The Historical Development of Youle Jino

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1. Introduction

Jino[1)] is a Lolo (Yipho)-Burmese (Tibeto-Burman) language spoken in Xishuangbanna Autonomous district, Yunnan province, China (See Figure 1).[2)]

The population of Jino amounts to 20,899 (2000 census). The exact number of Jino speakers is still unclear, though the present author estimates about seventy or eighty percent of the population can speak Jino.[3)]

Jino has two main dialects, namely Youle and Buyuan. It is said that ninety percent of the speakers speaks Youle and the remainder Buyuan (Gai 1986).

This paper is a preliminary study of the historical development of Youle Jino and is mainly accomplished through comparison with Lolo-Burmese (LB) languages and Proto-Tibeto-Burman (PTB)/ Proto-Lolo-Burmese (PLB) forms.

Figure 1 Yunnan Province (雲南), China

2. Background

2.1 History of Jino Migration

Like other Tibeto-Burman ethnic groups, the migration of Jino still remains uncertain. Many Tibeto-Burman and Tai-Kadai ethnic groups derived from southern China, and some of them migrated into Burma, Thai, Laos and northern Vietnam (LaPolla 2003a). The Jino can be considered to have moved from northern Yunnan or southern Sichuan to the deep south of Yunnan which is their present habitation. It is said that their habitation does not cross over the China-Laos (or China-Burma) border, though the ethnic groups which historically might have had contact with them, such as Phunoi, Akha, Bisu, Mpi, etc., have migrated from Xishuangbannna (Sipsongpanna) into Phongsaly, northern Laos.

2.2 Previous Literature on the Genealogy of Youle Jino

From a diachronic aspect, Youle Jino is definitely a member of the Lolo-Burmese branch of the Tibeto-Burman family (see Figure 2). The Lolo-Burmese branch can be divided into two sub-branches, namely Loloish and Burmish (Benedict 1972, Matisoff 1972, etc). Many scholars consider the Jino language to be a Loloish language (Bradley 1983,[4)] Nishida 1989, Thurgood 1989, Dai 2003), though its language structure seems very similar to the Burmish group, as is pointed out by some linguists (Nishida 1989, Luo 1991, Hayashi 2007a).

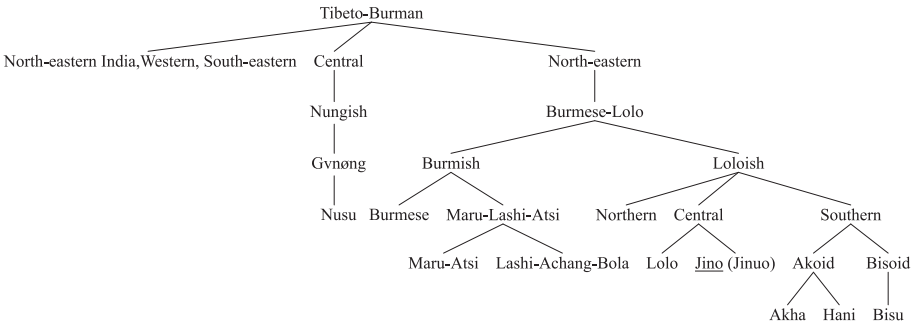

Figure 2 Tibeto-Burman Genealogy (Bradley 1997)

3. Phonological Development of Youle Jino

Tibeto-Burman historical phonology has been described and discussed by many linguists (Shafer 1966–73, Burling 1967/1968, Benedict 1972, Bradley 1979, Matisoff 1991, 2003, T. Nishida 2000, etc.), but most of them did not deal with Jino data to reconstruct Proto-Tibeto-Burman (PTB) or Proto-Lolo-Burmese (PLB), since linguistic data from Youle Jino were not available at that time.

This presentation does not attempt to mention all the previous literature in detail. In this section, the phonological development of Youle Jino will be discussed through analyses of the primary data that the present author has collected and by comparison with PTB or PLB forms that previous works have reconstructed.

3.1 Onsets and Rhymes

Sino-Tibetanists have a consensus on the onset voicing opposition in PTB stops and affricates, like **p-* vs. **b-*, or **ts-* vs. **dz-*, and so on (Benedict 1972, Matisoff 2003), which changed into *ph-* vs. *p-*, or *tsh-* vs. *ts-*, and so on, in most modern Burmish languages. In most modern Loloish languages, voiced stops and affricates still remain in their phonological inventories and they have developed new phonemes, namely voiceless aspirated stops and affricates, and generally have tripartite systems, such as *b-* vs. *p-* vs. *ph-*, and so on.[5)]

Youle Jino can be considered to be a member of the Loloish languages, though it has a binary opposition in stops and affricates, like Burmish languages, as in (1).

(1) a. *pi*^{55} 'to give' / *phi*^{55} 'to vomit', *tɛ*^{55} 'to look' / *thɛ*^{42} 'to clap', *kø*^{55} 'to deceive' / *khø*^{44} 'to be frightened'

b. *tsə*^{55} 'to knit' / *tshə*^{55} 'to concede', *tʃə*^{42} 'to live' / *tʃhə*^{44} 'to tell (a story)', *ʨe*^{44} 'to be wet' / *ʨhe*^{55} '(animals) to hold (something) in the mouth'

From the viewpoint of the stop/affricate changes, Youle Jino is very similar to Burmish languages rather than Loloish, and seems superficially innovative. However, Youle Jino has preserved the two-way contrast of stops and affricates in PTB, though it has undergone a VOT (voice onset time) change (PTB **b-* > J. *p-*, PTB **p-* > J. *ph-*, etc.), whereas other LB languages, especially Loloish, have created a three-way contrast, namely voiceless unaspirated /

Table 1 Some examples of Youle Jino voiceless/ voiced nasals and lateral

gloss	J	LH	WB	WT	PTB (Matisoff 2003)
'fire'	mi^{55}	mī	mii:	me	*mey
'extinguish'	m̥i^{42}	mè?	hmit	med-pa	*s-miːt
'hurt'	n̥ɔ^{42}	nà	naa-	na-ba	*na
'listen'	n̥ɔ^{42}	na	naa	——	*?-na
'four'	l̥i^{55}	ɔ̂	lei:	bźi	*b-ləy
'heavy'	a^{33}l̥i^{55}	hɔ̂	lei:-	lći-ba	*s-ləy-t

voiceless aspirated / voiced, through phonological interaction between prefix and root-initial consonants (**?-p* > LB *p-* / *ph-*).

Youle Jino has a voiced/voiceless contrast in nasals and lateral, which can be traced back to a **∅-* / **s-* (**?-*) prefix before sonorant root-initials in PLB and subsequently merged into voiced sonorants in most modern LB languages.[6)]

(2) a. *mi*^{55} 'fire'/ *m̥i*^{42} 'extinguish (fire)', *nɔ*^{42} 'hurt'/ *n̥ɔ*^{42} 'listen', *n̥i*^{55}*pu*^{44} '(nasal) mucus'/ *n̥i*^{55} 'two', *ŋa*^{33}*zɔ*^{55} 'bird'/ *ŋ̥a*^{55} 'pluck off'

b. *le*^{42} 'aluminum'/ *l̥e*^{42} 'study (v.)'

Table 1[7)] shows that some voiceless nasals and lateral in Youle Jino can be reconstructed as PTB **s-N / L* (Matisoff 2003).

In many LB languages (Lahu, Lisu, etc.), PLB complex nasals have affected the tonal tiers, such as high tones, whereas in Youle Jino, they have generally become voiceless nasals, which should be viewed as a kind of VOT change.

Matisoff (2003: 38–40) points out that some Loloish languages show interesting reflexes of nasal initials. In Bisu, PLB plain nasals, such as **m-*, **n-*, etc., have become homorganic voiced stops, namely *b-*, *d-*, etc., and PLB complex nasals, such as **s-n*, **s-m*, generally remain nasals, namely *n-*, *m-*, etc. Youle Jino also has some odd reflexes of PLB **s-N*, such as *ŋa*^{33}*zɔ*^{55}/ PLB **s-ŋak* 'bird', *nɤ*^{33}*sɯ*^{55}/ PLB **s-ni-ŋ/k* 'heart', etc., though these reflexes are more conservative than those of Bisu and can be considered to be merged into less marked nasals, namely voiced nasals.

