

# Stem alternation in Pingwu Baima

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# Tibetic Qiang-Rgyalrong Chinese



## 图例

- 羌语
- 北部方言
- 南部方言

- Huang & Zhang (1995): (i) regular sound correspondences with WT paradigms; (ii) simplification resulting in the elimination of stem alternation (as in other Tibetan dialects)

Gloss	present-future		past		imperative	
	Baima	WT	Baima	WT	Baima	WT
go	ndzi <sup>53</sup>	<i>mchi</i>	tɕ <sup>h</sup> æ <sup>35</sup>	<i>chas</i>	ndzue <sup>53</sup>	'gro
eat	ndza <sup>53</sup>	'cha'	ndzø <sup>35</sup>	'chos	ndzue <sup>53</sup>	'cho~'chos
	present-future		past/imperative			
sell	ndzu <sup>35</sup>	<i>'tshong, btsong</i>	tsu <sup>35</sup>	<i>btsongs, tshong</i>		
dig	ko <sup>53</sup>	<i>rko, brko</i>	kø <sup>35</sup>	<i>brkos, rkos</i>		
look	ta <sup>53</sup>	<i>lta, blta</i>	tø <sup>35</sup>	<i>bltas, ltos</i>		
loot	ndzua <sup>53</sup>	<i>'phrog</i>	tɕ <sup>h</sup> ue <sup>53</sup>	<i>phrogs</i>		
chase	nde <sup>53</sup>	<i>'ded</i>	te <sup>53</sup>	<i>ded</i>		
make	ndzu <sup>53</sup>	<i>'grub</i>	tɕu <sup>53</sup>	<i>grub</i>		
	present-future/past				imperative	
sit; live	dy <sup>53</sup>	<i>sdod, bsdad, bsdad</i>		de <sup>35</sup>	<i>sdod</i>	

Alternating verbs in Huang & Zhang (1995: 107)

- Nishida & H. Sun (1990), H. Sun et al. (2007), no reference to corresponding WT forms; T/A - M discussed separately; (i) stem formation is distinct from that in better studied Tibetic varieties (different patterns of alternation involving consonantal and/or vocalic changes)

