"Brightening" and the place of Xixia (Tangut) in the Qiangic branch of Tibeto-Burman*

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1.0 Introduction

Xixia (Tangut) is an extinct Tibeto-Burman language, once spoken in the Qinghai/Gansu/Tibetan border region in far western China. Its complex logographic script, invented around A.D. 1036, was the vehicle for a considerable body of literature until it gradually fell out of use after the Mongol conquest in 1223 and the destruction of the Xixia kingdom.[1]

A very large percentage of the 6000+ characters have been semantically deciphered and phonologically reconstructed, thanks to a Xixia/Chinese glossary, Tibetan transcriptions, and monolingual Xixia dictionaries and rhyme-books. The *fǎnqiè* method of indicating the pronunciation of Xixia characters was used both via other Xixia characters (in the monolingual dictionaries) and via Chinese characters (in the bilingual glossary *Pearl in the Palm*, where Chinese characters are also glossed by one or more Xixia ones).

Various reconstruction systems have been proposed by scholars, including M.V. Sofronov/K.B. Keping, T. Nishida, Li Fanwen, and Gong Hwang-cherng. This paper relies entirely on the reconstructions of Gong.[2]

After some initial speculations that Xixia might have belonged to the Loloish group of Tibeto-Burman languages, scholarly opinion has now coalesced behind the geographically plausible opinion that it was a member of the "Qiangic" subgroup of TB. The dozen or so Qiangic languages, spoken in Sichuan Province and adjacent parts of Yunnan, were once among the most obscure in the TB family, loosely lumped together as the languages of the Western Barbarians (Xifan = Hsifan). This has all changed in the past quarter of a century, as the Qiangic group has

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[1]See, e.g. Nishida 1967, Grinstead 1972.

[2]In 1999, Professor Gong kindly provided me with a 29-page list of his Xixia reconstructions, correlated to the Qiangic etymological sets I had presented in my Taipei talk (1999). It is a pleasure to dedicate this paper to him.

been subjected to intensive fieldwork. mostly by Chinese scholars (e.g. Sun Hongkai, Huang Bufan, Dai Qingxia, Sun Tianshin).

The Qiangic languages are of great interest, both phonologically and grammatically. They typically have complex systems of initial consonants and vowels, but rather rudimentary tone systems.[3] Grammatically they have systems of markers in the VP which agree with the subject and/or object of the clause (although these are not as elaborate as, e.g. in the Kiranti group of E. Nepal). These languages are further characterized by well-developed sets of verbal prefixes which mark the *directionality* of the verbal event.

Proto-Qiangic remains to be reconstructed. It is already clear that rGyalrong (= Gyarung = Jiarong) and Ergong (= Daofu = Stau) belong together in a separate subgroup of this family. They have preserved PTB prefixes and thus have especially complicated systems of initial consonants, and also preserve final consonants better than the other languages. Yet their systems of directional prefixes seem to indicate that they belong somewhere in the Qiangic group.

This paper attempts to confirm the impressionistic insight that Xixia was a Qiangic language by comparing reconstructed Xixia forms with etyma from the modern Qiangic languages. There is, to be sure, a methodological problem involved in comparing a reconstructed language that reflects an *état de langue* of some 800 years ago with modern spoken languages. Furthermore, the modern data seems sometimes to be overtranscribed due to incomplete phonological analyses, especially where the vowels are concerned.

Still, I believe that by focussing on a particularly striking phonological tendency that Xixia shares with the modern Qiangic languages it is possible to demonstrate conclusively that Xixia was indeed a member of the Qiangic group.

*2.0 The fate of PTB *-a in Qiangic*

***-a** is by far the best attested rhyme in TB languages. There is a strong tendency for this rhyme to be raised and fronted to **-i**, both in Xixia and in modern Qiangic languages. This development is typically impeded by velar/postvelar initials, and may be complicated by a number of other conditioning factors (including sibilant, nasal, and wawated consonants). Several etyma show exceptional developments that cannot yet be explained, but overall there is a rather satisfying degree of regularity.

It was Tatsuo NISHIDA who first observed that Proto-Tibeto-Burman (PTB) ***-a** usually developed into Xixia **-i**, and who pointed out that the same tendency was to be found in Tosu, a language known from a bilingual Chinese 18th century source, that Nishida claimed to be the lineal descendant of Xixia.[4]

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[3]The Qiang language itself has both non-tonal and tonal dialects. See Evans 2001.

[4]See Nishida 1973, 1976. This work, the *Tosu Yi-yu*, was part of a series of bilingual vocabularies prepared under the general rubric of *Xifan Yi-yu* (Vocabularies Translated from Western Barbarian Tongues).

Strange as the development of ***-a > -i** may seem in the Tibeto-Burman context, it is by no means unparalleled in the world's languages. Terrence Kaufman tells me (p.c. 2004) that in the 19th century a similar phenomenon in Indo-European languages like Frisian was called *brightening* Since this is a concise and euphonious term, I have adopted it in this paper.

In the following cognate sets, forms from modern Qiangic languages are taken from Sun and Huang 1991 ("ZMYYC"), except for the Pumi Dayang data, which are from my own fieldwork. As mentioned above, the Xixia reconstructions are by Gong (1999). PTB forms are from Matisoff 2003 ("HPTB").

Qiangic language name abbreviations:

QN	Northern Qiang (Mawo)	**QS**	Southern Qiang (Taoping)
PT	Pumi Taoba	**PQ**	Pumi Qinghua
PD	Pumi Dayang	**RG**	rGyalrong
EG	Ergong (=Stau = Daofu)	**MY**	Muya (=Minyag)
QY	Queyu	**GQ**	Guiqiong
ES	Ersu	**NM**	Namuyi
SX	Shixing	**XX**	Xixia

*2.1 Etyma where PTB *-a has become Xx -i (or where, in the absence of a Xixia cognate, other Qiangic languages have -i):*[5]

There are dozens of examples:[6]

	PTB	***Xixia***	
(1) AXE	***r-p^{w}a**	**wji$_{.}$^{1}** [7]	斧

Other Qiangic reflexes with -i

PQ **spy^{55}** EG **lvi** GQ **pi^{55}**zi^{55} SX **bi^{55}**mi^{33}

For similar Xixia reflexes see PATCH (22) and SNOW (30).

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[5]I am using "-i" in a loose way to refer to any front or apical vowel, including [-y, -ø, -e, -ɛ, ɿ]. Apical vowel reflexes are especially characteristic of syllables with sibilant initials (see below).

[6]At least 37 of these have good Xixia cognates. Eighteen of them are cited in Matisoff 2003 (HPTB): 172. Ten of them I had not identified appear in the rGyalrong/Xixia comparisons of G. Jacques (2003), and have been added to the present version of this paper (see 36-45 below).

[7]The subscript dot represents a hypothetical earlier prefix in Gong's system.

(2) BEE/BIRD ***bya** **[lacking]**

Other Qiangic reflexes with -i:

PQ **bʒɛ^{13}**tʃə^{55} ES **bzɿ^{33}** NM **ndzɿ^{53}**

The above forms mean 'bee'. G. Jacques (2003:8) cites rGyalrong (gDong-brgyad) **pɣa** 'bird', perhaps a loan from Tibetan (WT **bya**).