In a nutshell, Youle Jino onsets have preserved the two-way contrast of the PTB/PLB onset system and therefore can actually be more archaic than other LB onsets, though they have undergone VOT changes (**g-* > J. *k-*, **s-m* > J. *m̥-*).

The correspondence of Lolo-Burmese rhymes is briefly summarized in Table 2.

As seen in Table 2, Youle Jino has twelve plain and no creaky vowels,[8)] whereas many other LB languages, except Naxi, Bisu, Achang, have several sets of plain and creaky vowels. Loloish languages have generally lost final stops and innovated creaky vowels, while Burmish languages have preserved them (Hu and Dai 1964, Dai 1979, etc.). It is arguable that Burmish languages have preserved more rhymes which could be reconstructed in PTB/PLB than Loloish.

In Loloish languages, plain vowels are generally opposed to creaky ones in terms of vowel coloring, for example, /a/ vs. /a̱/, /i/ vs. /i̱/. Youle Jino is very similar to other Loloish

Table 2 Lolo-Burmese Rhymes (Hayashi 2003)

J	H	L	ACH	WB
-i	-i	-u/ E	-i	-i
-ɯ/ -ɤ		-ɨ	-ə/ -ɑ	
-i		-i	-a	-ac
	-ɨ		-ək	
	-i	-i	-i	-ei
	-u	-i	-e	-ip
-e	-e	-ɨ	-an	——
	-e	-e	-at	-at
-ɛ			-et	
	-ɣ	-i	-am	-am̓
-ø	-e		——	-wan
	-ɔ		-ɔm	-wam̓
		-ɔ	-um	-um̓
	-e	-i	——	-wat
-a	-a	-ɑ	-ɔʔ	-ak
-ə	-o	-o/-ɯ	-aŋ	-ang
	-a		-ɔ/-ua	-a
-ɔ		-ɑ		
	-ɔ	-o	-ɔŋ	-wang
-o	-u	-o/-u	-oʔ	-ɔk
-ɤ	-ɯ	-ɯ	-iŋ	-im
	-ɔ/-e	-i/-ɯ	——	-aň
-ɯ	-ɔ		-əŋ	
	-ɯ	-ɣ/-ɯ	-ui	-wei
-u	-u	-u	-au	-o
			-u	-u
	-u		-op	-up

languages in that it also lost final stops, but is completely different in that it did not innovate creaky vowels but instead created many vowel colors in its phonological inventory. Youle Jino rhymes can be considered to be more innovative than other LB languages.

3.2 Medials

TB comparative linguistics reveals that several types of medials, such as *-l-*, *-r-*, *-y-*, *-w-*, etc., can be reconstructed to the PTB phonological inventory. *-l-*, *-r-*, *-y-*, *-w-* can also be reconstructed as medials in PLB, based on the Old Burmese transcriptions. This paper focuses on *-l-*, *-r-*, and *-y-*, because *-w-* could be better analyzed as a part of a vowel in some languages.

3.2.1 Changes of medials in Youle Jino

Youle Jino has two medials (*-r-*, *-y-*) like Bisu (*-l-*, *-y-*) spoken in Thailand (Nishida 1966, Person 2000), though most Lolo-Burmese languages have only one (usually *-j-*) or no medials in their phonological inventories.

Table 3 shows the correspondence of medials in Lolo-Burmese (Hayashi 2002).

In Table 3, it seems possible to set up some basic correspondence rules of medials in LB. As for 'pus' and 'full', Youle Jino *-r-* corresponds to H *-j-*: ACH *-z̥-*: WB *-r-*: PLB *-l-*.

Table 3 Correspondence of Medials in Lolo-Burmese

	gloss	J	H	ACH	WB	Matisoff (2003)
-r-	'pus'	p**r**ɯ^{42}	b**j**ɔ^{55}	pz̥ɔŋ^{55}	praň	*blen
	'full'	∼p**r**ɯ^{44}	b**j**ɔ^{33}	pz̥ɔŋ^{35}	praň.-	*bliŋ
	'fly'	p**r**ɛ^{42}	b**j**ɔ^{33}	**t**s̱am^{55}	pyaṁ-	*byam
	'white'	∼ph**r**u^{55}	ph**j**u^{55}	phz̥o^{55}	phruu-	*plu
	'lick'	m**r**ɔ^{55}	m**j**e̱^{31}	**l**iap^{55}	lyak-	*lyak
	'fall'	k**r**ɔ^{44}	[Mo] ∼kɔ^{33}	kẕua^{35}	kya-	*gla
	'wide'	∼k**r**ə^{55}	**j**e^{55}	kaŋ^{31}	kyay-	*glay
	'river'	∼kh**r**ɔ^{55}	**l**o^{55}∼	**t**s̱**h**ă^{55}∼	khyɔng:	*klyoŋ
	'feces'	∼kh**r**i^{55}	[Mo] ∼**t**ɕhi^{31}	**t**ɕ**h**i^{55}	khyei:	*kləy
-j-	'bee'	p**j**ɔ^{55}∼	b**j**a^{31}	**t**s̱ua^{31}∼	pyaa:	*bya
	'speak'	p**j**a^{42}	(e^{55})	kẕai^{55}	prɔ:-	*br(w)ak
	'scratch'	ph**j**o^{33}	p**j**a̱^{33}	khz̥ɔn^{55}	phyɔk-	(*krak)
	'high'	∼m̥**j**o^{42}	(ɡo^{31})	m̥z̥aŋ^{55}	mrang.-	*mraŋ
	'eye'	m**j**a^{33}∼	m**j**a̱^{33}	n̥ɔ$^{?55}$∼	myak-ci.	*myak
	'horse'	m**j**o^{55}	mo^{31}	m̥z̥aŋ^{55}	mrang:	*mraŋ
	'tendon'	∼k**j**u^{55}	∼ɡu^{31}	∼kz̥ɔ^{31}	∼krɔ:	——
	'hear'	k**j**ɔ^{55}	ɡa^{31}	kẕua^{31}	kraa:-	*gla
	'six'	kh**j**o^{55}	ku̱^{31}	xz̥o$^{?55}$	khrɔk	*kruk

On the other hand, as for 'bee' and 'eye', Youle Jino *-j-* corresponds to H *-j-*: WB *-y-*: PLB *-y-, and as for 'speak', 'high', and 'horse', it corresponds to H *-j-*: WB *-r-*: PLB *-r-. In most modern LB languages, such as Hani, PLB *-l-, *-r-, and *-y- have merged into *-j-* or zero. However, it is safe to say that Youle Jino has preserved the distinction between PLB *-l- and *-r- / *-y-, the latter of which merged into Youle Jino *-j-*.

There are, of course, some problems in the correspondence of medials. For example, as for 'fly', Youle Jino has *-r-*, but Achang and WB do not have *-z̥-* and *-r-* respectively. Matisoff (2003) considers that this form should be removed from the correspondence set for *-l- above, but from the evidence of Youle Jino, PLB **byam* could be reconstructed as **blam*, which would account for the medial change of Youle Jino.

In addition, medials following velar initials are more problematic. In Old Burmese inscriptions, there are three types of velar and medial clusters, namely {kl}/{khl}, {ky}/{khy}, and {kr}/{khr}. However, in Written Burmese, the former two groups ({kl}/{khl} and {ky}/{khy}) merged into one ({ky}/{khy}), while the last one ({kr}/{khr}) remained as it was. It can not be attested that {-l-} after velar initials underwent the {-r-} stage before merging into {-y-} (Nishi 1999: 46).[9)]

On the other hand, as seen in the *-r-* column of Table 3, Youle Jino *kr* / *khr* can be traced back to PLB *gl / *kl. Hence, it should be considered that Youle Jino had diverged from PLB before its medial mutation.

3.2.2 Dropping and emerging -j-

3.2.2.1 Dropping -j-

Medial *-j- preceding front vowels in proto-forms dropped in the development of Youle Jino.

