operation. In fact, the *35* tone is exclusively the product of tone sandhi rules. Similarly, except for a small number of *33* reflexes inherited from PLB proto-tone 3, all tone *33* forms are also the result of secondary tone sandhi. Even forms with etymologically possible *42, 44,* and *55* reflexes may actually be the secondary products of sandhi. Fortunately, the original tonal reflexes may be sorted out from secondary conditioned sandhi reflexes.[2]

1.1 Open tones

With the open tones, the correspondences after sandhi adjustments are as follows:

PLB	Jino	number of forms
PLB *1	*42*	31
PLB *2	*44*	63
PLB *3	*33*	5

The unadjusted forms, taken largely from the lexicon in the back of Gai (1986), are given below, and then the relevant tone sandhi rules are discussed. The reflexes of the proto-tone 1 proveniences are straight-forward: 31 of the forms occurred in the *42* tone, e.g. the words for 'ask', 'boil', 'come', 'cry', 'barking deer', etc.[3] This is the expected tone.

In addition to the forms with a *42* reflex, there were two sets in which the cognate syllable is *44* rather than *42.* However, the *44* reflexes in these sets are not randomly distributed. In each case, the *44* reflex is the second member of a two-syllable construction, a pattern that would even without Gai's sandhi rules suggest a sandhi origin for the tone. Using Gai's sandhi rules (1986:11-12), these forms break down into two patterns: *42 + 42 > 44 + 44* (4 sets) and *44 + 42 > 33 + 44* (14 sets). In both cases the etymologically expected *42* tone has, due to sandhi interaction with a preceding 42 or a preceding 44 tone, become a 44 tone.

hair, body	**s-mwe*^{1}	*a*^{44} *m̥ɯ*^{44}	[42 + 42 > 44 + 44]
hundred	**rya*^{1}	*a*^{44} *ɕɔ*^{44}	[42 + 42 > 44 + 44]
see	**mraŋ*^{1}	*tɛ*^{44} *mjə*^{44}	[42 + 42 > 44 + 44]
sit	**nəw*$^{1(?)}$	*tɤ*^{44} *n̥*^{44}	[42 + 42 > 44 + 44]
bear	**d-wam*^{1}	*a*^{33} *ø*^{44}	[44 + 42 > 33 + 44]
cloud	**s-dim*^{1}	*m̥*^{33} *tɛ*^{44}	[44 + 42 > 33 + 44]
fat, be	**tsu*^{1}	*a*^{33} *tshɤ*^{44}	[44 + 42 > 33 + 44]
foot	**kriy*^{1}	*ʃɔ*^{33} *khi*^{44}	[44 + 42 > 33 + 44]

For the proto-tone 2 reflexes, the normal reflex is a *44* tone. The reflex is quite regularly found with some 63 forms. There are seven additional reflexes with discrepant tones (listed immediately below). The first two forms are grammatical particles; tonal irregularity in grammatical particles is of such high frequency as to have little or no significance in terms of our investigation. The next five are simply listed as irregular at this point with the possibility remaining open for several that they will prove not to be cognate at all.

question [yes-no]	**la²*	*la⁴²* -T
you	**naŋ²*	*nə⁴²* -T
urine	**ziy²*	*e⁴² tshe⁵⁵* ['water' + ?] -T
salt	**tsa²*	*tshə⁵⁵ khə⁴² lə⁴²*
two	**ni²(?)*	*n̥⁵⁵*
soft; tender	**s-nu²*	*no⁵⁵* -TI
seed	**s-yəw²*	*t/ɤ³⁵* [not an etymological tone] -T

The proto-tone 3 reflexes are in a way the most informative, since the presence of a proto-tone 3 reflex seems to be criterial for Lolo-Burmese membership. Here, the reflex is *33,* quite distinct from the *42* and the *44* of the other two open tones.

day	**niy³*	*n̥³³*
egg	**u³*	*a⁴⁴ vu³³*
full	**m-bliŋ³*	*ɣo⁵⁵ pɪɤ³³*
get; obtain	**ra³*	*jɔ³³ m̥⁴²*
moon	**k-la³*	*pu⁴⁴ ɬɔ³³*
open	**pwaŋ³*	*phɔ³³*
woman; female	**ma³*	*a⁴⁴ mɤ³³*