(3) BORROW/LEND ***r/s-ŋ(y)a** **njir^{2}** [8] 權, 借, 貸, 藉

Other Qiangic reflexes with -i:

QN **ŋuə** sa QS da^{241}**ȵi^{33}** EG **ʐŋi** MY **ŋɯ^{53}**
QY tə^{35}**ȵi^{55}** GQ **ŋi^{55}** NM ntʂhɿ^{55}; **ȵi^{33}** SX **ȵɛ^{35}**

ZMYYC #692 claims that the QS, QY, and NM forms (though not the others!) are loanwords, presumably from Zeku Tibetan **ɣiar** (cf. Written Tibetan **gyar**), but this seems highly unlikely in view of the much better match of these forms with WT **brnya** 'lend; borrow' (see STC #190).

(4) CHILD/SON ***za ⩕ *tsa** **zjɨ^{1}** 'son', **zji^{1}** 'boy', **zjij^{2}** 'male'
兒, 子; 天子; 雄性, 男性

Other Qiangic reflexes with -i:

QN **tɕi:** mi QS **tʂi^{33}**bʐi^{33} PT **tɕĩ^{55}** GQ e^{55}le^{55}**tsi^{33}**
ES jɑ^{55}**dʐɛ^{55}**

(5) CHIN ***m-ka** [lacking]

Other Qiangic reflexes with -i:

PT **ma^{35}kɛ^{35}** PQ **mø^{13}kɑ^{55}** MY **mɐ^{55}ŋkhĩ^{55}** QY **mɛ^{35}khi^{53}**
GQ **nɛ^{33}nkø^{53}** ES **mi^{33}xi^{55}** NM **miɛ^{55}kə^{ɪ33}** SX **mɐ^{33}kɛ^{55}**

This is one of the rare roots to show fronting in some Qiangic languages despite the velar initial. QS **mə^{31}**sɿ^{33}**kha^{33}** and RG **tə *mɟja*** show the typical retention of **-a** after velars. See below 2.3(a).

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[8]For similar final **-r**'s in Gong's reconstruction, see HUNDRED (15), LAUGH (16), GNAW/CHEW (47), RIGHTSIDE (56).

(6) COME ***la** **ljɻ^{1}-rjar^{1}** 來

Other Qiangic reflexes with -i:

QN **ly** QS **ly^{33}** MY **ri^{35}** SX **liu^{55}**

(7) EARTH ***tsa** **tshjɻ^{1}** 土

Several modern Qiangic languages have reflexes with **-a**, e.g. PT **tɕa^{53}**, PQ **tʃɑ^{55}**, RG sɐ **tʃhɐ**, EG sɛ **tɕa**, MY **tsa^{53}**, NM **dʑa^{33}**tshɳ^{55}). For discussion of reflexes of ***-a** after sibilant initials, see EAT (next example).

(8) EAT ***dzya** **dzji^{1} ; dzjo^{1}** 食, 服(用)

Other Qiangic reflexes with -i:

QN **dzə** QS **dʒɿ^{33}** MY **ndzɯ^{35}** ES **dzɳ^{33}**
NM **dzɳ^{53}** SX **dzɛ^{53}**

There is a strong tendency for apical vowels to appear after sibilant initials, both in Chinese and TB. A plausible path of development from PTB*-a after sibilant initials would be something like: ***-a > -ə > -ɯ > -ɿ > -i.**

This etymon displays a morphophonemic variation typical of many Xixia verbs (Gong 2001:60). The basic form ("Form 1") has **-i** vocalism. Form 2, which appears before certain suffixes, has **-o** vocalism. See also GET/OBTAIN (12), PUT/PLACE (23), WEAR CLOTHES (35), DO/CLOSE (39), SEND ON ERRAND (42), and SLAUGHTER (an animal) (43).

(9) EDGE ***m-dzya** [lacking]

Other Qiangic reflexes with -i:

QN **zi** ka PT **zi^{35}**pe^{35} Pumi Dayang [Matisoff 1996/98] **dzɨ** [dzɣ]
MY **zyi^{35}** QY **zi^{55}**kha^{53} SX **zɳ^{33}**lɑ^{55}

(10) FLESH/MEAT/ ANIMAL ***sya** **tśhji^{1}** 肉

Other Qiangic reflexes with -i:

QS	**tʃhɻ^{55}**	PT	**ʂə^{53}**	PQ	**ʃʏ^{55}**	GQ	**ɕi^{53}**
ES	**ʂɻ^{55}**	NM	**ʂɻ^{33}**	SX	biɛ^{33}**tshɛ^{55}**		

This is another sibilant-initial root with apical or other central vowel reflexes in Qiangic.

(11) FORGET [9] ***ma-t** **mjɨ^{2}** 忘

Other Qiangic reflexes with -i:

QN	**ɾmə**	QS	**χmi^{55}**	PQ	thə^{13}**m̥ə^{13}**	RG	kɐ **jməs**
PT	nə^{35}**mɛ̃^{53}**	SX	**mɛ̃^{33}**				

Several forms point to a Proto-Qiangic prefix ***r- or *s-** with this root:

QN	**ɾmə**	QS	**χmi^{55}**	PQ	thə^{13}**m̥ə^{13}**	EG	**lmu**
RG	kɐ **jməs**						

RG kɐ **jməs** suggests suffixal ***-s** with this etymon, possibly more ancient than the suffixal **-t** that is set up in STC #425 on the basis of forms like Magari **hma ~ hmat** 'be lost; lose'.

Initial **m-** seems to favor the development of schwa. Lahu has a somewhat similar phenomenon: /ə/ is the rarest of the 9 Lahu vowels, but it occurs with especial frequency in syllables beginning with **m-.**

(12) GET/OBTAIN ***ra** **rjir$^{1/2}$, rjor$^{1/2}$** 得, 獲

See Gong 2001:60. The tonal instability of this word in Xixia is perhaps related to the fact that this etymon is under the relatively rare Tone *3 of Proto-Lolo-Burmese (PLB ***ra^{3}**).

(13) GOD/SOUL/SPIRIT ***m-hla** **sji^{2}** 神

Other Qiangic reflexes with -i:

MY	**lɛ^{53}**	QY	**ɬi^{53}**	GQ	**ɬø^{53}**	NM	**ɬɛ^{33}** 'god', ə^{ɪ55}**ɬi^{33} 'soul'**

Xixia **njạ^{1}** 'god' might reflect PTB ***nat ≍ *nan** 'evil spirit, demon',

(14) HANDSPAN ***m-twa** **[lacking]**

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[9]The semantic range of this etymon includess LOSE/DISAPPEAR/EXHAUSTED/SPENT. See STC #425.