As in Table 4,[10)] apart from 'tail', Matisoff (2003) reconstructed **-r-* in the PLB stage, though *-r- can be reconstructed as the medial in 'tail' as well, based on the WB and Achang

Table 4 Dropping -j- in Youle Jino

	gloss	J	H	ACH	WB	Matisoff (2003)
-j-	'tail'	∼m̥i^{55}	∼mi^{31}	∼n̥aŋ^{35}	∼mrii:	*mi
	'earth'	mi^{33}∼	mi^{55}∼	mi^{55}	mrei	——
	'frightened'	khø^{44}	gu̱^{33}	ʐo$^{?55}$	krɔk-	*krok
	'sweat'	khi^{55}	khɔ^{31}∼	∼xə^{35}	khywei:	*krwəy
	'foot'	∼khi^{55}	∼khɯ^{55}	ʈ͡ʂhi^{55}	khrei	*krəy
	'comb'	phi^{55}∼	phe^{31}	phʐa^{31}	bhii: (phrii:-)	*pri

Table 5 Emerging -j- in Youle Jino

	gloss	J	H	ACH	WB	Matisoff (2003)
-j-	'nine'	kju^{55}	[MO] ɣu^{31}	kau^{31}	ko:	*gəw
	'steal'	khju^{55}	xø^{31}	xau^{31}	kho:-	*kəw

forms. In Jino, *-r- of PLB changed into *-j-*, and then the rhymes became front vowels. After that change, *-j-* before front vowels was lost.

For instance, as for 'frightened', the PLB form **krok* could have developed as follows:
**krok* > **khrok* > **khjok* > **khjø* > J. *khø*^{44}

3.2.2.2 Emerging -j-

In Youle Jino, a medial *-j-* sometimes emerged between a velar onset and the vowel *-u*, though such examples are few.

Apart from Jino, medials can not be found in the forms for 'nine' and 'steal' in any LB languages, so that they could not be reconstructed in PLB either (Matisoff 2003). *-j-* in Youle Jino therefore should be viewed as an independent innovation, which is not attested in other LB languages.

As for 'steal', the PLB form **kəw* could have developed as follows:
**kəw* > **khəw* > **kho* > **khu* > J. *khju*^{55}

3.3 Tone

PTB was probably a toneless language since some modern TB languages, such as Amdo Tibetan, northern dialects of Qiang, etc., do not have tones in their phonologies (Dai 1991, Matisoff 2001). Many modern TB languages, on the other hand, have tones, which could be traced back to various elements of PTB syllables. PLB probably acquired a tone system through a tonogenesis process after diverging from PTB (Matisoff 1972, 2003, Mazaudon 1977, Bradley 1979, Weidert 1987).

3.3.1 Unchecked syllables

In most previous studies, the reconstruction of the PLB tone system is based on the tone marks of Written Burmese. Written Burmese has a three-way contrast in unchecked syllables ('live' syllables as coined by Matisoff 1991), therefore such syllables in PLB also have three types of tones.

Table 6 Lolo-Burmese Unchecked Syllables <Tone 1>

WB Tone	gloss	J	H	ACH	ZW	WB
Tone 1	'die'	ʃi^{42}	si^{55}	ʂ̩^{55}	ʃi^{51}	sei-
	'enter'	o^{42}	(thɔ^{33})	ɔŋ^{55}	vaŋ^{51}	wang-
	'painful'	nɔ^{42}	(kǫ^{31})	(xə^{31})	no^{51}	naa-
	'come'	lɔ^{42}	la^{55}	(ʐ̩ə^{35})	le^{55}	laa-
	'look for'	ʃɔ^{42}	(ʨho^{33}mo^{55})	tuai^{55}**xɔ**^{31}ʐ̩ua^{35}	mjaŋ^{51}**xo**^{31}	hra-
	'fly'	prɛ^{42}	bjɔ^{55}	tʂ̩am^{55}	taŋ^{21}	pyaṁ-
	'rain (v.)'	xo^{42}	ɔ^{31}ze^{55}**ze**^{55}	ʐ̩ɔ^{55}	vo^{51}	ywaa-
	'iron'	ʃɛ^{42}	sɔ^{55}	ʂ̩am^{55}	(ʃam^{51}tǫ$^{?55}$)	saṁ
	'1SG. NOM'	ŋɔ^{42}	ŋa^{55}	ŋɔ^{55}	ŋo^{51}	ngaa
	'10'	tshʏ^{42}	tshe^{55}	ʨhe^{55}	tshe^{51}	chay
	'be pointed'	a^{33}**ʨhø**^{55}	ʨhe^{33}	(liam^{31})	tʃhun^{51}	khyon-
	'sweet'	a^{33}**tʃhi**^{55}	ʨhu^{55}	(uai^{31})	tʃhui^{31}	khyo-
	'red'	a^{33}**n̥ɤ**^{55}	n̥i^{55}	na^{55}	ne^{51}	nii-/ a-nii
	'white'	a^{33}**phru**^{55}	phju^{55}	phz̥o^{55}	phju^{51}	phruu-
	'green'	a^{33}**n̥u**^{55}	n̥u^{55}	n̥au^{55}	ŋjui^{51}	ňo-
	'thick'	a^{33}**thu**^{55}	thu^{55}	(kan^{31})	thu^{51}	thuu-
	'name'	a^{33}**me**^{55}	tsho^{55}**mjɔ**^{55}	a^{31}**n̥iŋ**^{55}	mjiŋ^{51}	maň
	'guts'	a^{33}**vu**^{55}	u^{55}	a^{31}**u**^{55}	u^{51}	uu
	'bear (animal)'	a^{33}**ø**^{55}	xɔ^{31}**ɔ**^{55}	ɔm^{55}	vam^{51}	waṁ
	'water'	**ji**^{33}tʃho^{55}	**u**^{55}ʨu^{31}	(ti^{55})	vui^{51}	rei
	'nose'	**nɔ**^{33}to^{55}	**na**^{55}me^{55}	n̥ɔŋ^{55}	no^{51}	hnaa-khɔng:
	'mosquito'	**ɕo**^{33}kjə^{55}	**ja**^{55}ɡo^{31}	(phɔp^{55})	(kjaŋ^{51})	yang
	'long'	jɔ^{55}**ʃɯ**^{55}	(mo^{55})	sɔŋ^{55}	xiŋ^{51}	hraň-
	'foot'	ʃɔ^{55}**khi**^{55}	a^{31}**khɯ**^{55}	ʨhi^{55}	khji^{51}	khrei

The tones of unchecked syllables in modern LB languages correspond to those of Written Burmese, as seen in Table 6, 7 and 8.

Tables 6, 7 and 8 show the tonal correspondence rules in LB, as summarized in Table 9.

Table 9[11] shows that there is a complexity of tonal correspondence among LB languages, especially in Youle Jino whose tones correspond in many ways. This paper claims that the Youle Jino tone highlighted in bold face in each column is the basic reflex of the PLB tone, while the others were derived by disyllabization (**4.1**) or by synchronic tonal alternation, which can not be explained here in detail.

3.3.2 Checked syllables

The tones in checked syllables of LB languages correspond more systematically than those in unchecked syllables, as seen in Table 10.[12]

As in Table 10, the tonal correspondence in checked syllables of LB is divided into two groups, which can not be attested in Written Burmese, but is found in other LB languages. The difference between these two tonal sets might have derived from the voicing feature of the onsets, as argued by Nishi (1999: 53), etc. Table 11 summarizes tonal correspondence sets in LB.

The highlighted tone in each column of Youle Jino is probably the basic reflex of the PLB tone, whereas the other tone, namely 44, probably developed by synchronic tonal alternation or by diachronic disyllabization (**4.1**), similar to the situation of unchecked syllables.

