

Non-past and past verb stems in Tangut

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Over the past decade, the documentation of Gyalrongic languages has shed light on grammatical phenomena which were poorly understood in Tangut, a language of critical importance in the field of Sino-Tibetan comparative linguistics. This paper provides an explanation for the last remaining unelucidated verbal alternation in Tangut ($-i^1/-i^2$), which, as I will demonstrate, encodes a non-past/past distinction. By doing so, it also gives fresh arguments for placing Tangut and the Horpa languages together within one clade. Finally, methodologically speaking, it offers an example of grammatical reconstruction from above, i.e. employing sister languages to better understand the grammar of an extinct language through their common ancestor, revealing a rare example of complex *distributional* retention uncorrelated with regular phonetic correspondences.¹

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1. Introduction

An alternation exists in Tangut which has resisted all attempts at explanation to date. It is seen mainly in two intransitive verbs, which are both included in the third category (第三類動詞) of the classification drawn by Gong (2001: 43–48).

1. Except for an ensemble of abbreviations listed in §6, the glosses used in the present paper follow the *Leipzig Glossing Rules* (see <https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf>). The reconstruction used in this paper is that of Gong Hwang-chenrg, as given in Li (2008), with \acute{s} - and \acute{z} - rendered as ϵ - and \acute{z} -. Following Sun (2019), Honkasalo (2019), and Gates (2021), I use the label “Horpa” as a clade name and not Stau (Tunzhi 2017), which is now considered a subvariety of Horpa.

– 𪛗 ϵji^1 / 𪛗 ϵji^2 ‘to go’ (see (1) and (2)):

- (1) 𪛗 𪛗 𪛗 𪛗 𪛗 𪛗
 $\eta a^2 ts^h ji^1 l^h j j \cdot a \cdot t e i j \quad \epsilon ji^1 \cdot \eta a^2$
 1SG Qin state one-CLF go₁-1
 ‘Я отправляюсь в царство Цинь, ...’ (Solonin 1995: 40)
 ‘I will make a visit to Qin.’ (12K 132.25.01)

- (2) 𪛗 𪛗 𪛗 𪛗 𪛗 𪛗
 $t c h j i^1 m j a^1 n i o o w^1 \cdot w e^2 \cdot u^2 r j i r^2 \cdot \epsilon j i^2$
 DEM afterwards city INE PFV:DIR-go₂
 ‘遂入郭。’ (Shi et al. 1993: 257)
 ‘After that, he went into the city.’ (Leilin 03.04A.6)

– 𪛗 $s ji^1$ / 𪛗 $s ji^2$ ‘to die’ (see (3) and (4)):²

- (3) 𪛗 𪛗 𪛗 𪛗 𪛗 𪛗
 $\eta a^2 z j i j^1 \cdot j a a r^2 n i o o w^1 = r j i j r^2 s j i^1 \cdot \eta a^2 \cdot l j i^1$
 1SG few day after die₁-1-EXCLAM
 ‘吾限日而死也’ (Shi et al. 1993: 265)
 ‘I will die in a few days!’ (Leilin 03.34A.4)

- (4) 𪛗 𪛗 𪛗 𪛗 𪛗 𪛗
 $d j i^2 k j w i i r^1 l j o o r^1 d a^2 s u^1 \cdot u^2 d j a^2 \cdot s j i^2 j i^2$
 Xiongnu falsely words Su Wu PFV-die₂ say
 ‘匈奴詐言武已死’ (Shi et al. 1993: 259)
 ‘The Xiongnu falsely told (others) that Su Wu had died.’ (Leilin 03.12A.3)

The same pattern of alternation is also seen in one transitive verb 𪛗 $p h j i^2$ / 𪛗 $p h j i^1$ ‘to abandon’ (see (5) and (6)).

2. As pointed out by an anonymous reviewer, Arakawa identifies in a sequence 𪛗 𪛗 𪛗 a disyllabic verb 𪛗 𪛗 $d j a^2 s j i^2 s j i^1$. However, the compound 𪛗 𪛗 $s j i^1 n i o o w^1$ ‘after death’ is hugely employed in Tangut, quite often without any verb before. In this example, as explained hereafter (§2.2 and §3.4), 𪛗 $s j i^1$ displays a nominal use of the $-i^1$ stem, and the sequence 𪛗 𪛗 𪛗 must be understood as $d j a^2 \cdot s j i^2 s j i^1 n i o o w^1$ ‘...he died. After his death, ...’. As indicated here, there are two known scripts for $s j i^2$, 𪛗 and 𪛗; we do not know any linguistic difference between these two variants.