1.2 Stopped tones

Syllables originally ending in the stops *-p, *-t, and *-k have a distinct history within Loloish, a history set out with insight and clarity in Matisoff (1972). From originally toneless syllables ending in final stops, these tones have evolved within the history of Loloish; they developed from the interplay of voiced and voiceless prefixes interacting with the voicing and the manner of the root initial. The developmental patterns are sufficiently complex and sufficiently idiosyncratic to Loloish as to preclude the plausibility of this pattern being due to a similar but independent development. As a consequence, these patterns have been used elsewhere for subgrouping purposes (Thurgood 1982a).

Correspondences which pattern together are grouped together under an appropriate label. The examples are representative not exhaustive.

Table 1: Jino reflexes for stopped syllables

	gloss	PLB	Jino
*s-bak	burn	**s-duk*	*thɔ^{55}*
	cook, boil	**s-gyak*	*tʃhɑ^{55}*
*s-mak	deep	**s-nak*	*n̥ɑ^{55}*
	snot	**s-nap*	*n̥i^{55} pu^{44}*
	twist	**s-rik*	*jə^{55}*
*pak	deer, sambar	**tsat*	*tʃhi^{42} zɔ^{44}* -I
	pierce; stick into	**tsap*	*tshɔ^{42}*
	run	**kyat*	*thə^{42}*
*sak	tree	**sik*	*ɑ^{33} tsɤ^{44}* < 44 + 42
*k-rak	ant	**k-rwak*	*pu^{44} xɔ^{42}*
	chicken; fowl	**k-rak*	*jɑ^{42}*
	maggot	**k-luk*	*ɬɔ^{42}*
*s-pak	rope; string	**s-kyak*	*ɑ^{33} khɤ^{44}* < 44 + 42
*[s]mak	eye	**[s]myak*	*mjɑ^{42} tsi^{33}*
	back	**[s]nok*	*ɑ^{44} n̥ɔ^{42}*
	dream	**[s]mak*	*m̥e^{55} mɑ^{42}*
*m-pak	climb	**m-tak*	*tɑ^{42}*
	cut by blow	**m-tök*	*tə^{42}*
	emerge	**m-twak*	*tɔ^{42}*
*ryak	eight	**ryat*	*xɛ^{55}*
	stand	**ryap*	*xe^{55}*
	stomach	**wyik*	*ɣɔ^{55} phu^{44}*
*c-sak	kill	**c-sat*	*se^{55}*
	new	**c-šik*	*ʃi^{55}*
	pluck	**c-šak*	*tshɯ^{55}*
*c-pak	cold	**c-pak*	*tʃhɔ^{55}*
	lose	**c-pyok*	*ɲɪ^{42} phi^{55}*
	six	**c-krok*	*tɕhɔ^{55}*
*v-pak	goat	**v-cit*	*tʃhi^{55} pɛ^{33} lɛ^{33}*
	leaf	**v-p[y]ak*	*ɑ^{33} phɑ^{55}*
*rak	drunk	**yit*	*jɛ^{55}*
	hand	**lak*	*lɑ^{55} pu^{44}*
	hide	**wak*	*vɑ^{55}*
*zak	descend	**zak*	*zɑ^{55}*
*bak	cooked	**gyak*	*tʃɑ^{55}*
	leech, water	**grwat*	*e^{42} kø^{55}*
	waist	**gyok*	*ɑ^{33} tʃɔ^{55}*
*mak	brain	**nok*	*vu^{44} nɔ^{55}*
	hungry	**mwat*	*mø^{55}*
	morning; early	**nak*	*nɑ^{55}*

[In the labelling system, the prefixes are *s-, *(s-) also representing an *s-* but at a lesser time depth, *C- representing a tone lowering voiced consonant, *k- representing a tone-raising *k-* prefix (often an animal prefix), *m-, and *V- representing a tone-lowering vocalic prefix (with the same effect as *C-). The initials and finals are self-evident with bilabials used to represent all places of articulation and with nasals, voiced and voiceless stops, voiced and voiceless spirants, and *r-/*l-/*y-/*w- distinguished.] (This analysis and much of the data is from Matisoff (1972) (but cf. Thurgood (1977); the only 'original' contribution is in the addition of the Jino data.]