Table 7 Lolo-Burmese Unchecked Syllables <Tone 2>

WB Tone	gloss	J	H	ACH	ZW	WB
Tone 2	'wash'	tshi^{55}	tshi^{31}	(phɔp^{55})	chi^{21}	chei:-
	'walk'	zo^{55}	zu^{31}	so^{31}	so^{21}	swaa:-
	'eat'	tsɔ^{55}	dza^{31}	ʈ̬ɕ^{31}	tso^{21}	caa:-
	'steal'	khju^{55}	xø^{31}	xau^{31}	khau^{21}	kho:-
	'hear'	kjɔ^{55}	ga^{31}	kz̬ua^{31}	vo^{55}**kjo**^{21}	kraa:-
	'give'	pi^{55}	bi̱^{31}	tsi^{31}	pji^{21}	pei:-
	'expensive'	phu^{55}	phø^{31}	(kɔ^{55})	phau^{21}	a-pho: ['price']
	'horse'	mjo^{55}	mo^{31}	m̬z̬aŋ^{31}	mjaŋ^{21}	mrang:
	'fire'	mi^{55}	**mi**^{31}dza^{31}	(poi^{31})	mji^{21}	mii:
	'5'	ŋɔ^{55}	ŋa̱^{31}	ŋɔ^{31}	ŋo^{21}	ngaa:
	'9'	kju^{55}	ɣø^{31}	kau^{31}	kau^{21}	ko:
	'bitter'	a^{55}**khɔ**^{55}	xa^{31}	xɔ^{31}	kho^{21}	khaa:-
	'feces'	a^{55}**khri**^{55}	ɕi^{31}	ʈ̬ɕhi^{31}	khji^{21}	khyei:
	'salt'	**tshə**^{55}khə^{42}	**tsha**^{31}dɤ^{31}	ʈ̬chɔ^{31}	tsho^{55}	chaa:
	'frog'	**phɔ**^{55}thɛ^{55}	xa^{31}**pha**^{31}	phɔ^{31}	**pɔ̱**^{21}khe̱k^{55}	phaa:
	'bee'	**pjə**^{55}jə^{55}	**bja**^{31}si^{55}	**tʂua**^{31}ɕaŋ^{31}	**pjŏ**^{21}jaŋ^{21}	pyaa:
	'fruit'	a^{55}**sɯ**^{55}	a^{55}si^{31}	ʂ̬ɔ^{31}	ʃi^{21}	a-sii:
	'liver'	a^{33}**tshɯ**^{55}	tshɔ^{31}	a̱^{31}ʂ̬əŋ^{31}	siŋ^{21}	a-saň:
	'dog'	**khɯ**^{33}ŋi^{55}	a^{31}**khɯ**^{31}	xui^{31}	khui^{21}	khwei:
	'slippery'	a^{33}**krø**^{55}	**dz̬u**^{55}lɯ^{55}ne^{33}	(ne$^{?35}$)	tʃu̱t^{55}	khyɔ:-

Table 8 Lolo-Burmese Unchecked Syllables <Tone 3>

WB Tone	gloss	J	H	ACH	ZW	WB
Tone 3	'ripen'	m̬jɤ^{44}	mjɔ^{33}	ŋ̬eŋ^{35}	mjiŋ^{55}-	hmaň.-
	'fall'	krɔ^{44}	ja^{33}	kz̬ua^{35}	kjo^{55}	kya.-
	'full'	a^{55}**prɯ**^{44}	bjɔ^{33}	pz̬əŋ^{35}	pjiŋ^{55}	praň.-
	'moon'	pu^{55}**l̥ɔ**^{44}	**la**^{33}si^{31}	pau^{51}**l̥ɔ**^{35}	**lɔ̱**^{55}mo^{55}	la.
	'open'	phɔ^{55}	phɔ^{33}	phɔŋ^{35}	phoŋ^{55}	phwang.-
	'know'	sɯ^{55}	xɤ^{33}	sɑ^{35}	se^{55}	si.-
	'day'	n̥^{55}	nɔ^{33}	n̥en^{31}	ŋ̬ji^{55}	nei.
	'tall'	la^{55}**m̥jɔ**^{42}	(ɡɔ^{31})	m̬z̬aŋ^{55}	mjaŋ^{51}	mrang.-

Table 9 Tonal correspondence in unchecked syllables of LB languages

WB Tone	J	H	ACH	ZW
Tone 1	**42**/ 33/ 55	55	55	51/21
Tone 2	**55**/ 33	31	31	21/ 55
Tone 3	55/ **44**/ 42	33	35/ 31/ 55	55/ 51

3.3.3 "Polysyllabization", stress pattern and "word-tonalization"

As will be discussed below (**4.1**), it is safe to say that Youle Jino has changed from a monosyllabic language to a polysyllabic language, like most other Sino-Tibetan languages. However, it should be noted that more nominals have become "polysyllabized" than verbal roots.

"Polysyllabization", especially disyllabization, is related to different prosodic features in the Sino-Tibetan area. The languages spoken in southern China and mainland southeast Asia (Sino-sphere [Matisoff 1990]), regardless of which language family they are affiliated

Table 10 Lolo-Burmese Checked Syllables

	gloss	J	H	ACH	ZW	WB
A	'kill'	se^{55}	se̱^{31}	sat^{55}	sat^{21}	sat-
	'pig'	va^{55}	a^{31}ɣa̱^{31}	o^{ʔ55}	va^{ʔ21}	wak
	'sew'	kju^{55}	ɡu^{3}	xẓop^{55}	khjup^{55}	khyup-
	'lick'	mrə^{55}	mje̱^{31}	liap^{55}	jo^{ʔ21}	lyak-
	'sleep'	ji^{55}	ju̱^{31}	e^{31}	ju̱p^{55}	ip-
	'2'	n̥^{55}	n̥i^{31}	(sək^{55})	i^{55}	hnac
	'6'	khjo^{55}	ku̱^{31}	xẓo^{ʔ55}	khju^{ʔ55}	khrɔk
	'8'	xɛ^{55}	ɕe̱^{31}	ɕet^{55}	ʃit^{55}	hrac
	'deep'	a^{33}**na**^{55}	na̱^{31}	(lək^{55})	nik^{21}	nak-
	'new'	a^{33}**ʃi**^{55}	sɻ^{31}	ʂək^{55}	a^{21}sik^{55}	sac-
	'sheep'	**tɕhi**^{55}pɛ^{44}	a^{31}**tsi̱**^{31}	(pa^{ʔ55})	(pai^{21}nam^{55})	chit
	'hand'	**la**^{55}pu^{44}	a^{31}la̱^{31}	lɔ^{ʔ55}	lo^{ʔ21}	lak
	'be bent'	a^{55}**kho**^{44}	ɣu̱^{31}	kok^{55}	koi^{55}	kɔk-
B	'chicken'	ja^{42}	a^{31}xa^{33}	kẓua^{ʔ55}	vo^{ʔ21}	krak
	'wrap'	thø^{42}	to̱^{33}	tshet^{55}	(kje^{ʔ21})	thup-
	'climb up'	ta^{42}	da̱^{33}	tɔ^{ʔ55}	to^{ʔ21}	tak-
	'pick up'	ko^{42}	(u̱^{31})	ku^{ʔ55}	ku̱i^{51}	kɔk-
	'sharp'	tha^{42}	ta̱^{33}	thɔ^{ʔ55}	tho^{ʔ55}	thak-
	'black'	a^{55}**na**^{42}	na̱^{33}	(lɔk^{55})	no^{ʔ21}	nak-
	'fear'	khø^{44}	ɡu̱^{33}	ẓo^{ʔ55}	kju^{ʔ21}	krɔk-
	'bird'	**ŋa**^{33}zɔ^{55}	(a^{55}dzi^{55})	m̥ɔ^{ʔ55}	ŋo^{ʔ55}	hngak
	'eye'	**mja**^{33}tsi^{55}	mja̱^{33}	**n̥ɔ^{ʔ}**^{55}tsi^{ʔ55}	**mjo^{ʔ}**^{21}tʃi^{55}	**myak**-cei

Table 11 Tonal correspondence in checked syllables of LB languages

Tone group	J	H	ACH	ZW
A	**55**/ 44	31	55	55/ 21
B	**42**/ 44/ 33	33	55	55/ 21

with, mostly belong to iambic stress languages. The iambic stress pattern may have created sesquisyllabic (one-and-half syllable) words in this area.[13)]

Youle Jino was possibly a syllabic-tone language, but various factors (language contact with Chinese, linear phonological changes, etc.) have made it an iambic and word-tonal language (Hayashi 2005).

