The Origin of Vowel Alternations in the Tangut Verb[*]

Guillaume Jacques
Université Paris Descartes, CRLAO

Like other Qiangic languages, Tangut has complex verbal morphology. Based on comparative data from Qiangic languages, this article attempts to reconstruct the origin of the Tangut ablaut system. In Tangut, some verbs have two stems, the distribution of which is determined by the person of the agent and the patient. Stem 2 appears when the agent is first or second person singular and the patient is third person, and Stem 1 in other verbal forms. We show that there was a third person patient *-*w* suffix in Tangut cognate with Northern Qiang, and that Stem 2 is the result of the coalescence of this suffix with the verb root vowel.

Key words: Tangut, Qiang, rGyalrong, ablaut, agreement

Like rGyalrong and other members of the Qiangic branch of Sino-Tibetan, Tangut has a complex agreement system in which person is not only marked by affixes, but also by stem alternations, as was first discovered by Nishida (1976) and elaborated by Gong (2001). In this article, we shall first present former scholarship on Tangut verbal agreement, then propose a new analysis of the verbal stem alternations based on comparisons with modern Qiangic languages.

1. Tangut agreement system

1.1 Personal suffixes

Kepping (1975, 1985:217) was the first scholar to discover the existence of a personal agreement system in Tangut. She described three suffixes: 𗢸 ŋa² (1SG), 𗩾 nja² (2SG) and 𗤁 nji² (1PL and 2PL). These suffixes are related to the personal pronouns, though not in an entirely transparent way:

Suffixes	Pronouns
𗥃 ŋa² 1SG	𗥃 ŋa² 1SG
𗋽 nja² 2SG	𗀗 nja² 2SG
𘀗 nji² 1PL/2PL	𗀄 nji² 2SG Honorific, 2PL

The 1SG pronoun and suffix are identical in both pronunciation and writing, though other first person singular pronouns such as 𗋽 mjo² also exist and must be used with the 𗥃 ŋa² suffix. The second person singular pronoun 𗀗 nja² has the same reconstructed pronunciation as the suffix, but they are written with different characters, and never confused in texts. Finally, the plural SAP[1] suffix 𘀗 nji² has the same pronunciation as the second person honorific/plural pronoun 𗀄 nji², but they are written with different characters. Besides, this pronoun, when used for a singular argument, requires the 𗋽 nja² suffix, as can be seen in the following example (№ 3.6, p.14):[2]

(1) 𗀄 𗯖 𘒀 𗪊 𗥃 𗋽
    nji² tshji² ljij¹ a dʑij nja²
    you serve   PRF agree 2SG
    'Do you agree to serve her?'

Therefore, although it seems probable that the personal suffixes are ultimately derived from pronouns, they had already been grammaticalized by the time the first Tangut texts had been written.

    An interesting property of Tangut personal suffixes is that they may agree not with an argument, but with the possessor of an argument (a SAP possessor of a 3ʳᵈ person argument). This is a common property of agreement in ST languages (except rGyalrong, see Jacques 2004:345), and was noticed by Kepping (1985:238). They can appear not only on verbs, but also, in a few instances, directly on nouns without a copula (Jacques 2008).

    In transitive verbs, when one argument is SAP and the other non-SAP, regardless of their respective syntactic roles, agreement occurs with the SAP argument. When both arguments are SAP, agreement occurs with the patient. This system is summarized in the following table, where columns indicate the patient and rows the agent:

---

[1] Speech-act participant, i.e. first or second person.
[2] All example sentences in this paper are from Jacques (2007), the textual edition and translation of the Tangut text 新集慈孝傳/𗆧𘃡𗤶𗴺𗟲 'The new treatise on parental love and filial piety'. Gong Hwang-cherng's reconstruction of Tangut is used throughout the article (see Gong 2002).

Table 1: Tangut agreement suffixes

	1s	1p	2s	2p	3
1s			豚 nja^2	菀 nji^2	雏 ŋa^2
1p					菀 nji^2
2s	雏 ŋa^2	菀 nji^2			豚 nja^2
2p					菀 nji^2
3			豚 nja^2	菀 nji^2	

1.2 Stem alternation

As Gong (2001) pointed out, suffixes are not the only argument markers on the verb in Tangut; some verbs have an alternation between two stems that follow the following patterns:

Table 2: Patterns of stem alternation in Tangut

Alternation	Stem 1	Stem 2	Meaning
-ji → -jo	蕆 mji 1.11	蘝 mjo 1.51	hear
-ju → -jo	敊 lju 2.02	娚 ljo 2.44	throw
-ji → -jɨ	衦 sji 2.10	毹 sjɨ 1.30	die
-jij → ji	蔜 ljij 2.33	厬 lji 2.09	see
-ier → -ior	厳 wier 1.78	蒶 wior 1.90	love[3]

Most of the alternating verbs (if not all of them, as we shall see below) are transitive. Stem 2 is used when the verb's subject (that is, A for a transitive verb or S for an intransitive one) is 1SG or 2SG and the patient is third person (Gong 2001:26). Stem 1 occurs in all other cases, including those when a 1SG or 2SG agreement suffix appears but is coreferent with the patient of the verb (Gong 2001:32-34).

