

On Initial Correspondences of Sino-Tibetan Related Words^{*}

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The initial correspondences of Sino-Tibetan related words identified by Gong Hwang-cherng are reanalyzed in this paper. The Old Chinese correspondences to Written Tibetan consonant clusters, Cv-C-, are taken as examples to show one-to-many matches in initial correspondences of Sino-Tibetan related words. The interpretation on those matches highlights the problem about what part of Written Tibetan consonant cluster is appropriate to be compared with the single initial in Old Chinese. Internal changes, chronological layers induced by language contact and morphological process are tried to solve this problem. However, many correspondences remain inexplicable. The results then show the serious handicap in justifying the genuine Sino-Tibetan cognates.

Key words: Sino-Tibetan, initial correspondence, Gong Hwang-cherng, rank theory, layer

1. Introduction

The comparison between Old Chinese (OC) and Written Tibetan (WT) has attracted tremendous research interest since the 1930s. In this area Gong Hwang-cherng's comparative work has been generally accepted as one of the most systematic and rigorous studies (cf. Coblin 2003). Nine papers on Sino-Tibetan comparison by Gong have been included in Gong (2002), which can represent his main achievement in this area in past decades. The sound correspondences between Chinese and Tibetan found by Gong pave the way for further understanding the relationship between the two languages.

Now it has been realized that sound correspondence is indeed a necessary condition for cognateness, but it is not a sufficient condition. For convenience, we shall use the term 'related words' for those exhibiting sound correspondences. Before continuing with a detailed analysis, some conventions in this paper should be clarified: **v** stands for voiced (e.g. C_v = voiced consonant); **ua** unvoiced aspirate (e.g. C_{ua}); and **uu** unvoiced

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unaspirated (e.g. C_{uu}); < > corresponds to; > change into; and [] square brackets for meaning notations.

Checking the Sino-Tibetan (ST) related words found by Gong, the rules for final correspondences generally involve one-to-one matches, or can be explained by certain sound conditions. However, the correspondences of initials between Chinese and Tibetan are much more complex. Based on Gong's (1995) ST lists, in some corresponding syllables, WT has consonant clusters while OC has only single initials. For instance, WT gnyis [two] < OC 二 *njidh; WT rku [to steal, to rob] < OC 寇 *k^hugh. The question is how to explain the formation of such correspondences? There are at least two possibilities: 1. Single initials in OC are derived from consonant clusters such as those in WT, that is, **gn- > OC *n-; **rk- > OC *k-; 2. Prefixes in WT are acquired after the split of Tibetan from OC; that is, **n- > WT *gn-; **k- > WT *rk-. Then the question is to explain how the prefix is acquired in Tibetan. Focusing on WT C_v-C- < OC C- in Gong (1995)'s ST lists, it is expected to have some further understanding of the relationship between the two languages.

It is well-known that WT employs complex inflectional systems. A root may have several morphological variants. In Gong (1995)'s ST lists, sometimes several forms of WT are listed to correspond to a form in Chinese. For example, OC 披 *phrjal [divide] < WT 'bral [to be separated, parted from], 'phral [to separate, to part], ral [rent, cleft, torn]. When defining related words between two languages, the semantic match is argued to be rigorous. In other words, the semantic connection of related words should be demonstrated either in literal evidence or universals of semantic changes (cf. Chen 1999, F. Wang 2006). According to this principle, the form "'phral [to separate, to part]" in WT holds priority as the counterpart to OC. For some correspondences like OC 粉 *pǝnx [flour] < WT dbur [to smooth], OC 井 *tsjin [a well] < WT rdziŋ [pond], OC 肝 *kan [liver] < WT mkhal [kidney, reins], the semantic connection would be not accepted at the present stage. All the correspondences in Gong (1995) will go through this procedure and those fitting the requirement will be data for further investigation in this paper.