With the exception of the occasional apparent sandhi tone, the above correspondences are regular.

2. Further subgrouping of Jino

Benedict (1981) and Bradley (1983) both contended that Jino is 'Central Loloish'; the table below of tonogenetic developments of stopped-syllables confirms the 'Central Loloish' character. An examination of the patterns of tonal splits in the former stopped-syllables provides even more specific subgrouping information. The presence of at least a two-way tonal split in former stopped-syllables is characteristic of Loloish in general (Matisoff 1972), but in certain Loloish languages the original two-way division went on to become a three-way split. Table 2 below summarises the Loloish three-way split in stopped-syllables found in *all* stopped syllables of Sani, Ahi, Nasu, Luquan, Lisu, and Lahu (see Matisoff 1972; Thurgood 1982a).

Table 2: The Loloish three-way split of former stopped-syllables.

Initial Class	Sani	Ahi	Jino	Nasu	Luquan	Lisu	Lahu
*s-bak	55	55	*55*	*55*	*55c*	1	á (35)
*s-mak	55	55	*55*	*55*	*55c*	1	á (35)
=====	===	===	===	====	====	===	=====
*pak	44	44	42	32s	22s	2	â? (54s)
*sak	44	44	42	32s	22s	2	â? (54s)
*k-rak	44	44	42	32s	22s	2	â? (54s)
*s-pak	44	44	42	32s	22s	2	â? (54s)
*(s)mak	44	44	42	32s	22s	3	â? (54s)
*m-pak	44	44	42	32s	22s	3	â? (54s)
=====	===	===	===	====	====	===	=====
*ryak	22s	44s	*55*	34	*55c*	6	á (35)
*C-sak	22s	44s	*55*	*55*	*55c*	6	á (35)
*C-pak	22s	44s	*55*	*55*	*55c*	6	à? (21s)
*rak	22s	44s	*55*	*55*	*55c*	6	à? (21s)
*zak	22s	44s	*55*	*55*	*55c*	6	à? (21s)
*bak	22s	44s	*55*	*55*	*55c*	6	à? (21s)
*mak	22s	44s	*55*	*55*	*55c*	6	à? (21s)

The three series are separated by === and the subsequent merger of the first and third series is indicated by the use of italic numerals.

The presence of this split in Jino allows it to be subgrouped together with these languages and against the remaining Loloish languages, which underwent only a two-way split in stopped-syllables. Further, the fact that Jino shares the subsequent merger of the first and third series of stopped-syllable tones allows it to be subgrouped with Nasu and Luquan as against Sani, Ahi, Lisu, and Lahu.

3. The palatalisation of bilabials

The above subgrouping of Jino with Nasu and Luquan (in section 2 above) requires that the presence of palatal reflexes of original bilabial clusters in Sani, Ahi, Nasu, and Luquan be the result not of a single shared innovation but of several independent but parallel developments (contra Thurgood 1982a). The additional Jino data makes it clear that this palatalisation of bilabial clusters occurred 'independently' at least twice. An obvious consequence of this reinterpretation is that the palatalisation can no longer be used to group Sani and Ahi together with Nasu and Luquan (as it was in Thurgood 1982a).

Table 3: Loloish reflexes of original bilabial clusters.