Modern Youle Jino nouns are mostly disyllabic with the second syllable carrying stress, as shown in (3). Stressed syllables are written in bold face.

(3) *ja*^{42} 'fowl': *ja*$^{42\rightarrow33}$***phɔ***^{55} 'cock' (*phɔ*^{55} 'male'), *ja*$^{42\rightarrow33}$***mɔ***^{55} 'hen' (*mɔ*^{55} 'female')

The word for'fowl' in Youle Jino is monosyllabic *ja*^{42}, while 'cock' and 'hen' are disyllabic with a suffix expressing 'male' and 'female' respectively. The stress pattern of disyllabic nouns such as (3) is iambic, so that it often forms the tonal pattern [33-55].

Adjectives and verbs in Youle Jino are much more complicated than nouns. In Youle Jino, adjectives have five word-tonal patterns and monosyllabic verbs have fifteen word-tonal patterns (Hayashi 2007a), which do not correspond to any tonal systems in TB languages and are considered to have developed independently.

4. Morphosyntactic Development of Youle Jino

4.1 Disyllabization

4.1.1 Monosyllabic cognates

Comparison among TB languages reveals that the words of PTB were not polysyllabic but monosyllabic. In Youle Jino, most verbal roots are monosyllabic, as shown in (4).

(4) *tsɔ*^{55} 'eat', *tə*^{42} 'drink', *mju*^{55} 'swallow', *le*^{55} 'go', *ta*^{42} 'go up', *tɛ*^{55} 'watch', *mjə*^{42} 'see', *kjɔ*^{55} 'think', *n̥ɔ*^{42} 'listen', *m*^{42} 'make', *khju*^{55} 'steal', *ne*^{55} 'count', *ko*^{42} 'bring', *me*^{33} 'cry', *mrɛ*^{35} 'delicious', *jɔ*^{55} 'good', *m̥rɯ*^{55} 'swirl (head)', etc.

There are also a few monosyllabic nouns in Youle Jino.

(5) *khi*^{55} 'sweat', *ne*^{55} 'ghost', *ja*^{42} 'chicken', *jo*^{44} 'elephant', *l̥i*^{33} 'wind', *mi*^{55} 'fire', etc.

The verbal roots of Youle Jino usually do not occur independently, but occur inside a verbal complex in narratives, as in Table 12.

In Youle Jino, verbal roots tend to remain monosyllabic because the verbal complex including them is generally polysyllabic, whereas nouns tend to be disyllabic because the noun phrase usually occurs independently. This may be the reason why more verbal roots are monosyllabic than nouns.

4.1.2 Types of disyllabization

This section focuses on nominal disyllabization, which can result from three types of morphological process, namely NP marking (*a-* prefix), compounding, and reduplication (Xu 1992).

4.1.2.1 NP marking

Many Youle Jino nouns have an *a-* prefix, which is also found in many other Tibeto-Burman languages (Fu 1996). It should be noted that the root can not occur independently (for instance, ^{NG}*kju*^{55} 'tendon'), hence Youle Jino prefixed *a-* to disyllabify many nominal roots after it diverged from the proto-language.

Xu (1992) studies the semantic fields of *a-* prefixed nouns in TB, but they actually vary from language to language, though many TB languages prefix *a-* to nouns expressing kinship, human body parts, fauna and flora, etc. It may not be possible to determine what *a-* in TB derived from,[14] but we can speculate that *a-* prefixation results from drift occurring after the languages diverged.

Table 12 The Youle Jino Verbal Complex

(prev)-(pref$_1$)-(pref$_2$)-(pref$_3$)-[VERB]-(acp)-(B/R)-(T/A$_1$)-(T/A$_2$)
-(caus)-(aux$_1$)-(aux$_2$)-(T/A$_3$)-(still)-(T/A$_4$)

4.1.2.2 Compounding

Table 14 exemplifies some words for human body parts and bugs in LB languages.

Table 14 shows that the first syllable of 'eye' and 'face' in Youle Jino is the nominal root and corresponds to that in other LB languages. This is the case in the set of 'mouth' and 'beard', in the set of 'hair', 'head', 'bald', and 'hat', and also in the set of 'bug', 'butterfly', 'ant' and 'turtle'.

As shown in Table 14, the forms for 'eye' and 'brain' in LB languages are clear correspondence sets, hence each syllable can be traced back to the PLB (or PTB) stage. On the other hand, the remaining examples need to be dealt with differently. The Youle Jino forms for 'face', 'hair', 'hat' and 'turtle' definitely correspond to those in Hani, but not to other LB languages. For instance, the first syllable of 'hair (of head)' in Youle Jino, *tshɛ*^{55}, corresponds to the last syllable of Zaiwa *tsham*^{51} and the first syllable of Written Burmese *chaṁ*, but not to any syllable of Achang. 'hair' in Achang consists of *u*^{31} 'head' + *mui*^{31} 'fur/hair', while in other LB languages 'hair (of head)' is expressed in a different way from 'fur/hair'.

It is probable that PTB was a monosyllabic language and that many nouns in modern TB

Table 13 *a-* prefixed nouns of Youle Jino

gloss	J	H	ACH	ZW	WT
'tendon'	a^{55}kju^{55}	sa^{31}ɡu^{31}	a^{31}kz̯ə^{31}	a-krɔ:	rgyus pa
'door'	a^{55}ko^{44}	lu^{55}ɣu̯^{33}	pă^{31}tu^{35}	taṁ -khaa:	sgo
'thorn'	a^{55}kjo^{55}	a^{55}ɡɔ^{33}	ʨo^{31}	chuu:	tsher ma
'name'	a^{55}m̥e^{55}	tsho^{55}mjɔ^{55}	a^{31}n̥iŋ^{55}	naa-maň	ming
'father'	a^{55}pu^{55}	a^{31}da^{33}	teˀ	a-phei	pha
'mother'	a^{55}mɔ^{44}	a^{31}ma^{33}	mauˀ^{51}	a-mei	ma
'grandfather'	a^{55}phu^{55}	a^{31}bo^{55}	lɔŋ^{35}	a-bho:	po'o
'tree'	a^{33}tsɯ^{55}	a^{55}bo^{55}	saŋ^{31}tseŋ^{55}	sac-pang	shing sdong
'leaf'	a^{33}pha^{55}	a^{55}pa̯^{31}	a^{31}xz̯o^{ʔ55}	a-rwak	lo ma
'front'	a^{55}fu^{55}	me^{31}si^{33}	n̥ɔ^{ʔ55}si^{ʔ31}	hrei.	mdun
'back'	a^{55}no^{42}	nɔ^{55}xɔ^{33}	n̥oŋ^{55}pa^{31}	nɔk	rgyab
'above'	a^{33}tha^{55}	do^{33}n̥a^{33}	a^{31}lum^{31}	a-thak	stod