The medial **-w-** seems to have impeded brightening in this root. Most forms have a back vowel, sometimes raised to **-u**:[10]

QN	**tɤ**	QS	**tu^{33}**	RG	tə **twa**	ES	**dzuɑ^{55}**
EG	**tɕɯ**	MY	tɐ^{35}**tɕuɯ^{55}**	NM	**tʂu^{55}**	SX	**tʂu^{55}**

However, a few languages do show brightening even here:

PQ	tə^{55}**tshyi^{55}**	QY	tə^{35}**tɕhi^{53}**	GQ	te^{33}**tʃʅ^{55}**

(15) HUNDRED ***b-r-gya** **ʔjir^{2}** 百

Other Qiangic reflexes with -i:

QN	**khi^{1}**	QS	**tʂhi^{55}**	PT	**re^{53}**	PQ	**ʂi^{55}**
EG	**ʐɣiɯ**	MY	**dʑɛ^{53}**	GQ	**dʑø^{35}**	NM	**hiɔ^{53}**
SX	dʑi^{33}**ɕɛ^{55}** /**dʑi^{33}** 'one'/						

(16) LAUGH ***rya-t** **djiij^{1} ; rjiir^{2}** 笑, 嗤

Other Qiangic reflexes with -i:

RG	ka na **ri**	GQ	**ɣi^{35}**	ES	**rʅ^{55}**	NM	**dʐʅ^{33}dʐʅ^{55}**

Either Xixia form is a good match for the other Qiangic forms. **djiij^{1}** is glossed 笑 'laugh'; **rjiir^{2}** is glossed 嗤 'sneer'

(17) LISTEN ***g/r-na** **nji^{2}** 'listen' **;** 聽
mji^{1} 'hear' 聞

Other Qiangic reflexes with -i:

QS	tɕhy^{55}**ɳ̊y^{55}**	PT	sɛ^{35}**ɳ̊i^{53}**	PQ	thə^{13}**ni^{13}**	EG	wu **sŋi**
ES	ba^{33}**ɳ̊i^{55}**	NM	bɛ^{55}**hĩ^{55}**				

The Xixia doublet points up the language's tendency to change the position of articulation of initial nasals. See ILL/ACHE. below (73).

(18) MOON/MONTH ***s/g-la** **ʔa-lhji̤^{2}-phow^{1}** 'a month' 月
lhji̤^{2} 'moon'

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[10]This is identical to the regular Lahu reflex of ***-wa**, as in HANDSPAN ***m-twa** > Lh. **thu**; CATTLE ***nwa** > Lh. **nû**; TOOTH/TOOTHLIKE PART ***swa** > Lh. **-šū**.

Other Qiangic reflexes with -i:

'moon'	PT	**ɬi^{55}**	PQ	**ɬi^{55}**	MY	**lɛ^{35}**nɯ^{35}
	GQ	**li^{35}**mo^{33}	NM	**ɬi^{55}**mi^{55}	SX	**ɬi^{33}**mi^{55}
'month'	QS	**ʂʅ^{33}**	PT	**ʑi^{35}**	PQ	**ʒi^{13}**
	GQ	**li^{53}**	NM	**ɬi^{55}**		

Several forms for 'month' reflect the ***s-** prefix. Cf. WT **zla-ba**, Lahu ***ha*-pa**, etc. The Xixia development here is different from that in the phonologically similar etymon TONGUE (69), where the ***-a** has been preserved (see below).

(19) NEGATIVE ***ma** **mji^{1} ; mjij^{1}** 不, 無

Other Qiangic reflexes with -i:

QS	**mi^{55}**	EG	**mi**	MY	**ȵi^{35}**	GQ	**mɛ^{35}**
NM	**mɛ^{33}**						

Muya shows palatalization of the nasal, presumably after the change of ***-a** to **-i.**

(20) NEG. IMPERATIVE ***ta** **tji^{1}** 勿, 莫

Other Qiangic reflexes with -i:

PT	**tɛ^{35}**	QY	**tɛ^{35}**	GQ	**thɛ^{33}**	NM	**thɛ^{55}**

Several forms show palatalization and/or affrication of the initial, which presumably occurred after the change of ***-a** to **-i**:

QN	**tɕi**	QS	**tsʅ^{55}**	EG	**dʑi**	MY	**tɕɯ^{55}**

It is interesting that both 'negative' and 'negative imperative' show the brightening tendency, despite the fact that functors often show exceptional phonological developments.

(21) NOSE ***s-na** **njii^{2}** 鼻

Other Qiangic reflexes with -i:

QS	**χȵi^{31}**qo^{55}pə^{33}	EG	**sni**	NM	**ȵi^{33}**nga^{55}

(22) PATCH ***s-p^{w}a** **pjạ^{1}; wjɨj^{1} ; wjɨj^{2}** 補

Other Qiangic reflexes with -i:

QN	**ʂpa**	QS	**χpe^{33}**	PT	xə^{35}**phiɛ^{35}**	PQ	xə^{13}**sphɛ^{13}**
RG	ka **mphi**	MY	**phe^{35}**lɛ^{33}	ES	**pɛ^{33}pɛ^{55}**		

All the Xixia allofams are good matches with the modern Qiangic forms. The forms with initial **w-** are perfectly analogous to the Xixia reflexes of AXE (1) and SNOW (30), so they represent the preferred allofam for comparative purposes.

(23) PUT/PLACE ***s-ta** **tjɨ^{1}** 'put'**; tjọ^{1}** 到, 安置, 置
tjɨ^{2} 'place' 處, 所

Other Qiangic reflexes with -i:

QS	kuə^{31}**χty^{55}**	PT	khə^{35}**ti^{35}**	PQ	khə^{13}**stʃə^{13}**	EG	**sti**
MY	rɯ^{35}**tɕyi^{55}**	NM	tɕhi^{33}**tʂhɿ^{33}**	SX	**tɕɛ^{55}**		

Several forms show secondary palatalization of the initial after ***-a > -i**. It is not clear which of the two syllables in the Namuyi form is the reflex of this etymon.

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(24) RABBIT (calendrical animal) ***-la** **liɨ^{2}-o^{2}** 兔

Other Qiangic reflexes with -i:

QS	**ʑi^{241}**	PT	tho^{35}**li^{53}**	PQ	**ɬy^{13}**tsə^{55}	EG	wa **le**
MY	**ʐi^{35}**vø^{53}	QY	**ʐi^{35}**ko^{55}	ES	mi^{33}**dzɿ^{55}**	NM	tho^{55}**li^{55}**
SX	thy^{55}**ly^{55}**						

The PT, PQ, NM, and SX binomes are very similar to Loloish forms like Lahu **thɔ̂-là**, Hani **thù-hlɔ́**. This calendrical dissyllable is also found in Tai (e.g. Tai Nuea **thu^{5}-laa^{5}**ˆ but the first syllable seems to be a loan < Chinese 兔 (Mand. **tù**). This is evidently an early loan into Qiangic, since it underwent brightening.[11]

The development of fricatives from palatalized laterals (as in QS, MY, QY) is paralleled in WT (e.g. PTB ***b-ləy** 'four' > WT **bźi**).

(25) REST ***na** **[lacking]**

[11]Mu Shihua (p.c. April 2004) claims that this word is actually of Altaic origin.

Other Qiangic reflexes with -i:

QS	χbɑ^{241}**ȵi**^{31}	PT	khə^{35}**ȵi**^{53}	PQ	khə^{13}**ni**^{55}	EG	nɛ **ni**
MY	ji^{35}**ȵi**^{55}	ES	ba^{ɹ55}**ȵi**^{53}	SX	lɛ^{55}**ȵɛ**^{33}		

(26) SALT *tsa tshjɨ^{2}-ʔu^{2} 鹽

Other Qiangic reflexes with -i:

QN	**tshə**	QS	**tshɿ**^{33}	PT	**tshi**^{55}	PQ	**tshi**^{13}
RG	**tshɐ**	EG	**tshɯ**	MY	**tshɯ**^{53}	QY	**tshi**^{53}
GQ	**tshi**^{53}	ES	**tshɿ**^{33}	NM	**tshɿ**^{33}	SX	**tshɐ**^{55}

The vocalism of all these modern Qiangic reflexes [-i, -ɨ, -ɿ, -ə, -ɐ] shows raising and/or centralization, the latter due to the sibilancy of the initial.