– 𐰇𐰏 *phji¹* / 𐰇𐰏 *phji²* ‘to abandon’

(5) 𐰇𐰏 𐰇𐰏 𐰇𐰏 𐰇𐰏 𐰇𐰏 𐰇𐰏 𐰇𐰏 𐰇𐰏

dzjwo² p^hji¹-nja²=tja¹ kjwiir¹=rjir² ·a-tjij² ηwu²

person abandon₁₋₂=TOP steal=COMIT one-aspect COP

‘...когда от-талкивают людей, [давших добрые советы], то это сродни воровству.’ (Solonin 1995: 57)

‘...when you abandon someone [who has given good advice], it is like stealing.’ (12K 133.09.02)

(6) 𐰇𐰏 𐰇𐰏 𐰇𐰏 𐰇𐰏

gji² tjij² dja²-p^hji²

child rites PFV-abandon₂

‘...он отбросил сыновний долг...’ (Solonin 1995: 64)

‘...the son has deserted the rites (the filial piety)...’ (12K 133.31.07)

The verbal alternation due to agreement ($\Sigma[B]$ of Table 1), discovered by Gong (2001: 32–34) and confirmed many times after by Jacques (2009; 2011; 2014) and Beaudouin (2022; 2023), cannot apply here. As first expressed by Jacques (2009), as the alternating pattern due to agreement is inherent to transitivity, it cannot apply to intransitive verbs.³

Table 1. Agreement paradigm of the Tangut verb

| P A | 1SG | 1PL | 2SG | 2PL | 3 |
|--------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|----------------------------------|
| 1SG | | | Σ -nja ² 𐰇𐰏 | Σ -nji ² 𐰇𐰏 | $\Sigma[B]$ -nja ² 𐰇𐰏 |
| 1PL | | | | | Σ -nji ² 𐰇𐰏 |
| 2SG | | | | | $\Sigma[B]$ -nja ² 𐰇𐰏 |
| 2PL | Σ -nja ² 𐰇𐰏 | Σ -nji ² 𐰇𐰏 | | | Σ -nji ² 𐰇𐰏 |
| 3 | | | Σ -nja ² 𐰇𐰏 | Σ -nji ² 𐰇𐰏 | Σ |

As for the transitive verb 𐰇𐰏 *phji¹* / 𐰇𐰏 *phji²* ‘to abandon’, Jacques (2014: 228–229) also pointed out that, if one accepts that 𐰇𐰏 *phji¹* indicates the $\Sigma[B]$ of Gong’s model, there would be some examples of sentences where $\Sigma[B]$

3. In the system drawn by Gong (2001), the agreement suffix was responsible for the sound change. Jacques (2009) revealed instead that the alternation came from an ancient third person suffix *-w (cognate with Geshiza’s reanalyzed first person singular -u) which fused with the main vowel to produce Stem B (see Table 5).

would not be within a $1 \rightarrow 3$ or $2 \rightarrow 3$ frame. I reproduce in (7) the example he mentions, which displays a nominalization process.

- (7) 穢 穢 穢 穢 穢 穢 穢 穢 穢 穢
 $phji^1 war^2$ gji^1 $sej^1 = \eta wu^2$ $dzji$ $teior^1 = phji^1$ tji^2 ljo^2
 abandon₁.object profit calculate=INS action dirty=cause[A] NMLS:LOC where
 wji^2
 EX.V
 ‘Ainsi, comment peut-on se salir en voulant tirer profit d’un objet perdu?’
 (Jacques 2014: 228–229)
 ‘How can one get dirty by seeking to take profit from an abandoned object?’
 (FP 27.5–6)

Gong (2001:46) already recognized that his explanation did not perfectly fit for his third class, and suggested a distance dependence with the agreement suffix, which nevertheless left counterexamples. The examples I give in this introduction could support the suffixal interpretation, as most of the occurrences one can find in Tangut documents. However, this is only a corpus effect; one can find in Tangut quite a few examples of Stem 2 verbs with an agreement suffix ((8)), and examples of Stem 1 verbs without any suffix ((7) above and (9)).⁴

- (8) 殳𠄎訖𠄎𠄎𠄎𠄎𠄎𠄎 殳𠄎𠄎𠄎
pju¹ dzjwo² nja² dzjiij¹ tjɿ² kjiir² ·u² rjiir²-ɕji²-ŋa²
 honorable.person 2SG stay NMLS:LOC room INE PFV:DIR-go₂-1
 ‘誤入公室矣’ (Shi et al. 1993: 307)
 ‘Venerable person, I came to the place where you live.’ (Leilin 08.04B.6)
- (9) 殳𠄎𠄎𠄎𠄎𠄎𠄎𠄎𠄎𠄎𠄎𠄎𠄎𠄎𠄎𠄎𠄎
ŋa² dja²-sjɿ¹=zjiij¹ yur¹ djij¹ rew^{r2}=k^hju¹ rjiir²-tjo¹
 1SG PFV-die₁=time[A] corpse steps bank=SUBE IMP-put[B]
 ‘Когда я умру, положи мое тело на ступени дворца.’ (Solonin 1995: 62)
 ‘Once I have died, give the order [to put] my corpse below the stairs.’ (12K 133.27.05)

The reason is thus elsewhere. In this paper, I provide evidence allowing us to understand this last remaining unidentified verbal alternation in Tangut as an opposition of *tense*. Stem 1 ($-i^1$ stem) encodes non-past tense, and Stem 2 ($-i^2$ stem) past tense. This identification, inferred from the internal distribution of the morphemes collocating with both stems, is perfectly coherent with the semantics

4. The non-past/past hypothesis can explain this corpus anomaly. Most of the perfective occurrences observable in Tangut documents refer to past events; the relation between the stem type and the presence or absence of a suffix is only a question of correlation and not causation.