Table 14 Nominal Compounds in LB

gloss	J	H	ACH	ZW	WB
'eye'	mja^{33}tsi^{55}	mja̯^{33}	n̥ɔ^{ʔ55}tsi^{ʔ31}	mjoˀ^{21}tʃi^{55}	myak-cei
'face'	mja^{33}phrə^{55}	mja̯^{33}phø^{31}	n̥ɔ^{ʔ55}mui^{31}	mjoˀ^{21}toŋ^{21}	myak-hnaa
'mouth'	m̥ø^{55}m̥ø^{55}	me^{31}bɔ^{31}	n̥o̯t^{55}	nu̯t^{55}	hnut
'beard'	m̥ø^{33}m̥ɯ^{55}	me^{31}mo^{31}	n̥o̯t ^{55}mui^{31}	nu̯t^{55}mui^{21}	hnut-khan-mwei:
'hair'	tshɛ^{55}khɯ^{55}	tshe^{55}khɔ^{55}	ŭ^{31}mui^{31}	u^{21}tsham^{51}	chaṁ-pang
'head'	vu^{55}khɛ^{55}	u^{31}du^{31}	ni^{31}kuaŋ^{31}	u^{21}lu̯m^{21}	uu:-khɔng:
'brain'	vu^{55}no^{55}	u^{31}nɔ^{31}	u^{31}nuˀ^{31}	u^{21}nuˀ^{55}	uu:-hnɔk
'bald'	vu^{33}ta^{55}	u^{31}n̥i^{55}	nă^{31}kuaŋ^{31}liŋ^{55}	ŭ^{21}tʃu̯t^{55}	khɔŋ: -tuṁ:
'hat'	vu^{55}tsho^{55}	u^{31}tshɔ^{31}	u^{31}suŋ^{31}	muˀ^{21}kjup^{55}	uu:-thup
'bug'	pu^{55}tʃu^{55}	bø^{31}za^{31}	pau^{31}	pau^{21}	po:
'butterfly'	pu^{55}lu^{42}	a^{55}lu̯^{33}dza^{55}bɔ^{55}	phă^{31}z̯am^{35}ts̯am^{55}	phɔ̆^{55}la̯m^{55}	lip-praa
'ant'	pu^{55}xɔ^{44}	a^{55}u̯^{33}la^{55}de^{31}	ʨhi^{55}man^{55}	pau^{51}voˀ^{55}	pu-rwak-chit
'turtle'	pu^{33}tʃhi^{55}pu^{33}phjɔ^{55}	bø^{31}ʨhu^{55}bø^{31}bjɔ^{55}	(tau^{35})	(ta̯u^{55}kop^{21})	(lip)

languages have been disyllabized or polysyllabized independently. 'hat' in both Youle Jino and Hani consists of 'head' (*vu*^{55} and *u*^{31}) + 'wear' (*tsho*^{55} and *tshɔ*^{55}), whereas in Achang and Written Burmese the disyllabization probably occurred after each language diverged, though the first syllables (*u*^{31} and *uu:*) are cognate.

The fact that disyllabization is a by-product of language divergence of TB supports the idea that two languages are more closely related if they have many words which correspond to each other in every syllable, though it needs to be studied from the viewpoint of language contact. The clear correspondence in 'turtle' of Youle Jino and Hani implies that these two languages may be more closely related.

4.1.2.3 Reduplication

Nominal reduplication is found in every TB language. Xu (1992) claims that Loloish languages reduplicate nouns more frequently than Burmish languages. Reduplication in some Loloish languages is exemplified in (6) (Xu 1992: 260).

(6) a. Lolo: *dzu*^{33}*dzu*^{42} 'water', *vɛ*^{33}*vɛ*^{33} 'flower', *sl̩*^{33}*sl̩*^{33} 'god', etc.

b. Naxi (western): *ba*^{55}*ba*^{33} 'flower', *n̥i*^{55}*n̥i*^{33} 'milk'

Reduplicated nouns are found also in Youle Jino, as in (7), though examples of whole reduplication are relatively rare.

(7) *m̥ø*^{55}*m̥ø*^{55} 'mouth', *ki*^{55}*ki*^{44} 'uncle', etc.

More often found are examples of what I refer to as '*l-* reduplication'. This is a type of partial reduplication in which the reduplicated syllable is a copy of the rhyme and tone of the root syllable with *l-* as onset, as in (8).

(8) a. *a*^{33}*n̥ɤ*^{55} →*a*^{33}*n̥ɤ*^{55}***lɤ***^{55} 'red', *a*^{55}*kha*^{42} →*a*^{55}*kha*^{42}***la***^{42} 'hard', etc.

b. *khjɔ*^{55}***lɔ***^{55} 'inside', *ʃɔ*^{33}*tʃha*^{55}*(**la**^{55})* 'thick grass', *phɔ*^{55}*thɛ*^{44}*(**lɛ**^{44})* 'frog', *tshə*^{55}*khə*^{42}*(**lə**^{42}) 'salt', etc.*

l- reduplication[15)] is productive for adjective derivation (8a), but is often found in nominals (8b). Parentheses in (8b) represent optionality, hence the *l-* reduplicated syllable of 'thick grass', 'frog' and 'salt' appears optionally. However, the word 'inside' can not be expressed by ^{NG}*khjɔ*^{55} only, but by *khjɔ*^{55}*lɔ*^{55}. This is also an example of disyllabization of Youle Jino nouns, though it is hardly productive.

4.2 Canonical Word Order, Case Marking and Relational Morphology

The case marking systems of TB languages appear to have developed independently in each subgroup, since the present marking systems differs from each other (nominative-accusative vs. ergative-absolutive) and the case markers of each language (even in a subgroup) can not be considered to be cognates (Dai, Liu and Fu 1989).

Table 15 Pronouns in Youle Jino

	Singular		Dual		Plural	
	Nominative	Oblique	Nominative	Oblique	Nominative	Oblique
		Possessive Accusative				Possessive Accusative
1st	ŋɔ^{42}	ŋɔ^{35}	a^{33}n̥i^{55}/ ŋa^{55}n̥i^{55}	a^{33}n̥i^{42}	a^{33}ŋu^{55}(INCL) ŋa^{55}vu^{44}(EXCL)	a^{33}ŋu^{42}/ ŋu^{55}(INCL) ŋa^{55}vɛ^{55}(EXCL.POSS)
		ŋɔ^{33}ɛ^{55} ŋɔ^{35}				
2nd	nə^{42}	nə^{35}	n̥i^{55}n̥^{44}	n̥i^{55}n̥i^{42}	n̥i^{55}ju^{44}	
		nɛ^{35} nə^{35}				n̥i^{55}vɛ^{55} n̥i^{55}ju^{35}
3rd	khɤ^{42}/ thu^{42}	khɤ^{35}/ a^{55}n̥ɔ^{35}	khɤ^{33}n̥i^{55}	khɤ^{33}n̥i^{42}	khɤ^{33}m̥a^{55} / jo^{33}m̥a^{55}	khɤ^{33}m̥a^{42} / jo^{33}m̥a^{42}

Many modern Kiranti, Chin and Qiangic languages show verb agreement systems (Qu and Jing 2000, LaPolla 2003a, DeLancey 2008, etc.), which can be reconstructed also in PTB forms, but LB languages, including Youle Jino, lack these systems.

Like most TB languages (probably PTB also), Youle Jino is a SOV language, and both subject and object are unmarked if they are common nouns, as in (9a), though objects can be optionally marked by tonal alternation of the last syllable (44 →35), as in (9b). On the other hand, the grammatical relation of pronouns in Youle Jino is obligatorily marked by tone, as in (10).

(9) a. khɔ^{55}mɔ^{44} khɔ^{55}phɔ^{55}
wife husband
jə^{35}-mɤ^{35}.
scold-PAST
'The wife scolded her husband.'

b. khɔ^{55}phɔ^{55} khɔ^{55}mɔ^{35}
husband wife.OBL
jə^{35}-mɤ^{35}.
scold-PAST
'The husband scolded his wife'

(10) a. ŋɔ^{42} khɤ^{35}
1SG.NOM 3SG.OBL
khu^{33}-nœ^{44}.
call-SFP
'I call him.'

b. khɤ^{42} ŋɔ^{35}
3SG.NOM 1SG.OBL
khu^{33}-nœ^{44}.
call-SFP
'He calls me.'

The oblique forms of pronouns are different from the nominative forms in that their last syllable should have either a 35 or a 42 tone. Table 15 shows the complete paradigm of Youle Jino pronouns.

Tonal alternation of pronouns can be found also in Hani (Dai and Duan 1995: 106), Colloquial Burmese (Okell 1969), and Achang (Dai and Cui 1985). In Hani, the tone of pronouns mainly alters if they are followed by particles, while in Colloquial Burmese, the level tone of pronouns becomes a falling tone if they are oblique, which is quite similar to Youle Jino. Considering the fact that Colloquial Burmese has a tone alternation system (level →falling) for marking oblique nouns, it might be worth considering whether the tonal

Table 16 Case markers in TB (Dai 1989, etc.)