(27) SATIATED *k-wa ʔjiij^{1} 飽, 滿

Other Qiangic reflexes with -i:

PT	tə^{55}**kui**^{53}	PQ	tə^{55}**kui**^{55}	QY	lu^{55}**wi**^{55}

This is a general TB root. Cf. **WB wa'.**

(28) SHINE/BRIGHT PLB *m-ba^{3} mbiɦ

This Xixia reconstruction is by Nishida (1966:447). The prenasalized Xixia initial fits well with the Lolo-Burmese forms: WB **pa'**, Lahu **ba** (Lh. voiced obstruents descend from PLB *prenasalized initials).[12]

(29) SINEW/TENDON *r-tsa [lacking]

Other Qiangic reflexes with -i:

QS	**dʐɿ**^{241}	PQ	**stie**^{55}	QY	**dzi**^{35}ka^{53}	NM	gu^{55}**tsɛ**^{33}

However, the tendency in the modern Qiangic languages is to preserve a non-front vowel in this root:

PT	**dʐu**^{53}	EG	**ʐtsa**	MY	**ndʐuɯ**^{35}	ES	**htɑ**^{55}

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[12]See Matisoff 1978:17-18.

SX sɛ^{55}**tsɑ^{33}**

(30) SNOW ***s-p^{w}a(l)** [13] **wjɨ^{1}** 雪

Other Qiangic reflexes with -i:

PT **pʉ^{53}** PQ **spy^{55}** Pumi Dayang **ɸpɨ**

The Xixia reflex is consistent with those of AXE (1) and PATCH (22). Most modern Qiangic languages do not show brightening, however, either retaining the ***-a-** (QS mə^{31}**pɑ^{55},** RG tɐi **jpa**, EG nkhɛ **va,** QY kha^{55}**wa^{55}**) or backing it to **-u** or **-ɯ** under the influence of the **-w-** (QN tɕi qə^{ɻ} **βu**, MY **vɯ^{35}**, GQ khø^{55}**wu^{55}**).

(31) SPARROW ***m-tsa** [lacking]

Other Qiangic reflexes with -i:

QS i^{31}**tshie^{55}** PT guɛ^{35}**tɕi^{35}** QY ʐ̩õ^{35}pu^{35}**tsi^{53}**

GQ **tshɿ^{55}tshɿ^{33}** NM ɣa^{55}**ndʐ̩ɿ^{55}** SX **dʑyɛ^{33}**mi^{55}

RG pa-**tsa** shows no brightening.[14]

(32) TAIL ***m-ba** **mbɪfi**

This Xixia reconstruction is by Nishida (1966:464). This sparsely attested root occurs in Mpi (S. Loloish) **m^{2} pa^{4}** (Matisoff 1978:17-18).

(33) TOOTH ***s-wa** **śjwi^{1}** 齒

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[13]This etymon is reconstructed ***wa** at the proto-Lolo-Burmese level. See HPTB pp. 46, 171, 428.

[14]G. Jacques has suggested that the second syllable of this rGyalrong form is a diminutive suffix derived from the morpheme for CHILD (see #4 above and Mandarin 子), so that the root is really the first syllable.(perhaps cognate with WT **bya** 'bird'). Such a formation is indeed attested in several TB languages (e.g. Thadou Chin **giit-tsa** 'sparrow' (where the root is definitely the first syllable), and might plausibly be invoked to explain forms like Pumi Taoba **gɯɛ^{35} tɕi^{35}** 'sparrow' (≍ **tɕi^{35}** 'child') and Pumi Jiulong **wə^{11} tsi^{35}**. However, there is abundant evidence for the existence of an etymon ***m-tsa** 'sparrow', which sometimes appears as an independent monosyllable (e.g. Written Burmese **ca**; Nusu **dʐ̩a^{33}**; Hayu **dzu**; Daofu/Ergong **ɣzə**); sometimes as the second syllable of a binome where the first syllable is definitely a prefix (e.g. Jingpho **ù-tsā** (**ù-** is a Jingpho prefix occurring in many ornithonyms); Hani Liuchun **xa^{31} dza^{55}** (**xa^{31}-** is an animal prefix in Hani/Akha); Muya **u^{53} zɯ^{53}**; Yi Mile **ʌ^{55} tʂo^{33}**, Yi Mojiang **ʌ^{55} dzo^{55}**); and sometimes as the first syllable of a binome where the meaning of the second element is clear: Lahu **jà-mɨ̂** (the 2nd syllable means 'tamed; not wild'); similarly, Yi Weishan **dʐ̩ɑ^{55} ɱ^{21}** and Yi Nanhua **dʑu^{33} mi^{55}**. Several binomes might well combine this independent root with the diminutive suffix: Gazhuo **tsa^{323} za^{33}**, Guiqiong **tshə^{55} tsə^{31}**, Bai Jianchuan **tso^{44} tsi^{33}**.

Other Qiangic reflexes with -i:

PQ **ʂy^{55}** GQ **xui^{53}** ES **ʂʅ^{55}**ma^{55} SX **βɛ^{55}**

Most modern Qiangic languages retain a back vowel; some even preserve medial **-w-** (QS **suə^{55}**, RG tə **swa**). In Xixia, the brightening tendency was not impeded by the labial semivowel.

(34) TROUSERS ***s-la** **ljii^{1}** (n.) 裙, 褲
ljii^{2} 'put on trousers' 穿褲

Other Qiangic reflexes with -i:

PT **ʑɨ^{35}** PQ **sdʒə^{55}** MY **dʑɯ^{53}** QY **dʑi^{35}**
GQ **xi^{53}** NM **li^{33}** SX phɛ^{33}**ly^{35}**

(35) WEAR CLOTHES ***gwa** **gjwi^{2} ; gjwo^{2}** 穿衣, 服

Other Qiangic reflexes with -i:

PT nə^{35}**gi^{35}** PQ tə^{55}**gui^{55}** EG **gi**

The medial **-w-**, directly preserved in such forms as QN **guə**, QS **guə^{33}**, MY **ŋguɯ^{53}**, prevented the shift to **-i** in several modern Qiangic languages, but evidently did not prevent the brightening in PQ or Xixia.

In his recent study comparing Xixia rhymes with those of the gDong-brgyad dialect of rGyalrong, G. Jacques (2003:6-9) offers several more examples of rGyalrong ***-a** corresponding to Xixia **-i**:

	rGyalrong	*Xixia*
(36) ABLE/CAN	**kʏ spa**	**wji̱**
(37) BILLHOOK	**tɯ ɲcɣa**	**dźji̱**
(38) COOK	**kʏ sqa**	**ɣjii**
(39) DO/CLOSE[15]	**kʏ pa**	**wji̱ ≍ wjo**

[15]This word means 'do' in the dialect studied by Jacques, but 'close' in the closely related Japhug dialect. Cf. German *machen* 'do; make', *aufmachen* 'open', *zumachen* 'close'.

Cf. Lahu **vâ** 'do, make, work'. See Gong 2001:60, where the Xixia forms are glossed 為 , 作 , 做 .