Agreement suffixes are usually present in most verb forms but <u>may</u> <u>be</u> <u>elided</u>, as Gong points out, leaving stem alternation as the only mark of agreement on the verb.

Alternating transitive verbs can have up to six distinct forms. The following table represents the (theoretical)[4] paradigm of the alternating verb 融 phji^1/庖 phjo^2 'to send, to cause to do'.

---

[3] This example comes from Jacques (2006b).

[4] This is the most common alternating transitive verb in Tangut. Almost all the forms in the table are attested; see for instance examples №s 9, 10, 11, 20, 21, 23, 24, 25, 30, 32, and 66 in Gong (2001).

Table 3: Tangut transitive paradigm (stem alternation and suffixes)

	1S	1P	2S	2P	3
1S			𗾓𗀈 phji¹ nja²	𗾓𗸸 phji¹ nji²	𘕕𗀒 phjo² ŋa²
1P					𗾓𗸸 phji¹ nji²
2S	𗾓𗀒 phji¹ ŋa²	𗾓𗸸 phji¹ nji²			𘕕𗀈 phjo² nja²
2P					𗾓𗸸 phji¹ nji²
3			𗾓𗀈 phji¹ nja²	𗾓𗸸 phji¹ nji²	𗾓 phji¹

Although Tangut lacks direct/inverse marking,[5] 1 > 3 and 2 > 3 are distinguished from 3 > 1 and 3 > 2 by means of stem alternation. The presence of this stem alternation is a further argument against the hypothesis of a recent grammaticalization of pronouns onto the verb (LaPolla 1992). However, the function of stem alternation in Tangut seems very different from that observed in other Qiangic languages such as rGyalrong.[6]

2. Reconstructing Tangut stem alternation

Gong (2001) thought that the vowel alternation in Stem 2 was due to the influence of the suffix onto the verb stem, but an alternative explanation for the origin of stem alternation is possible. We shall argue that Tangut verb stem alternation is not a genuine ablaut system,[7] but is rather the trace of a former suffix in proto-Tangut.

2.1 A comparative approach to stem alternation

In this section, we shall first present the verb paradigm in Northern Qiang, a modern Qiangic language, then analyze Tangut vowel alternation from the point of view of historical phonology, and finally interpret the vowel alternation as the result of the fusion (in proto-Tangut) of the verb stem with a suffix cognate to the third person object suffix in Qiang.

Here is the verb paradigm of Northern Qiang (Huang & Zhou 2006:131-133):

---

[5] Unlike rGyalrong, see DeLancey (1981).

[6] In rGyalrong, at least three stems exist (Sun 2000): Stem 1 (default), Stem 2 (Past), Stem 3 (Transitive 1, 2, 3SG > 3 Non-past). From the point of view of grammatical function, only Stem 3 could be compared to Tangut Stem 2, but even this is not probable, as stem alternation in Tangut seems to be independent of TAM parameters.

[7] By "ablaut" we mean vowel alternation that is not phonologically conditioned, such as the *e/*o alternation of proto-Indo-European or the vowel patterns in Semitic languages.

Table 4: Northern Qiang agreement system

	1P	2P	3P		Intransitive
1A		-a/-æ	-w-a/-w-æ		-a/-æ
		-ə˩	-w-ə˩		-ə˩
2A	-n		-w-ən		-n
	-j		-w-əj		-j
3A	-	-	-w		-

Qiang verbal morphology clearly follows an accusative alignment: the agent markers are the same as the intransitive suffixes. 1 > 3 and 3 > 1 are distinguished from 1 > 2 and 2 > 1 by the addition of a -w- third person patient suffix. This suffix is cognate with the Situ rGyalrong -w direct suffix (DeLancey 1981) and cognate suffixes are found in Kiranti languages. In intransitive verbs, this -w suffix does not appear.