	J	H	L	ACH	WB	WT
subject	——	——	——	——	(ka)	——
object	=va^{55}(animate), =a^{55}	jɔ^{55}	——	te^{53}	(ko)	la
genitive	=ɛ^{44}	ɤ^{33}	vi^{33}	a^{31}	ray	i, gi
instrumental	=la^{55}	ne^{33}	si^{31}	——	nay.	gi, gis

alternation system can be traced back to PLB or not.

On the other hand, the relational morphology of TB varies from language to language, and case markers in TB, as briefly summarized in Table 16, are so different that most of them cannot be reconstructed to PTB (even at its later stages), therefore they are probably secondary innovations (Dai 1989, LaPolla 1992, 2003a, 2004, Hu 2002).[16)]

Most case markers in TB languages do not appear to be cognate, but it is possible to reconstruct a genitive marker in PLB/PTB. =ε^{44} corresponds to Akha ə (Hansson 1996), Written Burmese *i.*, Written Tibetan *i*, and so on. =ε^{44} mainly functions as a possessive marker when it follows an NP, but in addition functions as a modality marker when it follows a VP (Hayashi 2007c). Akha ə and Written Burmese *i.* (also Colloquial Burmese *ye.* < *ray*) also follow VPs, which seems to behave like Youle Jino. This leads us to speculate that Youle Jino =ε^{44} is a reflex of the PTB genitive marker.

4.3 Causatives

Most TB languages contain simplex-causative pairs in verbal morphology, which can be traced back to PTB **s-* prefix, although it is not very productive in most Tibeto-Burman languages (Dai 2001, LaPolla 2003a). Youle Jino does not have such pairs due to the fact that the causative counterparts might have merged into the simplex ones and are now marked by the analytic prefix *m-*, as in (11).

(11) *a*^{33}*phi*^{55} '(taste) hot'/ *m*^{33}*-phi*^{55} 'make hot'

m- in Youle Jino was derived from the verbal root *m*^{42} 'make' through grammaticalization and is at present employed for marking direct causation.

Apart from *m-*, Youle Jino has four indirect causative affixes, namely *pi-*, *khø-*, *ja-*, and *-vi*, which should be viewed as results of other independent innovations. *pi-* is definitely a grammaticalized form of the verb root *pi*^{55} 'give', whereas the origin of other three affixes still remains uncertain. As is widely known, the verb 'give' can be grammaticalized into a causative or benefactive marker in many languages, including Southeast Asian languages (Matisoff 1991, Lord 1993, Newman 1996, LaPolla 2003a), but it cannot be traced back to the PTB/PLB stage because it has little phonological correspondence in many modern TB languages and often functions in different ways even if it corresponds phonologically (Tsangla *bi*, Belhare *-per*, Lahu *pî*, Modern Burmese *-pei* express benefactive, while Jino *pi-* generally expresses causative).[17)]

Hayashi (2007a) claims that there is a continuum of coerciveness among these four indirect causative affixes, as shown in Table 17.[18)]

Table 17 Coerciveness Hierarchy of Causative Affixes in Youle Jino

humanity	INDIRECT CAUSATION permissive——————coercive				DIRECT CAUSATION
[+ human]	-vi<	pi-<	khø-<	ja-	m-
[− human]	-vi<	pi-			m-

Table 18 Functional Words and Affixes/Particles Comparable in Related Languages

	J	H	LH	ACH	WB	PTB (Matisoff 2003)
negative	ma-, mɔ-	ma^{31}	mâ	ma^{31}	ma	*ma
negative imperative	thɔ-	tha^{31}	tâ	ta^{31}	——	*da/ *ta
Y/N interrogative	-la^{42}	la^{31}	lâ	la^{31}	lɔ(la-w)	*la
Wh- interrogative	-n̥a^{42}	(a)	le	ne^{31}	naǎ	*la-y
copula	ŋɯ^{55}	ŋɯ^{55}	ve/ ɣɨ	n̥e^{ʔ55}	hut	*ray/ *way/ *s-rut
plural	-m̥a	ma^{31}	hɨ	(tu^{ʔ31})	——	*s-ray

khø- and *ja-* can be employed if and only if the causee is human. *ja-* expresses more coercive causation than any other affixes. The coercive hierarchy occurred independently after the five causative affixes derived from the different sources.

4.4 Other Affixes Comparable to Related Languages

Functional words and affixes are generally hard to reconstruct to the proto-language, though when it is possible, the languages with comparable functional words and affixes may be viewed as closely related languages diachronically.

Table 18 deals with some functional words and affixes (or particles) reconstructible to PLB/PTB.[19)]

As shown in Table 18, negative, negative imperative and a Yes-No interrogative marker can be reconstructed to the PTB stage. The Youle Jino negative marker has two forms, namely *ma-* and *mɔ-*, though the former is more archaic than the latter. The Youle Jino Yes-No interrogative particle *-la*^{42} is considered to have preserved the archaic vowel *-a* of PTB **la*, which would otherwise have shifted to ^{NG}*-lɔ*^{42} in Youle Jino.

The Wh- interrogative particle is relatively problematic. Unlike the Yes-No interrogative particle, the Wh- interrogative particle in Youle Jino *-n̥a*^{42} can not be related to the PTB form **la-y* which was reconstructed by Matisoff (2003). To reconstruct the Wh- interrogative form of PTB, Matisoff (2003) attached importance to the Lahu and Colloquial Burmese forms (*le* and *lɛ̀* respectively), but we should also pay attention to the Youle Jino, Achang, Written Burmese, and Bisu forms (*-n̥a*^{42}, *ne*^{31}, *naǎ*, and *nï*^{55} *ɤ*^{31} respectively) whose PTB/PLB form could be reconstructed as **ny-* (Hayashi 2007b).

Copulas in Youle Jino and Hani have *ŋ-* initial, which may correspond to Written Burmese *hut.* Matisoff (2003) thinks the Written Burmese copula is a reflex of PTB **s-rut*, but the copulas in Youle Jino and Hani do not seem to be reflexes of this PTB form.

Plural markers in Youle Jino and Hani must be cognate, though they do not seem to be related to the Lahu and PTB forms (Matisoff 2003). To reconstruct the plural marker

of PTB, we should also take into consideration Langsu (*mɔ*$^{?31}$, Dai 2005), Zaiwa (*mo*$^{?55}$ 'pronominal suffix', Xu and Xu 1984) and Dulong (*maʔ* 'human plural', LaPolla 2003b) forms, which may be related to Written Tibetan *mang* (DeLancey 2008).

5. Final Remarks

This paper mainly employs stable roots (in other words, CALMSEA (Matisoff 2006)) to consider some aspects of the historical development of Youle Jino. It may be widely accepted that if the function words and particles of two languages phonologically correspond to each other in both linear and non-linear levels they can be more closely related languages. Of course, the possibility of loan words should be taken into consideration, but even if borrowing occurs between related languages, loan words generally violate the phonological correspondence rules of cognates.

From these aspects, applying the comparative method to Youle Jino and other LB languages will lead to the following conclusions:

a. ***Phonological Development***

Initial: archaic in that Youle Jino obstruents and sonorants preserve the voicing contrast of PTB

Medial: archaic in that Youle Jino preserves the contrast of PTB/PLB medials

Rhyme: innovative in that Youle Jino lost the stop/nasal endings and changed the vowel colors of PTB/PLB

Tone: innovative in that Youle Jino is now changing from a syllabic to a word-tonal language

b. ***Morphosyntactic Development***

Disyllabization: *a-* prefixed and *l-* reduplicated nouns are more frequently found in Youle Jino, and has developed independently.

Case-Marking: The case-marking system of Youle Jino was innovated independently, though the possessive marker =ε^{44} can correspond to Akha, Burmese and Written Tibetan.

Causative: The ∅- / *s-* contrast of PTB which expresses transitivity has disappeared in Youle Jino, which has five morphological causative devices instead.

Other Affixes / Particles, and Function Words: The negative prefix, negative imperative, and Yes-No interrogative particle in Youle Jino can be traced back to the PTB stage, while the copula and plural marker can at most be traced back to PLB.