The corpus I use is composed of my transcriptions of the 叢叻 *djiŋ¹bo¹* (類林 *Lèilín*, ‘Forest of Categories’) in the edition of Shi et al. (1993), and the 叢梟 *ŋa²nji¹l^hjiŋ* (十二國 *Shìèr guó*, ‘The Twelve Kingdoms’) in the edition of Solonin (1995). I also conducted searches in the 梟叢 *ŋa²nji¹l^hjiŋ* (新集慈孝記下卷 *Xīnjí cíxiào jì xiàjuàn*, ‘New Collection on Parental Love and Filial Piety’), edited by Jacques (2007). For each example I give, the editor’s translation precedes mine.

Tables 2, 3, and 4 list all the occurrences of each of the three pairs of stems mentioned above, in their morphosyntactic context. I consider the presence or the absence of a preverb (first column), the presence or the absence of the telic/future suffix 徻 *jij*¹ (second line, TEL/FUT), and the presence or the absence of the inferential suffix 𠬞 *-sji*² (rightmost column). Each cell refers then to the particular conjunction of one of the two stems with the presence or absence of these three morphemes. I place preverbs conveying the perfective aspect (the perfective negation and the orientational preverbs) in an upper frame, and the absence of any preverb and the presence of a general negation or a preverb conveying imperative-like mood (non-perfective) in a bottom frame. For each cell, I list the occurrences found in 𪛗𪛗𪛗 *djij*¹*bo*¹ (L), the 𪛗𪛗𪛗 *ɣa*²*nji*¹*hij* (K) and the 𪛗𪛗𪛗𪛗𪛗𪛗𪛗𪛗 *sjiw*¹*ɕioo*¹*nji*²*wə*¹*la*¹ *mji*² X (F). Note that for the verbs 𪛗 *ɕji*² and 𪛗 *ɕji*¹, it was necessary to distinguish post-verbal contexts (where the verb works as an auxiliary) from independent contexts (where the verb is the main verb). As one can see, this extraction provides a repartition similar to the two other verbs.⁵

5. In fact, the resulting distribution tends to indicate that post-verbal occurrences pertain to another grammatical category, which could have repercussions on the analysis of the exact meaning of the verb in these configurations. In the three tables, parentheses indicate false exceptions, either due to homonymy with another morpheme (§2.1), or due to a systematic, accountable characteristic (§4.1).

Table 2. Distribution of 𨮑 *ɕji²* and 𨮑 *ɕji¹* ‘to go’ in *Leilin, Twelve Kingdoms*, and *Filial Piety*

| | | 𨮑 <i>ɕji²</i> | | 𨮑 <i>ɕji¹</i> | | |
|-----------------------------|----------|--------------------------|-----------|--------------------------|----------|--------------------------------|
| | | TEL/FUT | / | TEL/FUT | / | |
| | | L K F | L K F | L K F | L K F | |
| 𨮑 <i>dja²</i> - | PFV | | | | | 𨮑 - <i>ɕji²</i> IFR |
| | | 1 | | | | |
| 𨮑 <i>-a-</i> | PFV:UP | | | | | 𨮑 - <i>ɕji²</i> IFR |
| | | 4 | | | | |
| 𨮑 <i>nja¹</i> - | PFV:DOWN | | 1 | | | 𨮑 - <i>ɕji²</i> IFR |
| | | | 1 | | | |
| 𨮑 <i>rjir²</i> - | PFV:DIR | | | | | 𨮑 - <i>ɕji²</i> IFR |
| | | 32 | 6 | 5 | | |
| / | | | | | | 𨮑 - <i>ɕji²</i> IFR |
| | | | | 2 | 28 10 4 | |
| 𨮑 <i>mji¹</i> - | NEG | | | | | 𨮑 - <i>ɕji²</i> IFR |
| | | | | | 5 1 | |
| 𨮑 <i>dja²</i> - | IMP | | | | | 𨮑 - <i>ɕji²</i> IFR |
| | | | | | 1 | |
| 𨮑 <i>tji¹</i> - | PROHIB | | | | | 𨮑 - <i>ɕji²</i> IFR |
| | | | | | 2 | |
| | | | | | | |
| post-verbal (auxiliary) | | | 3 | (1) | | 𨮑 - <i>ɕji²</i> IFR |
| | | | 115 40 21 | 2 2 | 49 28 13 | |

Table 3. Distribution of 𨮑 *ɕji²* and 𨮑 *ɕji¹* ‘to die’ in *Leilin, Twelve Kingdoms*, and *Filial Piety*

| | | 得 𨮑 <i>ɕji</i> ² | | | 𨮑 <i>ɕji</i> ¹ | | | |
|-----------------------------|---------|-----------------------------|----|------|---------------------------|----|------|---------------------------------|
| | | TEL/FUT | | | TEL/FUT | | | |
| | | L | K | F | L | K | F | |
| 𨮑 <i>dja</i> ² - | PFV | | 1 | 3 | | | | 𨮑 - <i>ɕji</i> ² IFR |
| | | | 50 | 15 6 | | | 2 | |
| 𨮑 <i>mji</i> ² - | NEG.PFV | | | | | | | 𨮑 - <i>ɕji</i> ² IFR |
| | | | | | 1 | | | |
| / | | | | | | | | 𨮑 - <i>ɕji</i> ² IFR |
| | | | | | 2 | 43 | 14 5 | |
| 𨮑 <i>mji</i> ¹ - | NEG | | | | | | | 𨮑 - <i>ɕji</i> ² IFR |
| | | | | | | 3 | 1 | |
| 𨮑 <i>dji</i> ² - | OPT | | | | | | | 𨮑 - <i>ɕji</i> ² IFR |
| | | | | | | 3 | 2 | |