2. Single initials in OC are derived from consonant clusters (C_v-C-) in WT?

At first, if we hypothesize that the OC single initials are derived from such consonantal clusters (C_v-C-) as those in WT, we may deduce that the pre-initial, C_v-, disappear in OC. The loss of the pre-initial causes different changes of the following initial. In order to find the change patterns, we divide the cluster, C_v-C-, into three categories: (I) C_v-C_v-; (II) C_v-C_{uu}-; (III) C_v-C_{ua}-.

(I) C_v-C_v-

Three patterns can be found in OC. (a) Pre-initial C_v- is simply lost without any effect on the root initial. After loss of the pre-initial, there is (b) unaspirated devoicing of the root initial or (c) aspirated devoicing of the root initial. The ST examples for the three patterns are listed, respectively.

(a)

OC	WT
貧 *bjjən [poor]	dbul [poor, poverty]
貔 *bjid [a wild animal, possibly some kind of panther or leopard]	dbyi [lynx]
銀 *ŋjin [silver]	dŋul [silver]
曩 *naŋ [in past time]	gna-bo < *gnaŋ-bo [ancient, in old times]
讓 *njan [cede, yield, give way]	gnaŋ [to give, grant, concede]
二 *njidh [two]	gnyis [two]
殘 *dzan [damage, hurt, remainder]	gzan-pa [to wear out, hurt, waste]
五 *ngagx [five]	lŋa [five]
夢 *mjəŋh [dream]	rmaŋ-lam [a dream]
霧 *mjugh [fog, mist]	rma-ba [fog, foggy]
耳 *njəgx [ear]	rna [ear]
偽 *ŋwjig [false, cheat]	rŋod [to deceive, to seduce]
焚 *bjən [to burn]	'bar [to burn, to blaze]
渡 *dagh [to ford]	'da [to pass over]
是 *djigx [this, this is, is]	'di [demonstr. pron. this]
住 *drjukh [to stop]	'dug [to remain, to stay, to live, to be, to exist]
逗 *dugh [to remain, to stay]	'dug [to remain, to stay, to live, to sit]
含 *gəm [hold in the mouth, put in the mouth]	'gam [to put, to throw, into the mouth]
荷 *gar [carry]	'gel, pf. bkal, fut. dgal, imp. khol [to load, to lay on a burden]
護 *gwag [to guard, protect], 扈 *gwag [to stop, to check, to tend (sc. horses)]	'gogs [to prevent, to avert unfortunate events, fatal consequences], 'gog-skyoŋ [to guard, to protect]
緩 *gwan [slow, delay]	'gor [to tarry, linger]
惶 *gwaŋ [fearful; agitated]	'goŋ [to despond, be in fear]

量 *rjang [to measure]; *rjangs [a measure]	'grang [to number, to count], grangs [number]
越 *gwjat [transgress, extend]	'grod [to go, to travel], bgrod [to walk, to go, wander]
于 *gwrjag [go to]	'gro [to walk, to go]
慚 *dzam [ashamed]	'dzem [to feel ashamed]

Table 1: OC examples for a simple loss of the pre-initials in WT

(b)

OC	WT
臧 *tsaŋ [good]	bzaŋ [good]
四 *s (< *l) jidh [four]	bzhi < *b-lyi [four]
波 *par [wave, surge]	dba [wave]
九 *kjəgwɿ [nine]	dgu [nine]
晝 *trjəgwh [time of day light, day]	gdugs [mid-day, noon]
瘡 *tanx [to disease, suffering, distress]	ldar [to be weary, tired, faint]
塚 *trjuŋx [mound, peak]	rduŋ [a small mound, hillock]
展 *trjanx [roll over, unfold]	rdal [to spread, to extend]
椓 *truk [beat, strike]	rdug [to strike against]
稟 *prjməx [rations, receive]	'brim [to distribute, deal out, hand round]
分 *pjən [divide, distribute]	'bul [to give; offering, gift, present]
干 *kan [knock against, violate]	'gal [to be in opposition or contradiction to, to violate]
幾 *kjədx [small, little, few, several]	'ga [some, a few, several]
蓋 *gap [to thatch, to cover], *kabh [to cover, a cover]	'gebs, pf. bkab, fut. dgab [to cover]
攫 *kwjak [seize]	'gog, pf. bkog, imp. khog [to take away forcibly, to snatch, tear away, to rob, plunder]
頤 *kənx [neck]	'gul [neck], mgul [neck, throat], mgur [throat, neck]
爭 *tsr < *rtsiŋ [strife, quarrel]	'dziŋ [to quarrel, contend, fight]