(40) FINE/THIN	**kɯ mba**	**bji**
(41) LIVE/DWELL	**kɤ rɤrma**	**mji**
(42) SEND (on errand)	**kɤ ɣɤxpra**	**phji ≍ phjo**
(43) SLAUGHTER (an animal)[16]	**kɤ ntɕha**	**śjii ≍ śjoo**
(44) WET	**kɤ ɣɤla**	**lhji**
(45) YEAR/AGE	**ɯ xpa**	**wji**

*2.2 Etyma where PTB *-a has become Xx -e*

In a rather miscellaneous collection of cases, Xixia has brightened TB ***-a*** only as far as **-e**. These etyma mostly have resonant (**w-**, **l-**, **r-**) or velar initials; yet there are several other unimpeachable examples where velar initials have prevented Xixia brightening altogether (below 2.3).

(46) BIRD ***wa** **we[1]** 禽,鳥

Other Qiangic reflexes with -i:
QY bõ[35]**wi[55]** GQ **wi[55]**tsi[53]

Here the brightening did not "go all the way" to **-i,** probably because of the inhibiting effect of the **w-**. See also HOOF (48), CATTLE (53), TONGUE (69), RAIN (75).

(47) GNAW/CHEW PQc ***s/m-ka** **kier**

Other Qiangic reflexes with -a:
QN **ʁɑ[ɪ]** ɬa QS **χGɑ[241]**ɕe[33] PQ xə[13]**qɑ[13]** EG **ʐqa** le
RG (gDong-brgyad) **kɤ nɤ ŋka**

A couple of forms show some fronting and raising, but not to the point of becoming /i/:

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[16]This is a distinct root from PTB ***g-sat*** 'kill (in general)' > gDong-brgyad **kɤ sat**, Xixia **sja**.

MY tɯ^{33}**qø^{55}**lɛ^{33} NM **ŋqhɛ^{33}**

The Xixia form (cited in Jacques (2003:8) means 'chew'.

(48) HOOF ***kwa** **kwej^{1}** 蹄

The modern languages are virtually unanimous in preserving a low/back vowel in this etymon:

QN	ʁdzʯi **ku**	PT	**kua^{55}**ɬa^{55}	PQ	**spɑ^{55}**	RG	ta **ka**
EG	**ʐko**	MY	**quɐ^{33}**tshɯ^{53}	GQ	**ngɑ^{35}**	ES	**nkhuɑ^{55}**
NM	**qha^{55}**tsɛ^{33}						

The only forms showing some brightening here are SX **khɛ^{55},** QY ɳɐe^{55}**khø^{53},** and Xixia **kwej^{1}**, though nowhere did it proceed "all the way" to **-i**.

(49) STRENGTH ***k-ra** **ɣie^{1}** 力

QS	dzʯ^{241}**qɑ^{33}**	PT	**ka^{35}**	PQ	**qa^{13}**	NM	ma^{33}**ʁa^{35}**
SX	**ʁɑ^{33}**khua^{55}ji^{55}						

No modern Qiangic language shows brightening in this root. The Xixia form descends from the unprefixed root ***ra**, while in the other Qiangic languages the velar component of the initial consonant sequence predominates. See the discussion below 2.3(a).

(50) TIGER ***k-la** **le^{2}** 虎

This root, evidently a borrowing into TB from Mon-Khmer (cf. Mon **klaa**), has so far been attested mostly in Lolo-Burmese (cf. WB **kyâ** [Inscriptional Burmese **klaa**], Lahu **lâ**).

It is also attested in Qiangic, where the vowel is usually maintained as **-a**:

ES **lɑ^{55}** NM **la^{55}** SX **lɑ^{55} .**

In Ergong **ɮi**, however, brightening has occurred (inducing palatalization/frication of the initial). A similar fronting and raising led to Xixia **le^{2}**, although in this case the process did not go so far as to result in **-i**. These brightened forms indicate that this root must have been borrowed into Qiangic (perhaps from Lolo-Burmese) at an early date.[17]

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[17]Other modern Qiangic languages have borrowed their word for 'tiger' from other sources:

(1) from Tibetan (cf. WT **stag**):

QS pzʯ^{31}**dɑ^{33}**; MY **tɑ^{53}**; QY **ta^{53}**; GQ **tɑ^{55}**

(2) from Chinese 虎 (cf. Mand. **hǔ**)

Several more examples of rGyalrong **-a** corresponding to Xixia **-e** are to be found in G. Jacques (2003:8):

	rGyalrong	*Xixia*
(51) ARM	**tɯ ʁla**	**kiwej**
(52) BOIL (v.i.)	**kɤ la**	**le**
BOIL (v.t.)	**kɤ sɤ la**	**lę**
(53) CATTLE	**nɯ ŋa**	**ŋwe**
(54) DIFFICULT	**kɯ Nqa**	**gie**
(55) FROG	**qaʨpa**	**pię**

This etymon descends from PTB ***s-bal**, but evidently the final lateral dropped in Qiangic (as also e.g. in Lolo-Burmese) at an early date.

(56) RIGHTSIDE	**χcha**	**tśier**
(57) RUST	**sɣa**	**wę**

*2.3 Etyma where PTB *-a remains Xx. and/or most other Qiangic -a*

(a) After velar initials

In Qiangic the fate of ***-a** after velars is not a simple story. Each velar-initial root seems to behave somewhat differently, though the general tendency is clear - a velar initial impedes the fronting and raising of ***-a**. We have just seen a number of cases where a velar initial has permitted only partial brightening of the Xixia form (GNAW/CHEW [47], HOOF [48], STRENGTH [49], CATTLE [53], RUST [57]). This section presents several etyma where the velar initial has prevented Xixia fronting and/or raising completely.

(58) BITTER ***ka** **kha^{2}** 'bitter' 苦
khie^{1} 'bitter; evil; hate'

QN **χu**; PT **ɣo^{35}**; PQ **ɣo^{13}**

苦, 厭, 惡, 嫌, 憎

Other Qiangic reflexes with -a:

QN	**qhɑ**	QS	**qhɑ^{55}**	PT	**kha^{35}**mə^{53}	PQ	**qhɑ^{13}**
MY	**qha^{35}**	NM	**qha^{35}**	SX	**qhɑ^{55}**		

The only modern Qiangic form to show brightening is GQ **khi^{55}**mu^{55}. Gong considers the Xx. form **khie^{1}** 'bitter; evil; hate' to reflect the independent root ***m-kri-(y)-t-s** 'bile' (see HPTB:22, 118, 189, 193, 436, 456).

(59) CROW (n.) ***ka** [lacking]

Other Qiangic reflexes with -a:

EG	**qa** ʑe	QY	**ka^{55}**lo^{53}	GQ	**kɑ^{33}**li^{53}	ES	**kɑ^{33}**ə^{ɪ55}
NM	la^{55}**qa^{33}**						

A couple of forms show raising and fronting:

RG	**ki**	MY	**qɛ^{55}**ʐ̩ɛ^{53}

This root also has an imitative component.

(60) ENEMY ***d-gra** [lacking]

Other Qiangic reflexes with -a:

PT	**dʐ̩a^{53}wu^{55}**	RG	**təngrɐ**	MY	**dʐ̩a^{35}wu^{33}**	QY	**dʐ̩a^{35}**
SX	**dʐ̩ɑ^{35}**						

These forms might all be borrowed from Tibetan (cf. WT **dgra**). The Xixia binomial synonym **wjij^{2}-zjɨ^{1}** 強敵, 敵, 敵人 shows fronting in both syllables, but neither syllable seems cognate to the modern Qiangic forms.