Let us now examine the -ji/-jo alternation from the point of view of historical phonology. Tangut -ji has many origins, one of which clearly is proto-Tangut *-a or *-ja, as comparison with Japhug rGyalrong, Tibetan, or other ST languages reveals (Matisoff 2004, Jacques 2006a, Gong 2007):

Table 5: -ji :: -a correspondence set

Tangut		Japhug	Tibetan	Meaning
�	dʐji 1.10	ndza	za (zos)	to eat
䏝	wji 1.10	pa	(byed byas) bya	to do, to close
卼	wji 1.10	-xpa		year
詤	śjwi 1.10	-çɣa	so < *swa	tooth
䈉	gjwi 2.10	ŋga	b-go < *gwa	to wear (clothes)
㔲	tji 1.67	ta		to put
救	wji 1.67	-jpa		snow
䄷	lhji 2.60	sla	zla	moon
綟	wji 1.67	-rpa		axe
䎱	wji 2.60	spa		can

The Tangut rime -e also corresponds to rGyalrong and Tibetan -a:

Table 6: *-e* :: *-a* correspondence set

Tangut		Japhug	Tibetan	Meaning
毵	ŋwe 2.7	nɯ-ŋa		cow
絀	gie 1.9	ɴqa	dka	hard
蕠	wẹ 1.65	sɣa		rust

There does not seem to be any phonetic conditioning for these distributions, and we have to reconstruct several low vowels in proto-Tangut. Following Gong (2007), we propose here *ja → -ji*, *a → -e*.

Among the examples of verbs with *-ji(r)/-jo(r)* and *-ie(r)/-io(r)* vowel alternations cited by Gong (2001) or observed by us, only <u>transitive</u> verbs are found. We propose that Stem 2 originated as a fusion of the verb stem with a third person patient suffix *-w* cognate with the Qiang suffix presented in Table 4. We suppose that proto-Tangut *-ja-w → -jo* and *-a-w → -o*.

Table 7: A reconstruction of *-ji/-jo* and *-ie/-io* alternations in proto-Tangut

Stem 1		Proto-Tangut[8]	Stem 2		Proto-Tangut	Meaning
姁	dzji 1.10	*ndzja	姍	dzjo 1.51	*ndzja-w	to eat
姇	wjị 1.10	*pja	姈	wjo 1.51	*pja-w	to do
姈	gjwi 2.10	*ŋʷja	姚	gjwo 2.44	*ŋʷja-w	to wear
姄	tjị 1.67	*C-tja	姁	tjọ 1.72	*C-tja-w	to put
姴	wier 1.78	*pra	姳	wior 1.90	*pra-w	to love

After the fusion of the stem vowel with the *-w* suffix occurred, the changes *ja → -ji* and *a → -e* happened, creating the *-ji/-jo* and *-(i)e/-(i)o* alternations[9] attested in Tangut.

2.2 The distribution of Stem 2

The explanation outlined in §2.1 runs into serious difficulties. In Qiang, the *-w* suffix is present on all transitive forms with 3rd person patient, whereas in Tangut, only the 1SG > 3 and 2SG > 3 forms have Stem 2, not 1PL > 3, 2PL > 3 and 3 > 3 as would be expected if the distribution of *-w* in proto-Tangut had been identical to Northern Qiang *-w*.

---

[8] We reconstruct the syllables with a tense vowel (indicated by a dot under the vowel in Gong Hwang-cherng's reconstruction) with a lost presyllable *C- in proto-Tangut, following Gong (1999).

[9] As pointed out by Gong (1993), Tangut *-i-* is the trace of Proto-Tangut *-r-*.

However, the restriction of a suffix originally found on all forms to only 1SG > 3 and 2SG > 3 is not undocumented in languages of the Qiangic branch. In rGyalrongic languages, the past tense -*s* suffix[10] was originally found on all verbs (transitive and intransitive) and on all forms, as in modern-day Situ rGyalrong. However, in Japhug rGyalrong (where it is realized as -*t* or -*s* depending on the subdialect), it only occurs in the 1SG > 3 and 2SG > 3 forms of open-syllable transitive verbs (Jacques 2004:337).

Therefore, it does not seem absurd that the -*w* suffix of proto-Tangut would have undergone a restriction from all transitive 3rd person patient forms to only 1SG > 3 and 2SG > 3, following an evolutionary path typologically similar to the past tense suffix of Japhug.