PLB	Sani	Ahi	**Jino**	Nasu	Luquan	Lisu	Lahu	gloss
*blek	*dɪ^{22s}*	*di^{44s}*	—	—	—	—	—	become
*m-bliŋ^{3}	*dlæ^{33}*	*dɛ^{44}*	*pɹɤ^{33}*	*dɛ^{44}* *də^{213}*	—	—	—	full
*m-byaŋ^{1}	—	—	—	*d'a^{24}*	—	—	—	lazy
*byam^{1}	*tɬɪ^{33}*	*tɤ^{33}*	*pɹɛ^{42}*	*d'ɛ$^{24/213}$*	—	—	—	to fly
*bya^{2}	*dla^{11}*	*do^{21}*	*pj^{44}*	*-d'ɤ^{33}*	—	—	—	bee
*mruk	*ŋu^{55}* -I	—	*mjo^{55}*	—	—	*maw^{6}*	*mù?*	grass; to weed
*mraŋ^{2}	*ɲ^{55}* -T	—	*mjo^{44}*	*mu^{33}* -T	—	—	—	horse
*s-mraŋ^{1}	—	—	*m̥jo^{42}*	—	—	*mu^{3}*	—	high; tall
*mra^{1}	*ɲ^{44}*	—	*-mjə^{44}*	*ŋɔ^{213}*	—	*maw^{4}*	*mɔ̀*	see
*mra^{2}	*na^{55}* -T	—	—	—	*n̥u^{33}*	*myá^{5}*	*mâ*	many
*mwat	*ɲ^{22s}*	*ni^{44s}*	*mø^{55}*	*ñi^{55}*	—	*mrghe^{6}*	*mə̀?*	hungry
*[s]myak	*ne^{44}*	*nie^{44}*	*mjɑ^{42}*	*na^{32s}*	*na^{22s}*	*myá^{3}*	*mɛ̂?*	eye
*s-myok	*nu^{55}*	*nu^{55}*	*mɔ^{33} -T*	*nu^{44}-T*	*ñu^{55}*	—	—	monkey
*[s]myok	—	—	*mjɑ^{42}*	*nɛ^{32s}*	—	—	—	sprout
*myok	*nu^{55}* -T	—	—	*mɔ^{34}* -T *nu^{44}* - T	*ñu^{55c}*	*-mye^{6}*	*m`ɔ?*	monkey
*plu^{1}	*ɬz̩^{33}*	*to^{33}*	*phɹu^{42}*	*t'u^{24}*	—	—	—	white, silver
*c-plek	*ɬa^{22s}*	*-dɪ^{44s}*	—	*t'ə^{55}*	—	*hpye^{6}*	*phɛ̀?*	become
*priy^{1}	—	—	*phjə^{42}*	—	—	—	—	untie; loosen
*m-priŋ^{1}	*tɬæ^{33}*	—	*pɹɣ^{42}*	—	—	—	—	pus
*c-pyok	—	—	*-phi^{55}*	—	—	—	—	lose
*m-pyaŋ^{1}	—	—	*pɹə^{33}-*	*d'a^{24}*	—	—	—	lazy

Simple logic requires either that the merger of the first and third tonal series in section 2 occurred independently more than once or that the palatalisation of Loloish bilabial clusters occurred independently more than once; it is impossible to draw a genetic tree in which each change occurs only once. The logical possibility also exists that both changes occurred more than once, but given the rather idiosyncratic and specific nature of the tonal merger, it is unlikely that this change occurred under *precisely* the same conditions more than once. This leaves us with the conclusion that it is the palatalisations that occurred more than once.

This conclusion—that the palatalisations have multiple origins—is backed by more than simple logic. In general, despite the title of Ohala's (1978) paper 'Southern Bantu vs. the world: the case of palatalisation of labials', the palatalisation of bilabials is widely attested in Southeast Asian languages. Within Loloish itself, as David Bradley pointed out to me, certain northern Lisu dialects which are in a contact relationship with the Northern Yi languages discussed above have palatalised bilabial clusters. Outside of Loloish, as Paul Benedict pointed out to me, such palatalisations occur several places independently. Within Tibeto-Burman, such palatalisations occur in Tibetan dialects; outside Tibeto-Burman within the Kadai family, such palatalisations occur at least three different times. In terms of specific details, a careful examination of the data in Table 3 reveals a great deal of intra-language and cross-language variation in terms of which words palatalise and which do not. The nature of the variation suggests that what we have here is in part an areal convergence resulting from contact between these languages long after they had separated from their common origin.

4. Jino syntax

Among Loloish languages, certain features of Jino syntax appear unique and thus worthy of further study. For instance, Jino apparently (Thurgood 1985:454) 'has a perfective not characteristic of Loloish languages,' a rather archaic perfective marker which now must be analysed as having been lost elsewhere in Loloish rather than analysed as never having been in Loloish. The Jino marker in question is *sɔ*^{35} 'PAST', the initial *s-* of which may or may not be related to the widespread Tibeto-Burman *s- perfective marker.