(61) FIVE ***b/l-ŋa** **ŋwə^{2}** 五

Other Qiangic reflexes with -a:

QN	**ʁuɑ**	QS	**ʁuɑ^{33}**	PT	**ŋuɐ^{55}**	PQ	**ɣuɑ̃^{55}**
RG	kə **mŋo**	EG	**wŋuɛ**	MY	**ŋɑ^{35}**	QY	**ŋua^{55}**tɕã^{53}**
GQ	**ŋɛ̃^{35}**	ES	**ŋua^{ɪ33}**	NM	**ŋa^{33}**	SX	**ɦɑ̃^{55}**(ko^{33})

The modern Qiangic languages mostly preserve PTB ***-a** in this root. Xixia behaves similarly, in that the vowel is not fronted, though it is raised somewhat to schwa. This root should probably be set up as ***ŋ^{w}a** at the Proto-Qiangic level.

(62) GOOD ***na** **ŋa̤^{2}** 好

This root is not widespread in Qiangic. In one of the three modern languages in which it is attested, PTB ***-a** is preserved as such (QN **nɑ**, QS **nɑ^{33}**). The expected brightening occurs in NM **nɛ^{33}**, and most interestingly in EG **ŋi**, where the nasal is backed from dental to velar. In Xixia a similar backing occurred, but apparently with the opposite effect - i.e. the velarity of the nasal blocked the brightening. For a similar development, see ILL/ACHE (73).

(63) I / ME ***ŋa** **ŋa^{2}** 我

Other Qiangic reflexes with -a:

QS	**ŋɑ^{55}**	RG	**ŋa**	EG	**ŋɛ**	MY	**ŋɯ^{55}**
QY	**ŋa^{35}**	NM	**ŋa^{55}**	SX	**ŋɐ^{55}**		

The only modern form to show any fronting is GQ **ŋø^{35}**.

(b) After non-velar initials

There are very few good examples in this category, the best being HOT and TONGUE (and even these can be explained away).

(64) BOX / CABINET ***da** **[lacking]**

This form is sparsely attested in Qiangic, always with a low/back vowel:

Pumi Dayang	**tɔ́**	PT	**ta^{53}**	SX	**tɑ^{55}**

Extra-Qiangic forms include Lahu **ta-qɔ̄**, Naxi **tɒ^{55}**, Tujia **thɔ^{53}**, Karen **dø^{55}** .

[64a] CARRY ***ba** **wa̤^{2}** 負, 荷

Only one modern Qiangic form shows brightening: QN **bi**. Others maintain the original ***-a**: QS **ba^{33},** ES **ba^{55}**, SX **pɑ^{33} pɑ^{55}**. Still others reflect a different etymon with the same meaning, PTB ***bəw**: EG **mbɯ** vɛ, GQ **bu^{33}**, NM **bɛ^{33}bɛ^{55}**.

This example is spurious, however, at least as far as Xixia is concerned. As G. Jacques points out (2003:10) the Xixia form really means 'shoulder; carry on the shoulder', and seems directly cognate to rGyalrong **tɯ rpaʁ** 'shoulder', **kɤ mɤ rpaʁ** 'carry on the shoulder' (< PTB ***r-pak**).

(65) DOG ***na** **na** 狗

This is quite a rare root in TB, although it does occur both in Qiangic and Loloish. Loloish reflexes include Lisu **ɑ^{55} nɑ^{31}** and Yi Nanhua **ʌ^{33} nu^{55}** (ZMYYC #119). Qiangic forms include Shixing **khuɐ^{55} ȵi^{33}** and rGyalrong **khə na** [*ibid.*], with the former showing brightening.

By far the most widespread TB root for DOG is ***k^{w}əy**, which underlies the first syllables of the Qiangic forms just cited. Lisu also has another word for DOG reflecting this root, **khɯ^{31}**.

(66) HAMMER ***s-ta** **[lacking]**

As with the preceding dental-initial etymon (BOX/TRUNK), there is virtually no brightening tendency with this root, e.g.:

PT xə^{35}**ta^{35}** PQ xə^{13}**stɑ^{13}** MY ʁɯ^{35}**tsa^{53}** GQ u^{55}**tɑ^{55}**
NM **ntha^{55}**

However, a couple of forms with affricated initials (perhaps arising from metathesis of the prefix and the root-initial) have developed front vowels:
QS **tʂhi^{33}** EG **ndzɛ**

(67) HOT ***tsa-t** **tsja^{1} ; tshja^{1}** 熱

A number of modern Qiangic languages have raised and fronted the vowel in this root:

RG kə **stsɛ** EG wu **tsɛ** MY tsɯ^{55}**tsɐ^{53}** NM **tshɳ^{33}**
SX ɑ^{33}**tsiɛ^{55}**

Xixia does not show brightening after this sibilant initial, unlike its behavior in CHILD/SON (4), EARTH (7), EAT (8), FLESH/MEAT/ANIMAL (10), and SALT (26).

Several languages point to a dental suffix with this root (e.g. WT **tsha** 'hot, illness', **tshad-pa** 'heat; fever'; Lushai **śa ~ śat** 'hot'), and it seems very likely that the Xixia form reflects the rhyme ***-at**. See also ***g-sat** 'kill' > Xixia **sja**, VOMIT ***m-pat** > Xixia **wja**. A similar explanation works for the superficially irregular form in Pumi Dayang (below 3.0).

(68) MOTHER ***ma** **mja**[1] 母

No modern Qiangic language shows raising or fronting with this root, and here Xixia agrees with them all:

QN	a **ma**	QS	**ma^{33}; mɑ^{55}mɑ^{55}**	PT	**ma^{55}**	PQ	**mɑ^{55}**
RG	tə **mo**	EG	a **mɛ**	MY	ɛ^{55}**mɐ^{53}**	QY	a^{55}**ma^{53}**
GQ	ɑ^{55}**mɑ^{33}**	ES	a^{55}**ma^{55}**	SX	**mɑ^{55}mɑ^{55}**		

We are here dealing with a linguistic universal, however, so this set need not be taken as a serious exception to the brightening tendency.[18] As in HOT, Xixia has developed medial **-j-** in this root.

(69) TONGUE ***s-lya** **lhjwa**[1] 舌

Many modern languages do develop brightening in this etymon. In several (QS, EG, GQ, SX) the initial has been palatalized/fricativized, leading to an apical vowel:

QS	**zɿ^{31}**qə^{55}	PT	**ɬiɛ^{53}**	PQ	**ɬie^{55}**qho^{55}	EG	**vʑɛ**
GQ	**dzʮ^{35}**	NM	ji^{33}**ɬɛ^{55}**	SX	**ʂɿ^{55}**		

Somehow Xixia developed a medial **-w-** here, which might have acted to preserve the original vowel quality of the etymon. This did not happen in the very similar roots GOD/SPIRIT (13) or MOON/MONTH (18). It is interesting that Pumi Dayang also has an exceptional reflex in this root (below 3.0).

This root has many other allofams, and it is very possible that the Xixia form descends from one of the others, including ***lay**, ***ley**, ***lyak,** or ***lyam**. See Matisoff 2003:672.

*2.4 Etyma where PTB *-a > Xixia back vowel*

[18]See Jakobson 1961, "Why *mama* and *papa*?" Cf. also FATHER (82).

We are left with a residue of etyma where Xixia has developed a non-low back vowel from PTB etyma with ***-a**. Most of these also have velar and/or nasal initials:

(70) DITCH ***ka** **gju^{1}** 渠

This root usually appears as the second element in compounds where the first constituent means 'water', e.g. Lahu **ɣɨ-qhâ** (**ɣɨ** 'water').