2.3 Other types of stem alternations

The three other types of alternation attested in the Tangut verbal agreement, -*ju*/-*jo*, -*ji*/-*jɨ*,[11] and -*jij*/-*ji*,[12] can also be accounted for, at least partially, by hypothesizing a *-*w* suffix in proto-Tangut in the 1SG > 3 and 2SG > 3 forms. All -*ju*/-*jo* and -*jij*/-*ji* alternating verbs presented by Gong (2001) are transitive. We would need to reconstruct the following changes:[13]

Table 8: A reconstruction of all other stem alternations in Tangut

Stem 1	Stem 2
-ju ← *-ju	-jo ← *-ju-w
-ji ← *-i	-jɨ ← *-i-w
-jij ← *-ij	-ji ← *-ij-w
-jij ← *-jaŋ	-ji ← *-jaŋ-w

However, among -*ji*/-*jɨ* alternating verbs given by Gong, we find two intransitive verbs: 狒 sji 2.10 / 糀 sjɨ 1.30 'to die' (cognate with Japhug *si* and Tibetan *shi*) and 帯 śji 2.9 / 粖 śjɨ 1.29 'to go' (cognate with Japhug *ɕe*). For examples such as these, a

---

[10] The suffix is cognate to the -*s* 'past tense' or perfective suffix of Classical Tibetan.

[11] Tangut -*ji* also corresponds to rGyalrong and Tibetan -*i*. Verbs with -*ji*/-*jɨ* alternation belong to the correspondence set where -*ji* corresponds to a Japhug front vowel.

[12] Tangut -*jij* corresponds sometimes to Tibetan and rGyalrong front vowels, sometimes to Japhug -*o* (proto-rGyalrong *-*aŋ*) and Tibetan -*ang*, see Jacques (2006a).

[13] As pointed out by an anonymous reviewer, some verb alternations in Tangut cannot be accounted for by our hypothesis, such as the -*jow*/-*jij* alternation in the verb 'to give' Stem 1 聚 khjow[1], Stem 2 焱 khjɨj[1]. We leave to future investigation the issue of how to reconstruct this unusual alternation.

direct *-*w* suffix in proto-Tangut cannot be hypothesized. The alternation could be due to analogy with transitive -*ji*/-* jɨ* alternating verbs or to the reanalysis of a different kind of alternation from an entirely distinct origin.

Interestingly, as already noted by Gong (2001:46) himself, stem alternation in the verb 'to go' does not always follow the rule we would expect (Stem 1 with 1SG and 2SG, Stem 2 with 1PL, 2PL, and third person). It is easy to find examples of Stem 1 followed by a first or second person suffix, or of Stem 2 with a third person subject:

(2)   𗷌   𗀱   𗒹   𘄴   𗋽   𗰛   𗩾   𗱽
     thja   wjɨ   mee   dźjwi   phja   mja   lja   jɨ
     1.20   1.67   2.11   2.09   1.20   1.20   1.20   2.28
     this   beast   imperial throne side   fear   come   QUOT

     𗩈   𗒟   𗅬   𘀗   𗷲   𗒑   𗙴   𗾞   𗦻
     nioow   tśhjwo ljụ   dźjɨɨr ɣwə   rjir   rjir   śji   ŋa
     1.57   1.48   2.52   1.92   2.25   2.74   2.77   2.09   2.14
     therefore   body   reject   before PRF   go[1]   1SG

'I feared that this beast could approach the throne; that is why I went ahead, ready to give my life.' (№ 26.7, p.82)

In this example, the Stem 1 form 𗾞 śji 2.9 appears followed by the first person suffix, though only Stem 2 would be expected here according to Gong's theory. In fact, the distribution of Stem 1 and 2 of the verb 'to go' is unrelated to person. We counted all the occurrences of Stem 1 and Stem 2 of the verb 'to go' in Jacques (2007), and found out that both stems appear with first, second or third person subjects, as can be seen from the following table:

Table 9: Occurrences of Stem 1 and Stem 2 in the Tangut text
'New treatise on parental love and filial piety'

	Stem 1 𗾞 śji 2.9	Stem 2 𗾟 śjɨ 1.29
1SG, 2SG	2	2
3	21	13
Ambiguous	3	2

Therefore, this shows that the function of stem alternation in this verb is entirely distinct from that observed in transitive verbs, and cannot be used as a counterexample to the idea presented above, that Stem 2 arose as the result of a fusion between the verb stem and a third person object/direct *-*w* suffix.

3. Conclusion

Tangut, if compared to other languages of the Qiangic branch, has a very eroded phonology: it lost consonant clusters, final consonants, and underwent extensive vowel changes. Nevertheless, the complex morphology of proto-Tangut did not disappear with these phonological changes. Instead, what used to be concatenative morphology (prefixes, suffixes) became vowel alternation, and the degree of flexion of the Tangut language increased, rather than decreased, in the process.

References

DeLancey, Scott. 1981. The category of direction in Tibeto-Burman. *Linguistics of the Tibeto-Burman Area* 6.1:83-101.