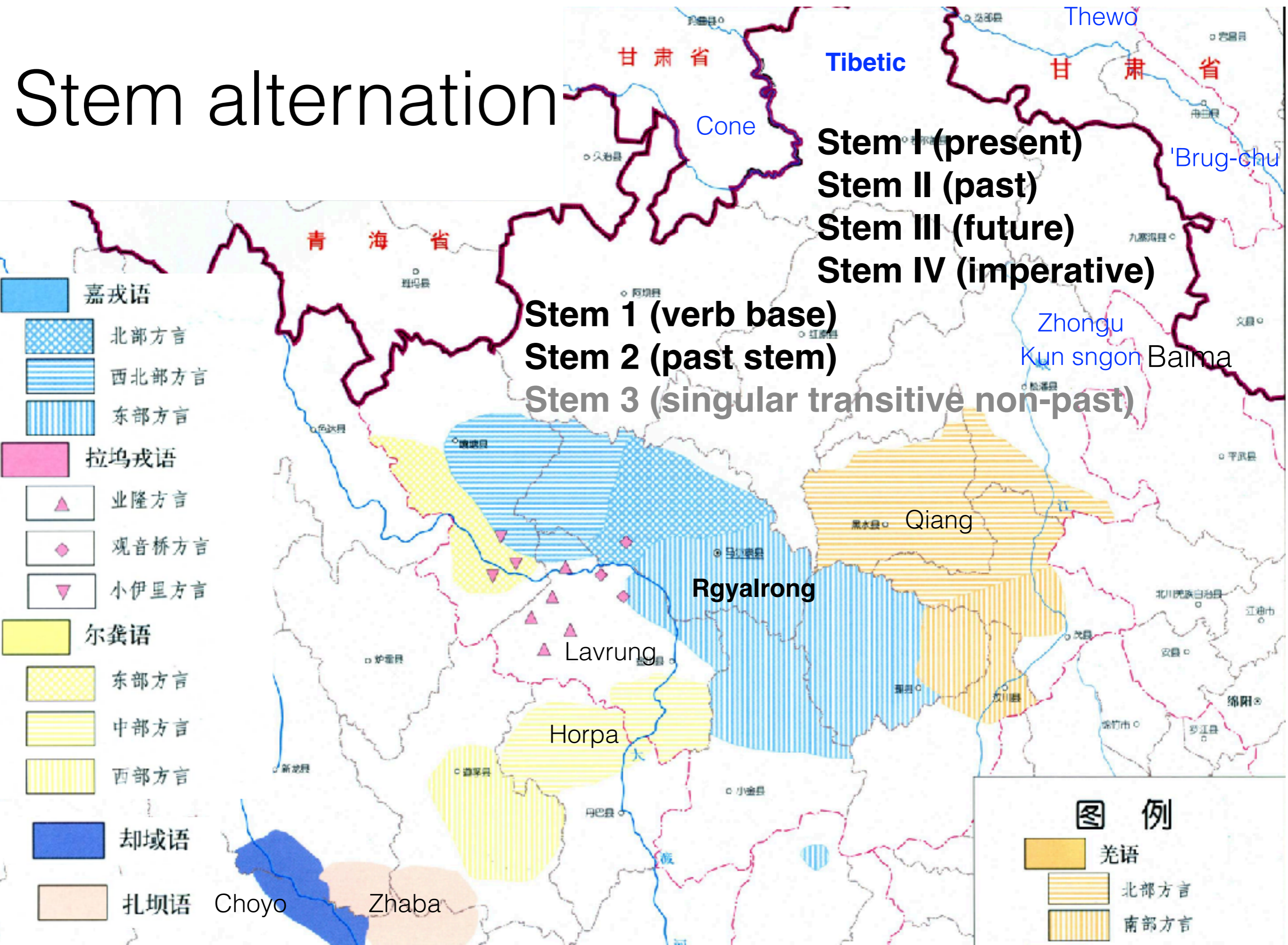
Gloss	Tense/Aspect		Mood	
	IPFV	PFV	Base stem	Imperative
take off	mbi <sup>53</sup>	p <sup>hi</sup> 53		
ask	ndzɿ <sup>53</sup>	tʂɿ <sup>53</sup>		
weep	ŋo <sup>53</sup>	ŋu <sup>53</sup>	ŋo <sup>53</sup>	ŋu <sup>53</sup>
wash	ndzo <sup>53</sup>	tɕy <sup>53</sup>	ndzo <sup>53</sup>	tɕy <sup>53</sup>
mend, patch			dza <sup>341</sup>	dʒø <sup>341</sup>
burn (firewood)			ndʒu <sup>53</sup>	ɬʃu <sup>53</sup>
cut, sever			ndza <sup>53</sup>	tʂa <sup>53</sup>
gnaw			ndø <sup>53</sup>	tø <sup>53</sup>
call			mbe <sup>53</sup>	pe <sup>35</sup>

Verbs with stem alternations in H. Sun et al. (2007: 83-84)

# Goals

- provide a more systematic study of high frequency alternating verbs in Pingwu Baima
- relate stem alternations in Pingwu Baima to WT verb morphology
  - to get a better understanding of the phonological processes through which different verb stems are derived
  - sketch the development of WT verb paradigms in Pingwu Baima
- reassess conclusions in previous work

# Stem alternation



# Showu Rgyalrong

<b>STEM 1</b>	<b>STEM 2</b>	<b>STEM 3</b>	
<i>rbā</i>	<i>rbî</i>	<i>rbē</i>	‘to press’
<i>rzû</i>	<i>rzō</i>	<i>rzâm</i>	‘to keep; to raise’
<i>ntshē</i>	<i>ntshî</i>	<i>ntshō</i>	‘to kill’
<i>skē</i>	<i>skhē</i>	<i>skî</i>	‘to smoke (cigarettes)’
<i>rkwāt</i>	<i>rkhū</i>	<i>rkō</i>	‘to put into (containers)’
<i>yōt</i>	<i>yôt</i>	<i>yīt</i>	‘to pick (flowers, fruits)’

Sun, Jackson T.-S. 2004. Verb-stem variations in Showu rGyalrong. In Ying-chin Lin, Fang-min Hsu, Chun-chih Lee, Jackson T.-S. Sun, Hsiu-fang Yang, and Dah-an Ho (eds.), *Studies on Sino-Tibetan Languages: Papers in Honor of Professor Hwang-cherng Gong on his Seventieth Birthday*, 269-296. (Language and Linguistics Monograph Series W-4.) Taipei: Institute of Linguistics, Academia Sinica. P. 273.