A couple of modern Qiangic reflexes show raising and fronting (EG **quɛ** ʐɛ, NM **qhɛ^{33}**), but PQ tʃə^{55}**qha^{55}** maintains the proto-vowel, while QS tsuə^{33}**χu^{33}** shows raising but no fronting. QN tsə **gui^{1}** and Xixia **gju^{1}** are diphthongal forms with both a high back and a high front element, which seem to illustrate well the tension between the opposing tendencies of **a**-brightening and velar "darkening".

(71) EAR ***g/r-na** **nju^{1}-dźjwo^{2}** 耳竅

Most of the modern languages preserve ***-a** in this root. The brightened forms are:
QS **ȵi^{31}**kie^{33} MY **ȵyi^{35}** QY **ne^{55}**po^{55}to^{55}

The high back vowel in the Xixia form is unexplained. As a wild guess, we might claim that this abnormal development was due to a desire to avoid homophony with NOSE (21). The second Xixia syllable means 'hole'.

(72) FISH ***ŋya** **źju^{2}** 魚

It is not clear whether the Qiangic forms really descend from PTB ***ŋya**, or whether we are dealing with a separate root reconstructible as Proto-Qiangic ***dza**.

The modern languages display either back or apical vowels:

QN	**ʁdzə**	QS	**dzɿ^{33}**	PT	**dzɨ^{53}**	PQ	**dʒə^{55}**
RG	tʃu **jo**	EG	ʁa **jɯ**	MY	**ʁuɯ^{53}**	QY	**ʐũ^{35}**
GQ	**tʃɿ^{53}**ȵi^{53}	ES	**zu^{55}**	NM	**zu^{55}**	SX	**o^{55}**

The Xixia form has a high back vowel, and is very similar to the RG, EG, QY, ES, and NM forms. The nasalization in the QY form is unexplained.

(73) ILL/ACHE ***na** **ŋo^{2}** 病, 痛

Several modern languages show the expected brightening:

PT **ŋ̊i^{53}** PQ **ŋ̊ɛ^{55}** MY **ŋe^{55}** QY **ŋ̊e^{55}**
ES **ŋ̊i^{55}**

This is a most interesting case. The PTB initial is not a velar, but rather a dental nasal. Xixia, however, apparently first changed the initial to the velar nasal, which then acted to prevent the raising and fronting to **-i**, and in fact induced the opposite effect of backing. This is very similar to what happened with GOOD (62). Muya also changed the position of the nasal, but developed a front vowel anyway.

(74) LOVE / WANT ***m-dza** **dzu^{1}, dzju^{1}** 愛, 樂, 喜

The Qiangic and Loloish languages, as well as Tibetan, reflect either of two distinct roots with this meaning:

***m-dza** > WT **mdza-ba** 'love'; Xixia **dzu^{1}, dzju^{1}**; GQ **tʂhɑ^{55}**gi^{33}; NM **dʐa^{55}**; QN **χtɕi**; SX **tshi^{55}** (QN and SX show brightening); Yi Dafang **ndʑu^{33}**, Yi Nanhua ŋ̊e^{33} **dʑa̲^{33}**

***m/d-ga** > WT **dga-ba** 'like, be willing, intend, wish'; QY **ga^{35}** 'love'; ES **gɑ^{55}**; PQ **sgiɑ^{55}**; PT **ɣiɛ^{35}**; EG **ʐgia** ʐɛ; Lahu **gâ** 'want; desiderative particle'; Yi Xide **ŋgu^{33}** 'love'; Hani Dazhai **ga^{31}**

The interesting Guiqiong binome **tʂhɑ^{55}gi^{33}** seems to reflect ***dza-ga**, a sequence of both roots, with brightening of the second.

(75) RAIN ***g/r-wa** **dzjṵ^{2}** 雨

The modern Qiangic forms (except for SX) reflect the velar prefix. Of these, PT, PQ, and SX show brightening:

PT **gui^{53}** PQ **gui^{55}** **PD gwí** QY **xu^{53}**
ES **guɑ^{33}** SX **ɸui^{55}**ʐɑ^{55}

The Xixia reflex is very similar to that in LOVE/WANT, but different from that of the phonologically similar WEAR CLOTHES (35). The cognacy of the Xixia form to those in the modern languages is not certain.[19]

[19]J.P. Evans (p.c. 2004) cites Mianchi Qiang **mʐ̩ì**, analyzing the **m-** as a prefixization of the root ***məw** 'sky; meteorological phenomenon'. The root-initial **ʐ̩** points to the alternatively prefixed prototype ***r-wa** (cf. Written Burmese **rwa**).

3.0 The fate of PTB *-a in Dàyáng Pumi[20]

That Xixia is definitely to be considered a Qiangic language seems especially obvious when we consider the fate of ***-a** in Dayang Pumi (= Prinmi), a dialect on which I conducted a month's fieldwork in 1996. Not only is the brightening tendency very much in evidence in Dayang, but the conditioning for the development is strikingly similar to that in Xixia with respect to the inhibiting effect of velar initials. The most frequent Dayang reflex of PTB ***-a** is **-i**, but in many cases (especially after palatal or labial initials), Dayang has developed **-ɬ**. While the developments in every single etymon are not entirely predictable, at least in the present state of our knowledge, the general tendencies are clear enough.

	PTB	***Dàyáng Pumi***
***-a > -i**		
(3) BORROW/LEND	***r-ŋ(y)a ≍ *s-ŋ(y)a**	də-**nǐ**
(15) HUNDRED	***r-gya**	**ʃí**
(17) LISTEN	***-na**	thə-**nǐ**
(18) MOON	***s/g-la**	**ɬí**
(18) MONTH	***s/g-la**	**ʐ́í**
(25) REST	***na**	khə-**ní**
(26) SALT	***tsa**	**tshǐ**
(35) WEAR CLOTHES	***gwa**	**gwǐ**
(71) EAR	***g-na ≍ *r-na**	**ȵ́í**-dʐ́ó
(73) ILL/ACHE	***na**	**ȵ́í**
(76) BUCKWHEAT	cf. PLB ***g-ra²** [21]	(Taoba tõ[35] **tɕi³⁵**, Jinghua tãu **tʃə¹³**)
(77) RICE	***dza** [22]	**dzí** 'cooked rice'
***-wa > -i**		
(14) HANDSPAN	***m-twa**	**tɕ́hwí**
(27) SATIATED	***k-wa** (cf. WB **waʾ**)	**kwǐ**
(75) RAIN	***r-wa ≍ *s-wa ≍*g-wa**	**gwí**
***-wa > ɬ**		
(1) AXE	***r-p^{w}a**	**ɸ́pɬ́**
(30) SNOW	***s-p^{w}al**; cf. PLB ***wa²**	**ɸ́pɬ́**

[20]This section is adapted from Matisoff 1996/1998 and 1999.
[21]Cf. Lahu **ɣâ**, Hani **ɣa²¹**, Lisu **gua²¹**.
[22]Cf. Lahu **cà** 'paddy', Wancho **tza**, Newar **ja**

***-a > ɬ**	[mostly after palatals]	
(2) BEE/BIRD	***bya**	**bɨ́**
(4) CHILD/SON	***za ≍ *tsa**	**tʂə̌N** [23]
(8) EAT	***dzya**	**dzɨ́** [dzʲ́]
(9) EDGE/SIDE	***m-dzya** [24]	**dzɨ̌** [dzʲ̌]
(10) FLESH/MEAT	***sya**	**ʃtʃɨ́**
(34) TROUSERS	***s-la**	**zʒɨ̌**
(56) RIGHTSIDE	***g-ya**	**zʒɨ́**
(72) FISH	***s-ŋya**	**dʒɨ́**
(78) THIN	***ba**	**bɨ́**
(79) MANY	***mya ≍ *mra**	**zʒɨ́**