Gong, Hwang-cherng. 1993. Xixiayu yu qiangyuzhi yuyan tongyuanci de lishi cengci [Historical layers in the cognates between Tangut and Qiangic languages]. Manuscript.

Gong, Hwang-cherng. 1999. Xixiayu de jin yuanyin ji qi laiyuan [The tense vowels in Tangut and their origins]. *Bulletin of the Institute of History and Philology Academia Sinica* 70.2:531-558.

Gong, Hwang-cherng. 2001. Xixiayu dongci de rencheng huying yu yinyun zhuanhuan [Personal agreements and phonological alternations in the Tangut verb]. *Language and Linguistics* 2.1:21-67.

Gong, Hwang-cherng. 2002. *Collected Papers on Tangut Philology*. Language and Linguistics Monograph Series C2-1. Taipei: Institute of Linguistics, Academia Sinica.

Gong, Hwang-cherng. 2007. Xixiayu zai Han Zang yuyan yanjiu zhong de diwei [The position of Tangut in the comparative study of Sino-Tibetan languages]. *Language and Linguistics* 8.2:447-470.

Huang, Bufan, and Facheng Zhou. 2006. *Qiangyu Yanjiu* [*Studies on the Qiang Language*]. Chengdu: Sichuan People's Publishing House.

Kepping, Ksenia B. 1975. Лексические группы глаголов и субъектно-объектное согласование в тангутском языке [Verb lexical groups and subject-object agreement in Tangut]. *Письменные памятники и проблемы истории культуры народов Востока* XI, 59-64. Moscow: Nauka.

Kepping, Ksenia B. 1985. *Тангутский язык—Морфология* [*The Tangut Language—Morphology*]. Moscow: Nauka.

Jacques, Guillaume. 2004. *Phonologie et morphologie du Japhug (rGyalrong)*. Paris: Université Paris VII – Denis Diderot dissertation. Online version: http://tel.archives-ouvertes.fr/tel-00138568/fr/

Jacques, Guillaume. 2006a. Essai de comparaison des rimes du tangoute et du rgyalrong. *Medieval Tibeto-Burman Languages II*, ed. by Christopher I. Beckwith, 121-152. Leiden: Brill.

Jacques, Guillaume. 2006b. Nouveau recueil sur la compassion et la piété filiale, Etude des alternances vocaliques dans le système verbal tangoute. Paper presented at the 11th Seminar of the International Association for Tibetan Studies (IATS-11), Medieval Tibeto-Burman Languages Symposium. Bonn, Germany.

Jacques, Guillaume. 2007. *Textes tangoutes I: Nouveau recueil sur l'amour parental et la piété filiale*. München: LINCOM Europa.

Jacques, Guillaume. 2008. Xixiayu de mincixing weiyu [The nominal predicates in Tangut]. *Minzu Yuwen* 2008.4:37-40.

LaPolla, Randy J. 1992. On the dating and nature of verb agreement in Tibeto-Burman. *Bulletin of the School of Oriental and African Studies* 55.2:298-315.

Matisoff, James A. 2004. "Brightening" and the place of Xixia (Tangut) in the Qiangic branch of Tibeto-Burman. *Studies on Sino-Tibetan Languages: Papers in Honor of Professor Hwang-cherng Gong on His Seventieth Birthday*, ed. by Ying-chin Lin et al., 327-352. Language and Linguistics Monograph Series W4. Taipei: Institute of Linguistics, Academia Sinica.

Nishida, Tatsuo. 1976. *Seikabun Kegonkyô* [*The Tangut Avataṃsaka Sūtra*], Vol. 2. Kyoto: Faculty of Letters, Kyoto University.

Sun, Jackson T.-S. 2000. Parallelisms in the verb morphology of Sidaba rGyalrong and Lavrung in rGyalrongic. *Language and Linguistics* 1.1:161-190.

21 rue de la Glacière
75013 Paris
France
xiang@free.fr

西夏語動詞元音交替的來源

向柏霖

巴黎第五大學

　　如同羌語支的其他語言一樣，西夏語有複雜的動詞形態變化。本文在羌語支語言歷史比較的基礎上，試圖探討西夏語元音交替的來源。西夏語部分動詞有兩個詞幹，這兩個詞幹的分布與主語和賓語的人稱有關。主語是第一或第二人稱單數、賓語是第三人稱的時候，動詞用詞幹 2，而在其他環境中動詞則用詞幹 1。本文認為，原始西夏語本來有一個與北部羌語同源的及物第三人稱標記 *-w-，詞幹 2 就是動詞詞根與該 *-w 後綴合併的結果。

關鍵詞：西夏語，羌語，嘉絨語，元音交替，人稱範疇