# Old Tibetan

- indigenous grammatical treatises (reflected in WT)
- irregularity and complexity (e.g. Shafer 1950/51; Uray 1959; Coblin 1976; Beyer 1992; Zeisler 2004, 2015; Jacques 2012; Hill 2014)
- four verb stems show a variety of ablaut, prefixes and suffixes, with sound changes obscuring in some cases the system (cf. Coblin 1976; Beyer 1992; Hill 2014 and references therein)



# Verb paradigms

Intransitive

**PRESENT**  
*N*\_\_\_\_\_

**PAST**  
\_\_\_\_\_s

-s alternates with -d

Transitive

	<b>PRESENT</b>
<b>CLASS 1</b>	<i>N</i> _____
<b>CLASS 2</b>	<i>N</i> _____
<b>CLASS 3</b>	<i>G</i> _____
<b>CLASS 4</b>	<i>G</i> _____

	<b>PAST</b>
	<i>b</i> _____s
	<i>b</i> _____s
	<i>b</i> _____s
	<i>b</i> _____s

	<b>FUTURE</b>
	<i>b</i> _____
	<i>G</i> _____
	<i>b</i> _____
	<i>G</i> _____

	<b>IMPERATIVE</b>	
	_____s	ablaut o
	_____s	
	_____s	aspiration
	_____s	

# Ablaut

	stem I	stem II	stem III	stem IV
root vowel a:	a	a	a	<b>o</b>
	<b>e</b>	a	a	<b>o</b>
	<b>o</b>	a	a	<b>o</b>
root vowel e:	e	e	e	<b>o</b>
root vowel u:	i(n)	u(ŋ)	u(ŋ)	u(ŋ)
the verb 'eat'	a	<b>o</b> / a	– / a	<b>o</b>

Table 1 Tibetan *ablaut* patterns in transitive verbs

Zeisler, Bettina. 2015. Eat and drink – if you can! A language internal explanation for the 'irregular' paradigm of Tibetan *za*, *zos*, *zo* 'eat'. *Himalayan Linguistics* 15.1: 34-62. P. 42.

Gloss	Stem I (present)	Stem II (past)	Stem III (future)	Stem IV (imperative)
be angry	N-khro	khro-s	∅	∅
weep	[N]-ngu	ngu-s	∅	∅
buy (1)	[N]-nyo	[b]-nyo-s	[b]-nyo	nyo-s
chop (2)	N-thub	b-tub-s	g-tub	thub-s
gather (3)	g-sog	b-sag-s	b-sag	sog-s
cut (4)	g-cod	b-cad	g-cad	chod-[s]

# Trends in verb stem alternation

- in modern Tibetic languages, the originally complex system of Written Tibetan has been simplified to different extents
- the neutralization of the stems was based on the reduction of phonetic elements and the adjustment of irregularities, the function of which was no longer transparent
- grammatically distinctive prefixes of transitive verbs and aspiration of the imperative stem have only been preserved in (the phonetically archaic) Amdo varieties
- loss of the future stem, ablaut o of the imperative stem is still found in all three varieties

*ndzoχ, bzaχ, coχ* ‘to put’ (cEA) ← འཛོལ་, བཞག་, **གཞག་**, ཞོག་ ‘to put’

*'jog, gzhag, bzhag, zhog*

Haller, Felix. 2011. Stem alternation and verbal valence in Themchen Tibetan. In Roland Bielmeier and Felix Haller (eds.), *Linguistics of the Himalayas and Beyond*, 85-96. Berlin, New York: De Gruyter Mouton. <https://doi.org/10.1515/9783110968996.85>

# Present study

- provide a more systematic study of high frequency alternating verbs in Pingwu Baima
- a small corpus of 250 high frequency verbs, elicited from Mandarin in isolation and as placed in carrier sentences based on Dahl's (1985) TAM questionnaire
  - 51 verbs (20%) are loans from Mandarin (e.g. 'count' *su̯ē*, *suàn* 算; 'steam': 'steam' *tʃē* 蒸) and constructions with the light verb 'to do' (e.g. 'steal', WT *rku*, *brkus*, *brku*, *rkus* > ***kû zê*** (IPFV), ***çē*** (PFV), ***tçī*** (IMP) )
  - 134 verbs (54%) non-alternating (with 1 stem), e.g. 'sprinkle' (WT *'thor*, *btor*, *gtor*, *'thor*) > ***tê***

# Present study

- provide a more systematic study of high frequency alternating verbs in Pingwu Baima
  - 65 verbs (26%) are alternating
    - 6 verbs (9%) with three stems (IPFV, PFV, IMP)
    - 59 verbs (91%) with two stems (IPFV vs. PFV/IMP)

- ongoing elimination of stem alternation
  - Nishida & Sun (1990), Sun et al. (2007)

‘look’: (1) IPFV  $ta^{13} = i^{53}$  ‘will look’, (2) citation stem = PFV  $t\varepsilon^{35}$ ; (3) IMP  $t\emptyset^{35}$