Another feature worthy of further attention is the Jino 'existential' *ŋa*^{42}. In Jino, this shows up as a copular verb with several distinct variants: *ŋə*^{42}, *ŋə*^{44}, *ŋə*^{35}, *ŋa*^{55}. The first three forms, all with the vowel *-ə*, occur in non-sentence final position before some other sentential particle; the last form, with the vowel *-a*, occurs sentence-finally. Thus, the copular verb would internally reconstruct as ***ŋa***. The tonal variation, given the massive tone sandhi, is best ignored, but if it were to be analysed, the internally-reconstructible tone would be a 42 tone [< PLB *1]. When more than one verb occurs in a clause, this Jino form always occurs after what is semantically the main verb.

The closest apparent Loloish cognate is found among the sentence- final particles of Akha. Egerod (1974a) and Egerod and Hansson (1974) discuss Akha sentence-final evidential particles extensively, and among these are the particles used to report visually acquired knowledge: */ŋá/, /ŋà/, /ŋá-a/, /ŋà-a/.* The form *ŋa,* reporting visually acquired knowledge, is obviously the core of all four modern Akha forms and is restricted to first person subjects; in Thurgood (1986), it is

argued that this *ŋa* is from the old first person pronoun ***ŋa*** 'I', reinterpreted as a marker of visual evidence. This sentence-final particle only occurs after the main verb.

The Jino and the Akha forms are phonologically cognate and occur in the same syntagmatic slot. Thus, one possibility is that they are both reinterpreted remnants of the ***ŋa*** 'I' first-person-agreement marker found in the proto-Tibeto-Burman subject-verb agreement system. Another possibility, as Scott DeLancey points out (personal communication 1987), is 'that the Jino forms and very possibly the Akha forms are cognate with the Jinghpo locative/copula *nga*, which has no apparent connection with the pronominal etymon (since that still survives in the Jinghpo paradigm, and there is no particular connection between the copula and first person).'

Once it is established that Jino is Loloish, other Jino features also take on additional importance for historical reconstruction. Among these features are the pronoun system and the system of sentence-final particles, especially ε^{44} and $t\varepsilon^{44}$, which have cognates elsewhere in Lolo-Burmese, in Tibeto-Burman, and, at least in the case of ε^{44}, probably in Sino-Tibetan (Thurgood 1982b).

5. Conclusion

Gai's 1986 Jino, tonally more accurate than his 1981 work, allows us to substantiate Benedict's (1981) and Bradley's (1983) contention that Jino is Loloish. The substantiation of this classification has numerous diachronic consequences. Phonologically, Jino should, as Benedict suggests, provide valuable new data on the reconstruction of Lolo-Burmese initial clusters. In terms of Loloish sub-grouping, the Jino data forces certain changes in previous work and provides certain new insights. However, the most important contributions will most likely be the contribution Jino has to make to our understanding of the history not just of Lolo-Burmese but also of Tibeto-Burman morphology and syntax.

NOTES

1 I shall be astonished if all my errors should prove minor and grateful to readers for their corrections. The merits of this paper are due to the influence of the ideas of others, and the attempt has been made to give full credit for the ideas through citations in the text, in the footnotes, and in the bibliography. Where I have miscited or failed to cite a source, it is through my failure to understand or my poor memory; for these shortcomings I apologise. I wish to thank Scott DeLancey, David Bradley and Paul Benedict for their kind but useful criticisms of an earlier version of this paper; probably none of them would agree with all of my conclusions.

For Lewis's Akha the tone marks have been changed. Using the vowel ***a*** as an example, high tone is shown as ***á***, mid tone ***a*** (unmarked), low tone ***à***, high-stopped ***á̱*** and low-stopped ***à̱***. Irregularities in the correspondence sets are marked with a transparent code, e.g. -T indicates an irregular tonal correspondence, while -I indicates an irregular initial. The Jino forms cited have been checked for regular sound correspondences; in all cases, the forms have been checeked for initials, for rhymes and for tones.

2 Bradley (1983) sets out essentially the correct correspondences, but shortcomings in the data then available left a significant number of gaps and exceptions.

3 Those wishing a full list of forms will be sent one on request.

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