Table 4. Distribution of 𪚩 *phji*² and 𪚪 *phji*¹ ‘to abandon’ in *Leilin*, *Twelve Kingdoms*, and *Filial Piety*

| | | | 𪚩 <i>phji</i> ² | | | 𪚪 <i>phji</i> ¹ | | | | |
|-----------------------------|---------|--|----------------------------|----|---|----------------------------|---|-----|---|-------------------------------|
| | | | TEL/FUT | | | TEL/FUT | | | | |
| | | | L | K | F | L | K | F | | L |
| 𪚩 <i>wji</i> ² - | PFV:OUT | | | | | | | | | 𪚪 <i>-sji</i> ² FR |
| | | | | 1 | | | | (2) | | |
| 𪚪 <i>dja</i> ² - | PFV | | | | | | | | | 𪚪 <i>-sji</i> ² FR |
| | | | | 10 | | | | (1) | | |
| / | | | | | | | | | | 𪚪 <i>-sji</i> ² FR |
| | | | | | | | | 8 | 2 | 1 |
| 𪚪 <i>mji</i> ¹ - | NEG | | | | | | | | | 𪚪 <i>-sji</i> ² FR |
| | | | | | | | | 2 | | |
| 𪚪 <i>dja</i> ² - | IMP | | | | | | | | | 𪚪 <i>-sji</i> ² FR |
| | | | | | | | | 1 | | |

2.1 *-i*² stem (Stem 2): Absolute distributional tendencies

Some interesting distributional facts deserve mention. As for the *-i*² stem, these facts have an air of absoluteness:

First, the *-i*² stem *never* occurs either unprefixing, or prefixed by the general negation marker 𪚪 *mji*¹.

Second, the *-i*² stem *never* occurs suffixed by a telic/future suffix 𪚪 *jij*¹.

Third, the *-i*² stem *always* occurs with a prefix conveying perfective aspect, typically 𪚪 *dja*²- (see (4), (6) above) or 𪚪 *rji*²- in the case of the motion verb 𪚪 *εji*² ‘to go’ (see (2), (8) above).

Fourth, the inferential 𪚪 *-sji*² *always* occurs with the *-i*² stem (as in (10)).⁶

- (10) 𪚪 𪚪 𪚪 𪚪 𪚪 𪚪 𪚪 𪚪
*t^hja*¹ *p^hio*² *mə*²*la*² *dja*²-*sji*²-*sji*² *ljij*²
 DEM_{DS} snake indeed PFV-die₂-IFR see[A]
 ‘...[OH] УВИДЕЛ, ЧТО ЭТА ЗМЕЯ ДЕЙСТВИТЕЛЬНО УМЕРЛА.’ (Solonin 1995: 56)
 ‘...he saw that that snake indeed had died.’ (12K 133.07.01)

Finally, internally speaking (and conversely to the *-i*¹ stem), the uses of the *-i*² stem are coherent, i.e. they are *always* the same, forming a unique category of finite verbs.

6. There is an apparent discrepancy with 𪚪 *εji*¹, suffixed in one occurrence by 𪚪 *-sji*² (*Leilin* 04.07A.2), but the suffix is in this case the homophonous nominalising suffix 𪚪 *-sji*².

2.2 $-i^1$ stem (Stem 1): Strong unabsolute distributional tendencies

On the other hand, when analyzing the contexts of occurrence of the $-i^1$ stem, one can observe strong tendencies, but without the absoluteness seen for the $-i^2$ stem.

First, the $-i^1$ stem usually occurs unprefixed or prefixed by the general negation, but there is a minority of examples where it is prefixed by preverbs usually co-occurring with the $-i^2$ stem (these marginal occurrences are in fact clues allowing for the attribution of the correct value to the alternation, and I discuss them in §4); Second, the general negation always goes together with the $-i^1$ stem (see 11).

- (11) 黃 靴 幾 幾 慨 概 概
 $\epsilon ja^1 \quad jaar^2 \quad kji^1-rar^2 \quad mji^1-sji^1$
 seven day PFV:IN-pass NEG-die₁
 ‘經七日不死’ (Shi et al. 1993: 259)
 ‘Seven days had passed, and he was still alive.’ (Leilin 03.11B.5)

Third, when a prefix conveys the imperative mood as in (12) and (13), the optative/jussive mood (i.e. irrealis imperative) as in (14), or the prohibitive (i.e. negative imperative) as in (15), it goes with the $-i^1$ stem;⁷

- (12) 幪 幪 幪 幪 幪 幪 幪 幪 幪 幪
 $nji^2 \quad dzji^1-ya^2 \quad dja^2-\epsilon ji^1-nja^2 \quad mjo^2 \quad lwe^2lwe^2 \quad lja^1-\eta a^2$
 2.HON fast-LOC IMP-go₁-2 1HUM slowly come-1
 ‘然君但急行，我當緩來’ (Shi et al. 1993: 302)
 ‘Go quickly! I will come slowly.’ (Leilin 07.21A.5)
- (13) 訛 訛 訛 訛 訛 訛 訛 訛
 $nja^2 \quad tsji^1-a-dzji^1 \quad tjij^2 \quad dja^2-phji^1-nja^2$
 2SG also one-moment rite IMP-discard₁-2
 ‘請子去禮’ (Shi et al. 1993: 261)
 ‘Please discard the rules of politeness.’ (Leilin 03.19A.2)
- (14) 箇 訛 訛 訛 訛 訛 訛 訛 訛 訛
 $ljiw^2 \quad teju^1 \quad da^2 \quad pji^1-nji^2-nja^2 \quad mej^1=ju^2 \quad djji^2-sji^1-\eta a^2 \quad ji^2$
 Lü Zhu words today 2SG eye=ANTE OPT-die₁-1 say
 ‘當效死於君前’ (Shi et al. 1993: 302)
 ‘Lü Zhu said: “Today I shall die before your eyes”’ (Leilin 08.05B.7)