‘weep, cry’: (1) IPFV  $\eta o^{53}$ , (2) PFV/IMP  $\eta u^{53}$

Gloss	Imperfective		Perfective	
	Baima	WT: pf, fut	Baima	WT: pst, imp
look	$t\underline{a}$	lta, blta	ty\u0304	bltas, ltos
weep	$\eta\underline{u}$	ngu	$\eta\underline{u}$	ngu[-s]



# Sound correspondences

- Zhang (1994a,b, 1997); Huang & Zhang (1995); Chirkova et al. (2021)
- prefix
  - nasal (as in  $^m\text{b}^{\text{f}}\hat{\text{u}}$  'to fly', WT *phur* vs.  $^m\text{b}\hat{\text{u}}$  'insect', WT *bu*)
  - but not stopped preinitials, including the prefixes *b-*, *g-* (as in  $\text{d}\hat{\text{e}}$  'seven', WT *bdun*,  $\text{d}\hat{\text{e}}$  'bottom part', WT *gdan*)
- codas
  - *-s*: vocalic and tonal changes > mid level or low tone (as in  $^n\text{d}\text{r}\bar{\text{e}}$  'rice', WT *bras*)
  - *-d*: vocalic and tonal changes > falling tone (as in *kê* 'voice', WT *skad*)

# Verbs with three stems

Gloss	Imperfective		Perfective		Imperative	
	Baima	WT	Baima	WT	Baima	WT
make	zê; ɛê	<i>bzo; byed</i>	ɛē	byas	tɛī	<i>bgyis, gyis</i>
go	<sup>n</sup> dzê	<i>'gro</i>	tɛ <sup>h</sup> è	chas	s <sup>h</sup> ù, <sup>n</sup> dzê	<i>song, 'gro</i>
come	wū; <sup>n</sup> dzî	<i>'ong; mchi</i>	uē / uē	'ongs	ʃuê	<i>shog</i>
eat	<sup>n</sup> dʒ'â	<i>'cha'</i>	<sup>n</sup> dʒà	'chas	<sup>n</sup> dʒ'ê	<i>'cho(s)</i>
speak	dzê	<i>zlo</i>	dzè, dzò	bzlas	dzò	<i>zlos</i>
sit; live	<sup>n</sup> dy	<i>'dug</i>	dê	bsdad	dyê	<i>sdod</i>

Baima alternating verbs with three stems

# Verbs with two stems

		Present	Past	Future	Imperative
Intransitive		<i>N-</i> _____	_____ <i>-s</i>		
Transitive	Class 1	<i>N-</i> _____	<i>b-</i> _____ <i>-s</i>	<i>b-</i> _____	_____ <i>-s</i>
	Class 2	<i>N-</i> _____	<i>b-</i> _____ <i>-s</i>	<i>G-</i> _____	_____ <i>-s</i>
	Class 3	<i>G-</i> _____	<i>b-</i> _____ <i>-s</i>	<i>b-</i> _____	_____ <i>-s</i>
	Class 4	<i>G-</i> _____	<i>b-</i> _____ <i>-s</i>	<i>G-</i> _____	_____ <i>-s</i>



		Present	Past /Imperative
<del>Intransitive</del>		<i>N-</i> _____	_____ <i>-s</i>
<del>Transitive</del>	Class 1	<i>N-</i> _____	<i>b-</i> _____ <i>-s</i>
	Class 2	<i>N-</i> _____	<i>b-</i> _____ <i>-s</i>
	Class 3	<i>G-</i> _____	<i>b-</i> _____ <i>-s</i>
	Class 4	<i>G-</i> _____	<i>b-</i> _____ <i>-s</i>

Gloss	Imperfective		Perfective/Imperative	
	Baima	WT: pr, fut	Baima	WT: pst, imp
weave, knit	<sup>n</sup> d <sup>ʰ</sup> â	'thag, btag	tā	btags, 'thog
gnaw, nibble	<sup>n</sup> d <sup>ʰ</sup> uê	'thog, btog	tuê	btog[-s], 'thogs
pick, pluck	<sup>n</sup> d <sup>ʰ</sup> uê	'thog, btog	tuê	btog[-s], 'thogs
sell	<sup>n</sup> dzù	'tshong, btsong	tsū	btsongs, tshongs
open (door)	<sup>n</sup> dzâ	'bye-d [>a], dbye	ɛ <sup>h</sup> â	phye [>a], phyes
weigh	<sup>n</sup> dzâ	'gyog[>ag], bkyag	tɛâ	bkyag[-s], khyog
hit, beat	<sup>n</sup> dzû	'brab, brab	tʂû	brab[-s], brobs
fasten (belt)	<sup>n</sup> dʒè	'ching, bcing	tʃē	bcings, chings
spin into yarn	<sup>n</sup> gǰè	'khal, bkal	kǰē	bkal, 'khol
die	<sup>n</sup> dʒ <sup>ʰ</sup> ê	'chi	ʃê	shi
drive, chase after	<sup>n</sup> dâ	'ded	tâ	ded
meet, encounter	<sup>n</sup> dz <sup>ʰ</sup> ê	'phrad	tʂ <sup>h</sup> ê	phrad
take off	<sup>m</sup> bî	'bud	p <sup>h</sup> î	phud