***-a > -ɒ**	[mostly after postvelars, labials, dentals]	
(5) CHIN	***m-ka**	**mə̀-qɒ́**
(16) LAUGH	***rya**	**ʂɒ̌**
(48) HOOF	***kwa** [25]	ʒdʒwìN **ɸpɒ̌**
(49) STRENGTH	***k-ra²** [26]	**qɒ̌**
(53) CATTLE	***ŋwa**	**qwɒ́**
(55) FROG	***s-bal**	**ɸpɒ̌**
(58] BITTER	***ka**	**qhɒ̌**
(61) FIVE	***l/b-ŋa**	**wɒ̌N** [27]
(64) BOX/CABINET	***ta** [28]	**tɒ́**
(66) HAMMER	***m-t(w)a ≍ *s-ta** [29]	**stɒ̌**
(80) OPEN	***ka**	**tə-qɒ́**
(81) THROW	***m-ba(y) ≍ *s-ba(y)**	**βbɒ́** (Jinghua **sba⁵⁵**)
(82) FATHER[30]	***pa**	**bɒ́**

***-a > -a**		
(70) DITCH	***ka**	**qhá**

***-wa > ou**		
(33) TOOTH	***swa**	**ʂóu**

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[23]This form apparently reflects the suffixal ***-n** that sometimes appears on kinship terms, as in Dhimal **tsàn** 'son', Lepcha **a-zon** 'grandchild' (cf. Benedict 1972: n.86, p. 27; n. 284, p. 100). Cf. FIVE (below) for a different source of a nasalized vowel.

[24]Cf. Lahu **jâ**, Akha **dzà**, Limbu **ja**.

[25]Cf. Written Burmese **khwa**.

[26]Cf. Written Burmese **ʔâ**, Lahu **ɣâ**.

[27]With nasalization ofthe vowel, apparently reflecting the original *nasal root-initial. Cf. CHILD for a different source of a Pumi nasalized vowel.

[28]Cf. Lahu **ta-qō** 'box', Naxi **tɒ⁵⁵**, Tujia **tho⁵³**, Karen **dø⁵⁵** , Shixing **tɒ⁵⁵**, PT **ta⁵³**.

[29]Cf. Lahu **tha** 'strike with flat hand, slap, strike a sharp blow,˚ **tha-tu** 'hammer˚; also Written Tibetan **(m)tho-ba** 'large hammer' < ***-twa**.

[30]We are dealing here with a linguistic universal favoring **-a** vocalism (see MOTHER #68). The Xixia reconstruction is **wjạ**; rGyalrong dialects have forms like **tɐpɐ** and **awa**. See Matisoff 2000:#15.

***-ya > -ɛ**

(69) TONGUE ***s-lya** **ɬɛ̌**

This word is also exceptional in Xixia; see above.

***a-t > -ɛ**

(67) HOT ***tsa-t** [31] **tsɛ́**

4.0 Concluding remarks

On the one hand, brightening is highly unusual, both in the TB context and in general. On the other hand it is strikingly characteristic both of Xixia and of the modern Qiangic languages. This makes the "shared innovation" of brightening a valuable criterion for membership in the Qiangic group.

The modern languages do not display brightening to the same degree,[32] nor is the phenomenon completely regular, either within the same language or cross-linguistically. However, the similarity of the conditioning factors across the Qiangic languages - especially the inhibitory effect of velar initials - leads us to conclude that we are indeed dealing with a tendency that must be imputed to Proto-Qiangic itself.

A few observations on conditioning factors and exceptionality:

(a) Initial or medial /w/, probably because of its velar component, frequently acts as an inhibitory factor, as in HANDSPAN (14), BIRD (46), HOOF (48), FIVE (61), TONGUE (69), and RAIN (75). This blocking of brightening does not occur in TOOTH (33), where **s-** seems to be the dominant component of the initial consonant sequence; neither does it affect AXE (1), PATCH (22), or SNOW (30), where the dominant segment in the initial is **p-**, with the [w] merely "extrusional".[33]

(b) Following a widespread tendency in TB/ST, sibilant initials frequently condition the centralization of high front vowels to the "apical" position, as in EAT (8), FLESH/MEAT/ANIMAL (10), SALT (26), and SPARROW (31).

(c) Syllable-final **-r** in Gong's Xixia reconstructions seems to represent a suprasegmental feature of rhotacism, rather than a true consonantal segment, and is apparently an effect of an **r-** in the syllable onset, either prefixal or root-initial, as in BORROW/LEND (3), HUNDRED (15), LAUGH (16), GNAW/CHEW (47), and RIGHTSIDE (56).

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[31] See HOT (66) above. This **-ɛ** seems to be the regular Dayang reflex of ***-at**; cf. VOMIT ***m-pat > ɸphɛ́**; KILL ***g-sat > syɛ̌**.

[32] It would be interesting to count the number of brightened forms in the various Qiangic language, in order to determine the relative strength of the tendency in each of them. Although I have not yet performed this calculation, it seems to me impressionistically that Xixia ranks near the top of the scale.

[33] See Matisoff 2000.

(d) Brightening generally occurs after sibilant initials, as in CHILD/SON (4), EARTH (7), EAT (8), EDGE (9), FLESH/MEAT (10), and SALT (26). However, the Xixia reflex of HOT (67) retains the original ***-a**, undoubtedly because it descends from an allofam with dental suffix.

(e) Although velar initials generally block brightening, CHIN (5) and STRENGTH (49) are exceptions, though in the latter case the Xixia reflex points to initial ***r-** as its immediate prototype.

(f) WEAR CLOTHES (35) is doubly exceptional in Xixia, since brightening occurs despite the velar initial and medial ***-w-**.

(g) Nishida (1964/66) reconstructs a prenasalized series for Xixia, which is confirmed by several comparisons with Lolo-Burmese etyma (see SHINE/BRIGHT (28), TAIL (32) and Matisoff 1978:17-18.

Rare as the development ***-a > -i** is, it is by no means unheard of elsewhere in Southeast Asia. It is characteristic of Far Western Hmongic (p.c., David Mortensen), and Mortensen has just unearthed a similar phenomenon in the newly described dialect of Tangkhul that he calls "East Tusom". Among his examples are the following:

	PTB	*P-Tangkhul*	*E. Tusom*
(10) ANIMAL	***sya**	***ʔasa**	**ʃí**
(58) BITTER	***ka**	***kəkha**	**kəkʰxí** [34]
(5) CHIN	***m-ka**	***məkha**	**mɔ́kʰxì**
(71) EAR	***g/r-na**	***kəna**	**ʔɪkʰənì**
(8) EAT	***dzya**	***kətsa**	**kəzí**
(21) NOSE	***s-na**	***na-**	**ʔɪ ni ʃì**
(15) HUNDRED	***r-gya**	***ʃa-**	**mì ʃí hɛ́**

Nevertheless, the fact remains that brightening is incomparably more characteristic of Qiangic/Xixia than it is of any other subgroup of Tibeto-Burman.

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[34]Note that velar initials do not at all impede brightening in this dialect.

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