Table 2: OC examples of loss of pre-initials in WT and unaspirated devoicing of root initials

(c)

OC	WT
痛 *t ^h uŋh [to be pained]	gdun(s) [to feel pain, to be pained]
寢 *ts ^h jəmɣ [lie down to sleep]	gzim [to fall asleep, to sleep]
戡 *k ^h əm [to vanquish, kill]	'gum, pf. bkum, fut. dkum, imp. k ^h um(s) [to kill, to put to death]
曲 *k ^h juɣ [bend, cooked]	'gugs [to bend, to make crooked]

Table 3: OC examples of loss of pre-initials in WT and aspirated devoicing of root initials(II) C_v-C_{uu}-

There are three possibilities in the development of the root initial C_{uu}-: (a) no change; (b) aspiration; (c) voicing. For example:

(a)

OC	WT
洒 *silx [wash]	bsil [wash]
尊 *tsən [to honour, honorable]	btsun [respectable, noble, honorable]
髀 *pjidx [femur, haunch]	dpyi [hip]
攪 *krəkwx [disturb]	dkrug [to stir, agitate, to disturb]
鮮 *sjan [fresh fish, fresh meat]	gsar [new, fresh]
算 *sanh [to count]	gshor [to count, to measure]
三 *səm [three]	gsum [three]
滴 *tik [a drop, to drop]	gtig(s) [to fall in drops, to drop], btig [to drop, let fall in drops]
睹 *tag [see]	lta [to look, to view]
摺 *tjəp [to fold]	ltab [to fold or gather up]
死 *sjidx [die, death]	'chi < *'syi [to die, death]

Table 4: OC examples of simple loss of pre-initials in WT

(b)

OC	WT
寇 *k ^h ugh [to rob, robber]	rku [to steal, to rob]
蠢 *t ^h jənx [stupid]	rtul [blunt, dull, stupid]

Table 5: OC examples of loss of pre-initials in WT with added aspiration of root initials

(c)

OC	WT
饑 *grjəns [famine]	bkren [poor, hungry]
字 *dzjəgs [to breed, to love, fondle]	btsa [to bear, to bring forth]
藏 *dzang [conceal, to store]	gsang [to conceal]
談 *dam [to speak]	gtam [talk, discourse, speech]
鈍 *dənh [dull]	rtul [blunt, dull, stupid]
掘 *gwjət [to dig out]	rkod, rko [to dig, dig out, to hoe]

Table 6: OC examples of loss of pre-initials in WT with voicing of root initials(III) C_v-C_{ua} -

Two possibilities for the root initials can be observed: (a) no change; (b) de-aspiration. For example:

(a)

OC	WT
披 *phrjar [divide]	'phral [to separate, to part]
餐 *tshan [to eat; food, meal]	mtshal [to eat; food]
璨粲 *tshanh [bright, splendid]	mtshar [fair, fine, beautiful, bright, shining]

Table 7: OC examples of simple loss of pre-initials in WT

(b)