7. In Tangut as in Geshiza, the prohibitive, the jussive, and the imperative can be considered as subcategories of a larger imperative mood. Both Tangut and Geshiza distinguish, for the contextually inferable perfective and imperative semantics of the orientational preverbs, a first realis series (perfective indicative or imperative) from a second irrealis series (perfective interrogative or optative/jussive). For this matter, see Beaudouin (forthcoming b).

multiplicity of uses of the $-i^1$ stem makes the attribution of a label corresponding to this variety a challenging task.¹²

However, if one changes perspective here, the question of the variety of uses of the $-i^1$ stem may be more trivial than imagined: it would be far from the first time that Tangut uses the same character to write different words.¹³ In this particular case, we can thus accept the existence of three different categories for the $-i^1$ stem, without excluding the fact that there might be affinities between these categories. One might imagine a process whereby a primary stem derives non-finite forms as infinitives and nominalized forms.¹⁴ The primary opposition we have to understand is thus the one existing between $-i^2$ stem verbs and their $-i^1$ stem *finite verb counterparts*, and not all the $-i^1$ stem occurrences. With such a perspective, it is easier to find the nature of an opposition that must cover the following requirements:

- Requirement 1: it should be an opposition having strong affinities (i.e. being in correlation) with prefixed perfective marking, without being perfective marking;
- Requirement 2: it should be an opposition that explains why the inferential and the telic can only be attached to one of the two stems;
- Requirement 3: it should be an opposition that explains why imperative and optative prefixes are only attached to the stem co-occurring with the telic suffix;
- Requirement 4: it should be an opposition for which only that same stem can derive infinitive and nominalized (i.e., non-finite) forms;

As § 3 shows, the non-past/past distinction seen for some verbs in Geshiza Horpa fits these prerequisites quite well.

11. The presence of perfective marking that would indicate a “perfective” stem is indeed logically incompatible with the fact that perfective marking is also seen with the other stem, even if it is only in three sentences.

12. The imperfective/perfective thesis eludes the $-i^1$ stems co-occurring with perfective preverbs; the finite/non-finite eludes the finite forms of the $-i^1$ stems.

13. For instance, it is known that 𐱅𐰇𐰼 can be interpreted either as the inferential $-sji^2$ or the nominalizer $-sji^2$, and that 𐱅𐰇𐰼 can either transcribe the pronoun ηa^2 or the agreement suffix $-\eta a^2$.

14. These three values could coexist on a continuum departing from the verb to the nominalized form, with the infinitive as an intermediary stage.

3. Geshiza's non-past/past alternation (external evidence)

As Beaudouin (2023) showed, the proximity between Geshiza Horpa and Tangut can help us to better understand Tangut grammar. Here lies the question: since Geshiza features a $\Sigma \sim \Sigma^h$ verbal alternation (see Table 5) encoding a non-past/past opposition, does this alternation behave similarly to Tangut $\Sigma_1 \sim \Sigma_2$, i.e. does it obey the same templatic collocations? One can answer this question by taking the requirements listed above for Tangut's alternation, one by one.¹⁵

3.1 Requirement 1 (perfective prefixation for non-perfective Stem 2)

Like Tangut $-i^2$ stems, Geshiza past stems have an affinity with prefixed perfective marking (see Example (17)).¹⁶

Geshiza has a perfective aspect primarily marked with the verbal prefix $d\alpha$ - (glossing: PFV) that has no orientational meaning, obligatorily attaching to the past stem a verb, if such stem is available. (Honkasalo 2019: 545)

- (17) *gadā gadāyi brāngu dα-ε^hoŋ*
 morning early.morning Danba PFV-go.PST.1
 'I went (downriver) to Danba County Town early morning.'
 (Honkasalo 2019: 546)

3.2 Requirement 2 (inferential suffixed to Stem 2, telic to Stem 1)

Like Tangut $-i^2$ stems with $\frac{3}{4}\frac{1}{2} - sji^2$, in Geshiza too there is a coreference between the cognate inferential and past stems (see Example (18)).

In contrast to the sensory evidential $-r\alpha$ requiring the non-past stem, the inferential evidential $-s^hi$ occurs exclusively together with the past stem of the verb. (Honkasalo 2019: 600)

- (18) *zya α-wnæs^hq^ha-ko=be mαts^hα dα-t^hje-s^{hi}i=bɔ*
 ten one-twenty-CLF.year=also more PFV-become.PST.3-IER=MOD
 'Even ten, twenty-something years have passed since.' (Honkasalo 2019: 602)

15. This alternation is produced in Geshiza by aspiration of the initial; the directionality is random, i.e., the non-past/past alternation can either exist as C^- / C^h - or C^h / C^- , which makes it impossible to find phonetic regular correspondences. The aspectual system underlying the orientational series of preverbs is explained in Beaudouin (forthcoming a).