In a nutshell, it is important to note that Youle Jino has more archaic features than other LB languages and hence deserves to be studied for the reconstruction of PTB/PLB, though it can not be considered as a 'link language' like Dulong, Jingpho, Meithei, Xixia (Tangut), Nung and so on (Nishida 1978).

To compare the morphophonology and morphosyntax of Youle Jino with that of other TB languages and to reconstruct the proto-language may have some implications for the linguistic substratum of the Tibeto-Burman area. As is discussed above, it is true that to some extent Youle Jino can be archaic and useful for investigating the history of TB languages, but of course, not all the linguistic elements of this language can be construed as linguistic substrata and developments, because the structure of Youle Jino has been affected by its original innovations and language contact from the local dialect of Chinese and Daic languages which were spoken by the dominant ethnic groups of southern Yunnan.

The comparative method reveals that Tai Lue (Tai-Kadai) partially affected the lexicon of Youle Jino (fruit names, a couple of adjectives and adverbs, etc.), hence the language contact between them may be of great time depth. At present, the official language of this area is Mandarin Chinese, so the morphophonology and morphosyntax of Youle Jino has been strongly affected by Mandarin Chinese, even though this type of language contact commenced quite recently.

Ethnic migration in East and Southeast Asia is so complicated and mixed that the family-tree model cannot accurately depict language relationships in this area (Matisoff 2001).[20] PTB reconstructed most recently may be close to the linguistic substratum of this area, but in order to clarify the characteristics of linguistic substratum of the Tibeto-Burman area, more linguistic data and synchronic analyses are still needed.

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Data Resources

Achang: Dai and Cui (1985)/ Huang (1992); Bisu: Xu (1998); Written Burmese: Harada and Ohno (1979)/ Ohno (1995); Hani: Huang (1992)/ Dai and Duan (1995); Youle Jino:

my fieldnotes; Lolo: Huang (1992); Written Tibetan: Kitamura and Nagano (1990); Zaiwa: Huang (1992).

Abbreviations

'*' marks a proto-form, '-' an affix or particle boundary, '=' a clitic boundary, and '+' a root boundary. Parenthesized forms in the tables can not be considered as cognate.

ACH ..... Achang
EXCL ..... exclusive
H ..... Hani
INCL ..... inclusive
J ..... Youle Jino
LB ..... Lolo-Burmese
LH ..... Lahu
L ..... Lolo
MO ..... Mojiang Dialect of Hani (Haoni)
NG ..... unattested form
NOM ..... nominative
OBL ..... oblique
PAST ..... past
PLB ..... Proto-Lolo-Burmese
POSS ..... possessive
PTB ..... Proto-Tibeto-Burman
SFP ..... sentence final particle
SG ..... singular
TB ..... Tibeto-Burman
VOT ..... voice onset time
WB ..... Written Burmese
WT ..... Written Tibetan
ZW ..... Zaiwa (Atsi)

Notes

1) **Phonological Inventory of Youle Jino:**
Consonants: /p, ph, t, th, k, kh; ts, tsh, tʃ, tʃh, ʨ, ʨh; m, m̥, n, n̥, ɲ, ɲ̥, ŋ, ŋ̥ ; l, l̥; f, v, s, z, ʃ, r, ç, j, x, ɣ, (w)/
Vowels: /i, e, ø, ɛ, œ, a, ə, ɔ, ɤ, o, ɯ, u/
Tonemes: /55, 44, 33, 35, 42/
Syllable Structure: $(C_1)(C_2)V_1(V_2)(V_3)(C_3)$/T $<C_2$: -r- or -j-, C_3: -n or -ŋ$>$
/m, m̥, n, n̥/ can be syllabic nasals.
Typological Features of Youle Jino:
Basic Constituent Order: SOV, Noun-Adjective, Possessive-Head Noun, Relative Clause-Head Noun
Morphological Features: Agglutinative (Verbal Complex)
2) This map is cited from the website below, though it is slightly revised by the present author.
`http://www.travelchinaguide.com/images/map/yunnan/yunnan.gif`
3) For statistical data and discussions on the Jino speakers, see Dai (ed.) (2007).
4) Bradley (1983) analyzed the linguistic position of Jino, using data from Gai (1981), which contains many errors.
5) In many Lolo dialects, there are quadripartite systems in stops and affricates, such as *p-* vs. *ph-* vs. *b-* vs. *^{m}b-*.
6) Voiceless nasals are widely distributed in TB, for instance, in Himalayish (Chepang, Dhimal,

etc.), Qiangic (Queyu, Pumi), Nungish, Kuki-Chin, and also LB (Bisu, Achang, Nusu, Modern Burmese) (Matisoff 2003: 37). For voiceless nasals in Achang, see Dai (1985).

7) Written Burmese forms are mainly cited from Harada and Ohno (1979) and Ohno (1995), though the system of their transliteration is based on Yabu (1982), which is slightly reformed by me in this paper. In this paper, tone 1 (corresponding to the low level tone in colloquial Burmese) is marked by nothing, tone 2 (the high level tone in colloquial Burmese) by ':', tone 3 (the creaky tone in colloquial Burmese) by '.'. Even if Written Burmese does not have tone marks superficially, such as the vowel *-i* with tone 3, the vowel *-ɔ* with tone 2, etc., the tone mark will be added to the linear segment in this paper, like *-i.*, *-ɔ:*, and so on.
8) Youle Jino also has /-œ/, which is not shown in Table 2.
9) In addition, PLB *velar + medial often shifts to affricates in Youle Jino and other modern LB languages, which should be discussed in the future.
10) As for 'comb', the Jino form *phi*^{55} ∼ is a noun, while the WB form *phrii:-* which corresponds to Jino is a verb. We should note that the WB form *bhii:* is a noun which does not correspond to the Jino form *phi*^{55}.
11) For the origin of 'Tone 3' (creaky tone) in Burmese, see Thurgood (1981).
12) For a multi-genetic theory of tonogenesis through the analysis of tone correspondences in LB checked syllables, see Matisoff (1992), etc.
13) The typical Jingpho word is sesquisyllabic, as Matisoff (2001: 308) says. The sesquisyllable can be schematized as shown below.

T

$C_{ə}$- C_i(G)V(C_f)

Matisoff (2001: 308) says that the prefixes *mə-*, *ʔə-* and *kə-* are very frequently found in a Jingpho dictionary (Hanson 1906).

According to recent studies (Ding 2001, Ikeda 2002, Mazaudon 2005, F. Nishida 2005, Chirkova 2007), the tone bearing unit of Qiangic languages and Tamangic languages is not the syllable but the morpheme or phrase, and tone sandhi in some of these languages is related to stress patterns or other prosodic features, which is very similar to Youle Jino.

14) Wang (1992) investigates the origin of the *a-* prefix, though his analysis is unpersuasive.
15) *l-* reduplication is also found in Sangkong (Li 2002: 139), which may be related to Youle Jino *l-* reduplication.

Sangkong: *na*^{31} →*na*^{31}***la***^{42}'deep', *thu*^{55} →*thu*^{55}***lu***^{55} 'thick'

16) Even among closely related languages, the case-marking system is not consistent (some are ergative marking, others are anti-ergative marking). In addition, even if a given language has an anti-ergative marker, it does not correspond to that of other languages in the same subgroup (Lahu *thàʔ*, Youle Jino *va*^{55}, Akha *àŋ*). The case-marking system of every TB language is conditioned by pragmatic viewpoint, animacy, and semantic role (LaPolla 2003a), hence the constituent order (*SOV) and no overt markers (*=∅) for subject and object can be reconstructed to PTB.
17) It can be argued that *bəy 'give' in PTB/PLB functioned as a valency-increasing device and that the causative/ benefactive value was specified when it was grammaticalized into affix, after the split up into each language.
18) Table 17 is a revised version of Table 7.7 in Hayashi (2007a: 227).
19) Apart from the examples shown in Table 18, the Youle Jino conditional marker *-xɔ*^{42} is very similar

to Achang $xɔ^{\gamma 31}$, and these may be cognate.

20) For ethnic migration and linguistic relationships in East and Southeast Asia, see LaPolla (2001), Matisoff (2001), Bellwood (2005), and so on.

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