Gloss	Imperfective		Perfective	
	Baima	WT: pf, fut	Baima	WT: pst, imp
throw, cast	( <sup>n</sup> dâ) <sup>m</sup> bè	mda 'phen, 'phang	( <sup>n</sup> dâ) <sup>m</sup> bò	'phangs, 'phongs
take, hold	jê	len, blang	jō	blangs, longs
rest	ʃê	sro, bsro	ʃō	bsros, sros
dig, scoop	kê	rko, brko	kū	brkos, rkos
divide	gê	bgo[-d], bgo	gù	bgos, bgos
mend	dzâ	sgrog [ > ag], bsgrog	dzû	bsgrogs, sgrogs
exchange	ʒê	rje, brje	ʒè	brjes, rjes
jump (dance)	tsê	rtse, brtse	tsē	brtses, rtses
cut open	sê	gse	sē	gses
plough	mê	rmo[-d], rmo	mē	rmos
buy	ɲê	nyo	ɲyà	nyos

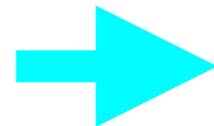
Gloss	Imperfective		Perfective	
	Baima	WT	Baima	WT
put, place	<sup>n</sup> dzuê	'jog, gzhag	ʒâ	bzhag, zhog
split open	<sup>n</sup> gâ	'ga[-d], dgad	kē	bkad, khod
cut with scissors	<sup>n</sup> dzâ	'dra, dra	tʂē	dras, dros
drink	<sup>n</sup> dù	'thung; 'thungs	<sup>n</sup> dỳ [pst]	btungs ~ 'thungs
flow (water)	<sup>n</sup> dzô / <sup>n</sup> dzê	'gro	ɕ <sup>h</sup> â	gshar; phyin

Gloss	Imperfective		Perfective/Imperative	
	Baima	WT: pr, fut	Baima	WT: pst, imp
appear (sun, frost)	<sup>m</sup> b <sup>ɕ</sup> ê	'phag/'phar	p <sup>h</sup> ê	
be drunk	<sup>m</sup> bē	bad / bams	p <sup>h</sup> ē	
bark (dog)	<sup>n</sup> guê		kuê	
solidify, congeal	<sup>n</sup> dʒ <sup>ɕ</sup> â	'khyag	tʂ <sup>h</sup> â	'khyags
ache	ts <sup>h</sup> â	tsha	ts <sup>h</sup> ê	

# Verbs with two stems

## Baima (Tibetan)

- stem alternation reflects WT paradigms; regularity of sound correspondences
- modifications: elimination of a distinct imperative stem, loss of distinction between transitive and intransitive verbs (loss of the *b*-prefix), leveling
- partial productivity



## Rgyalrong

- no distinction between transitive and intransitive
- stem 1 (IPFV): base vs. stem 2 (PFV): derived
- partial productivity

# Conclusions

- relate stem alternations in Pingwu Baima to WT verb morphology
  - to get a better understanding of the phonological processes through which different verb stems are derived
    - unlike Central and Kham Tibetan varieties, and more similar to Amdo varieties, Baima has a relatively complex verbal morphology in the sense of stem alternation
    - ongoing simplification resulting in the elimination of stem alternation
    - Baima regularly reflects the WT system with its irregularities



# Conclusions

- relate stem alternations in Pingwu Baima to WT verb morphology
  - sketch the development of WT verb paradigms in Pingwu Baima
    - the system is remodeled in a way that makes it more similar to that in the neighboring language(s)
    - there are verbs which developed stems with no correspondence in WT
- reassess conclusions in previous work
  - Baima is firmly Tibetic, but remodeled through contact

Thank you for your attention!

Sound files available at:

<https://pangloss.cnrs.fr/corpus/Baima>