16. In Geshiza the agreement suffix fused in some cases with the stem, provoking the appearance of a real conjugational paradigm.

Table 5. Verbal templates for Tangut and Geshiza Horpa (from Beaudouin Forthcoming a)

| | -6 | -5 | -4 | -3 | -2 | -1 | Σ | 1 | 2 | 3 | 4 | 5 |
|---------|--------------------|---|---------------------------------|--|--|----|--------------------------|---|---|---|----------|---|
| Tangut | $*ja^2$ | $a-$ rja^2 , nja^1 wja^2 , kji^1 dja^2/dji^2 | $a-$ $-ji-$ | mji^1 mji^2 mji^1 tji^1 | ie^1ji^1 tji^1 $tsji^1$ | | <i>redup. noun inc.</i> | $\Sigma[A] \sim \Sigma[B] \leftarrow *_{\Sigma}w$ $\Sigma_1 \sim \Sigma_2$ $\Sigma \sim \Sigma$ $\Sigma_{\text{vcd}} \sim \Sigma_{\text{vcdss}}$ | $-ji^1$ $-ja^2$ $-nja^2$ $-kji^1$ $-tsji^1$ $-rji^2$ | $-sji^2$ | $-dji^2$ | |
| Geshiza | $jae-$ $gegae-$ | $ra-$, $nae-$ $wa-$, $ga-$, $dae-$ $za-$ | $a-$ $-i-$ $-a-$ $-a-$ | $mi-$ $m\epsilon-$ $ma-$ $-di-$ | $v-$ $s/s^h/z-$ $ji\ddot{a}e-$ $a-$ $N-$ $N-$ | | <i>redupl. noun inc.</i> | $\Sigma \sim \Sigma^h$ $\Sigma_{\text{vcd}} \sim \Sigma_{\text{vcdss}}$ | $-u$ $-j$ $-n$ $-i$ $-yuan$ | $-rae$, $-s^hi$, $-ja$, $-wo$, $-go$, $-ma$ | | |

There is no cognate to Tangut's telic suffix in Geshiza.¹⁷ However, semantically speaking, the past stem in Geshiza displays an incompatibility similar to that seen in Tangut for the telic, but with prospective events.

[...] *the prospective requiring the non-past tense.* (Honkasalo 2019: 613)

- (19) *e dzi z-i-st^he-mə*
 INTERJ food **PROSP-INTRG-finish.NPST.2-EP**
 'Hey, are you about to finish cooking?' (Honkasalo 2019: 613)

3.3 Requirement 3 (imperative-like preverbs affixed to Stem 1)

In Tangut, imperative and optative/jussive preverbs precede the stem already collocating with the telic, i.e. the *-i^l* stem; one can find the same phenomenon in Geshiza, where those preverbs are attached to the non-past stem (see Example (20)).

[...] *all imperative types require the non-past stem of a verb.*
 (Honkasalo 2019: 636–637)

- (20) *dza wə-t^hi*
 tea **IMP-drink.NPST.2**
 'Drink (some) tea!' (Honkasalo 2019: 625)

3.4 Requirement 4 (Stem1 producing infinitive and nominalized forms)

Like in Tangut with Stem *-i^l*, infinitive and nominalized are derived from the same stem as that of prerequisite 3, which is, in Geshiza, non-past stem (see Examples (21) and (22)).

In contrast to finite verbs that can have up to two (exceptionally three; see § 4.3.5.3) stems, infinitives always require the non-past stem. (Honkasalo 2019: 272)

- (21) *s^hoŋzæ stærmu və-me t^ho vo t^hi ɛoŋ*
 S^hoŋzæ wedding LV:do.NMLS:A DEM.LOC alcohol **drink.INF** go.NPST.1
 'I will go to S^hoŋzæ to have a drink at the place of wedding.'
 (Honkasalo 2019: 687)

17. There is one in Mazur Stau; however, this language has lost the tense opposition of its sister language Geshiza. The present hypothesis predicts that a sister language detaining an opposition of tense *and* a suffix cognate to Tangut's telic marker would collocate this suffix with non-past stems.

[...] when compounded, verbs appear in the infinitive (see § 4.3.6), i.e. in the non-past stem devoid of any argument indexation morphology. (Honkasalo 2019: 443)

- (22) t^hi -*wrə* drinking water = t^hi ‘to drink’ (INF/NPST) + *wrə* ‘water’
(Honkasalo 2019: 447)

All these distributional similarities, together with the semantics attached to the distribution seen in Tangut, strongly advocate for the existence of a non-past/past opposition for the three Tangut verbs of the present study. Such an opposition would not only help understand the usual co-occurrence of the putative past stem with perfective prefixes, but also account for the rare exceptions (indeed, past tense in many languages often co-occurs with perfective aspect, but not necessarily). It also gives a semantic and comparative motivation for the presence of the three same uses (finite, infinitive, and nominalized forms) for the $-i^l$ stem; it is indeed perfectly coherent to produce infinitive and nominalized forms from the less specific of the two stems, i.e. the non-past.

Still, to foster this interpretation, it is necessary to look at the so-called exceptions ($-i^l$ stems co-occurring with a perfective preverb); all these exceptions indeed have to display non-past tense (or one of its two secondary meanings), either marked or contextually inferable. As seen in § 4, these distributional exceptions, within a non-past/past frame, are perfectly understandable.

4. The exceptions that prove the rule

4.1 Light-verb component stems (nominal use)

From a distributional perspective, the exceptions seen in Table 4 are actually not exceptions. One can see in Examples (23) and (24) successions of a perfective preverb with a $-i^l$ stem. However, the process by which light-verbs are constructed in West Gyalrongic, already well documented in Khroskyabs (Lai 2017: 240–242, 508) and Geshiza (Honkasalo 2019: 277–278), derives *nominalized* forms of the verbs before their incorporation in the light verb. These examples are thus subcategories of the nominalized category already identified for compound words.

- (23) 殽 翳 殽 殽 殽 殽 殽 殽 殽 殽
 $giuu^1$ $jā^1$ $tchji^2rjar^2$ $thja^1=jij^1$ sjj^1 $·wji^2-phji^1=·wji^1$
 Yu Yan immediately DEMDS=GEN death PFV:OUT-abandoning=LV:do[A]
 ‘延遂殯於門外’ (Shi et al. 1993: 270)
 ‘Yu Yan immediately buried him outside.’ (Leilin 04.16B.1)

18. There is a notable discrepancy regarding the subject of this sentence between the reconstructed Chinese text (鄉人 ‘villagers’) and the Tangut translation (𗡇 .o¹ ‘master, lord, host’).

- (27) 蕪髒鵠邇訛誨齏叢叢蔕揄張嶺緝縶襖毳儼
kjwi^l swē^l ja¹nji^{i²} nja²=ji^{j¹} zu^I.wie^{r¹} tji^{j¹} dja²-sj^{i¹}=zji^{j¹}^L t^hji^{j²}-sjo²
 Ji Sun former.days 2SG=GEN love cherish when PFV-die₁=time how
ɲwu²kwa^{r¹}-nja²-ji^{j¹}^L
 cry-2-TEL/FUT
 ‘Цзи-сунь-ваш давний друг, как же вы станете оплакивать его, когда он умрет?’ (Solonin 1995:49)
 ‘Ji Sun from since the old days is your beloved (friend). When he is dead, how will you cry?’ (12K 132.66.03)

5. Conclusion

Table 6 gives a summary of the distributional parallels seen between the non-past/past distinction in Geshiza and the opposition of the verbs of Gong Hwang-Cherng's third category. The perfect correspondence of these two complex distributional patterns cannot be due to chance.

The alternation seen in the third class verbs (第三類動詞) of Gong (2001) is thus of tense, and opposes a past stem always seen in perfective constructions (prefixed, as in Geshiza, with an orientational or negative perfective preverb), to a non-past stem usually seen without perfective preverb, but which can still appear in such configurations in non-past perfective (prospective) constructions. The non-past stem can also appear with imperative and optative (jussive) preverbs, which is coherent with the fact that the action has still to occur at the time of utterance. This last stem, as in Geshiza, can be used with infinitive and nominalized forms. As I invite other scholars versed in Tangut texts to verify, as this system fits without exception the semantics (see Example (28), which is also Example (28) of Gong 2001: 34) of each occurrence in the documents of my study, one should not find exceptions in other documents either.

Table 6. Compared distribution of Geshiza non-past/past and Tangut third class verbs stems

| | | T. -i ¹ stem | G. non- past | T. -i ² stem | G. past |
|--------------------------------------|----------------------------------|----------------------------|-----------------|----------------------------|------------|
| | | (Stem 1) | | (Stem 2) | |
| prefixation | prefixed | ✓ | ✓ | ✓ | ✓ |
| | unprefixed | ✓ | ✓ | ✗ | ✗ |
| aspect & modality (preverbs) | perfective (orient.) | ✓ | ✓ | ✓ | ✓ |
| | perfective negative | ✓ | ✓ | ✓ | ✓ |
| | general negative | ✓ | ✓ | ✗ | ✗ |
| | imperative (orient., prohib.) | ✓ | ✓ | ✗ | ✗ |
| aspect & evidentiality (suffixes) | telic/future, prospective | ✓ | ✓ | ✗ | ✗ |
| | inferential | ✗ | ✗ | ✓ | ✓ |
| non-finite conversion (stem) | infinitivation | ✓ | ✓ | ✗ | ✗ |
| | nominalization | ✓ | ✓ | ✗ | ✗ |

(28) 纛纛髡髮紮纛纛侖死氍氐詔羌侬燧茲[[]𤇀[]]纛¹ 纛¹
 $\eta a^2 = tja^1 \quad ma^1 \quad kji^1 - zeew^2 \quad . wji^2 \quad \eta jow^2 \quad twu^1 \quad bji^2 \quad t\epsilon ju^1 \quad nji^2 = jij^1 \quad nji^1$
 1SG=TOP sky PFV:IN-send Dong Hai place Mi Zhu clan=GEN house
 $pju^2 \quad \epsilon ji^1 - \eta a^2 - jji^1$
 burn[A] go.NPST-1-TEL/FUT
 ‘我是天使，遣我往燒東海廩家’ (Shi et al. 1993: 302)
 ‘Me, the sky sent me and I am going to burn the house of Mizhu’s clan in
 Donghai.’ (Leilin 07.21A.1)

Some parts of the preverb system (the interrogative function of the second series of preverbs) are still missing in this figure. Even if we lack attestations, the analogy between series 1 and 2 preverbs in imperative configurations allows to posit that such an analogy also exists in interrogative contexts for series 1 and 2 preverbs. Series 2 preverbs with interrogative functions should logically co-occur with past stems for perfective events and with non-past stems for prospective events. Further research will no doubt help complete this system.

One may note that the shared distribution outlined here is new data fostering the classification of Tangut within the Horpic clade. As Chirkova (2012) pointed out, the non-past/past tense opposition observable across the Qiangic area in both Qiangic (including Gyalrongic) and non-Qiangic languages such as Tibetan, can-not be taken as a defining parameter of Qiangness. However, the defining

parameters whose relevancy the author rightly critiques were then all exposed from a general typological/areal perspective (e.g., Sun 2001). The distribution given here is different. It is highly unlikely that, for two languages sharing an identical complex distribution between (1) their verbal stems and (2) cognate morphemes identically positioned in the verbal templates of each language (Beaudouin forthcoming a) and pertaining to the same TAME classes, the stems would not also share the same TAME semantics.¹⁹

Methodologically speaking, this is a peculiar case of grammatical reconstruction allowed by an example of rare distributional retention, for two languages distant from each other by 800 years. As stated above, the non-past/past alternation found for Geshiza verbs is realized through an aspiration whose directionality is random, and the similarities that led me to uncover the meaning of the alternation in Tangut were merely *distributional*.

The shared distribution between Geshiza Horpa and Tangut allows us to henceforth posit the existence of a non-past/past opposition in proto-Horpic, even if we still have no clues about its phonetic realization. The regularity of the alternation in Tangut might tend to indicate ulterior degradation of a previously non-random system in Geshiza Horpa.²⁰ Further documentation of other Horpa languages, especially the conservative Northern and Western varieties, and future comparison with other Gyalrongic languages will likely help us uncover the origin and the particular developments of this alternation in all the different Horpa languages. At present, it is probably too early to draw out conclusions of value for Gyalrongic and Sino-Tibetan, as this would potentially lead us to fall into the same trap as the proponents of areal features to define Qiangness. Non-past/past alternation exist elsewhere in Gyalrongic as well as in other Sino-Tibetan languages, which could for now point towards this feature as a retention

19. To answer the question of an anonymous reviewer, a feature is a concept that means nothing outside of a particular administration of proof context. Chirkova (2012) pointed out the arealness of features that were thought to be of genetic relevance, but were actually areal in the way they were analyzed. On the contrary here, even if it retrospectively (thankfully) fits the semantics, the non-past/past meaning of the stem is secondary; the reasoning is distributional, and departs only from precise, non-trivial, complex collocational phenomena.

20. The number of verbs obeying such a pattern in Tangut amounts for now to three; however, further research may uncover other examples. In the case that these three verbs proved to be the only remaining examples of a more general alternation in proto-Horpic, we can suppose that a conjunction of phonetic (same rhyme and tone), morphosyntactic (light-verb construction) and semantic (the same idea of 'loss') reasons helped conserve it. This is highly conjectural, but we may conjecture that while the retention was primarily probably most needed for the motion verb 'to go', the semantic and phonetic proximity between these three verbs might have worked together to create a cognitive background conducive to a more general retention.

with distributional characteristics that are peculiar enough to qualify to Horpic or Horpa. Beginning with Horpic then (West) Gyalrongic, further comparison will no doubt provide solid material of value for Burmo-Qiangic and Sino-Tibetan.

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List of abbreviations

| | |
|-------------------|---|
| 1 | singular first-person suffix/conjugation |
| 12K | <i>Twelve Kingdoms</i> |
| 1HUM | humilific first-person pronoun |
| 1SG | singular first-person pronoun |
| 2 | singular second-person suffix/conjugation |
| 2.HON | honorific second-person pronoun |
| 2SG | singular second-person pronoun |
| 3 | third-person conjugation |
| ANTIERG | antiergative |
| ANTE | antessive ('in front of') |
| CAUS | causative |
| CLF | classifier |
| COMIT | comitative |
| COP | copula |
| DEM.LOC | locative demonstrative |
| DEM _{DS} | distal demonstrative |
| DIR | directional preverb |
| EP | epistemic particle |
| ERG | ergative |
| EXCLAM | exclamative |
| EX.V | existential verb |
| FP | <i>Filial Piety</i> |
| FUT | future |
| GEN | genitive |
| IFR | inferential |
| IMP | imperative |
| INDF | indefinite |
| INE | inessive ('in', 'inside', 'within') |
| INF | infinitive |
| INS | instrumental |
| INTERJ | interjection |

| | |
|----------|----------------------|
| INTRG | interrogative |
| LOC | locative |
| LV | light verb |
| MOD | modal particle |
| NEG | negation |
| NMLS:A | agent nominalizer |
| NMLS:LOC | locative nominalizer |
| NPST | non-past |
| PFV | perfective |
| PROSP | prospective |
| PFV:DOWN | downward perfective |
| PFV:IN | inward perfective |
| PFV:OUT | outward perfective |
| PFV:UP | upward perfective |
| POSTE | postessive ('after') |
| PROHIB | prohibitive |
| PST | past |
| SUBE | subessive ('under') |
| SUPE | superessive ('on') |
| TEL | telic |
| TOP | topic |

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