OC	WT
奮 *pjən [spread the wing, fly up], 飛 *pjəd [fly]	'phur [to fly]
板版 *pranx [a plank, board]	'phar < *'phrar [board, flat board]
分 *pjən [divide, distribute]	'phul [to give]
歸 *kwjəd [return]	'khor < OT 'khord < *hkors [circle, to turn around, to return, to come home]
竿 *kan [bamboo pole, rod]	'khar [staff], mkhar [staff, stick]
篤 *təkw [firm, solid, thick]	'thug, mthug [thick, thickness, dense]
織 *tjək [weave stuff made of]	'thag [to weave]
滴 *tik [a drop, to drop]	'thig [to drop, to fall in drops]
梗 *kraŋx [strong]	mkhraŋ, khraŋ [hard, solid, firm]
鐮 *tsjuan [chisel, sharp pointed]	mtshon [any pointed or cutting instrument]

Table 8: OC examples of loss of pre-initials in WT and de-aspiration of root initials

Considering the influences mentioned in Li (1933), prefixes s-, b-, d-, and g- cause aspirated root initials to change into unaspirated, and then they never appear before aspirated consonants, while prefixes *a-chung* (transcribed ʼ-) and m-, allow the aspiration of the following root initial. This may explain the rarity of such a combination as C_v-C_{ua}- in WT. If we observe the change of ʼ-C_{ua}- and m-C_{ua}- in Tibetan dialects, we may find that for ʼ-C_{ua}- de-aspiration of the root initial can occur, while it never occurs for m-C_{ua}-, as seen in the examples given in Jiang (2002:233-234). (The de-aspirated examples are marked in boldface).

Gloss	WT	Lhasa	Xia'erba	Ba'erti	Batang	Dege	Xiahe	Alike
fly	ʼp ^h ur	p ^h ir55	p ^h i:r51	piɕu		p ^h i53	p ^h ər	
thick	ʼt ^h ug	t ^h u:55	t ^h uʔ55	t ^h uk	t ^h u55	tuʔ53	t ^h əɣ	tok
shot (arrow)	ʼp ^h en	paŋ52				p ^h en55	hen	np ^h en
gong	ʼk ^h ar	k ^h a:55	t ^h e:r51		k ^h a55	k ^h a53	k ^h ar	nk ^h ar
rotate	ʼk ^h or	k ^h or55		k ^h or ba	k ^h o55		k ^h or	
drink	ʼt ^h uŋ	t ^h uŋ55	t ^h u:ŋ51		t ^h u55	t ^h uŋ53	t ^h oŋ	
thorn	ʼts ^h er	ts ^h e55	ts ^h e:r51		ts ^h ɪ13		ts ^h er	tser
thumb	mt ^h e	t ^h e55	t ^h e51	tθ ^h e	t ^h e55		t ^h e	mt ^h e
kidney	mk ^h al	k ^h e55	k ^h a:i51		k ^h e55		k ^h a	mk ^h a
armpit	mtɕ ^h an	tɕ ^h ɛ53		tɕ ^h Δŋ	tɕ ^h ɪ13	tɕ ^h en55	tɕ ^h an	ntɕ ^h an
liver	mtɕ ^h in	tɕ ^h ɪ55	tɕ ^h ɪ:51	tɕ ^h in	tɕ ^h ɪ55	tɕ ^h in55	tɕ ^h ə	ntɕ ^h ən
lake	mts ^h o	ts ^h o55	ts ^h o53	ts ^h o	ts ^h u53		ts ^h o	mts ^h o

Table 9: The change of ʼ-C_{ua}- and m-C_{ua}- in Tibetan dialects

Based on data in Hua (2002), this distinction can be obtained in the change from WT to Hongyuan Tibetan, which is said to preserve most of the prefixes. Five out of a total of 47 ʼ-C_{ua}- examples lost aspiration in Hongyuan Tibetan. For example:

Gloss	WT	Hongyuan Tibetan
curl up	ʼk ^h um/skum	kəm
sew	ʼts ^h em	tsem/ptsem
sell	ʼts ^h oŋ/btsoŋ	tsoŋ/ptsoŋ
(rice) cooked	ʼts ^h os	tshu
shave, scrape	ʼthog	ptok

Table 10: The change of ʼ-C_{ua}- in Hongyuan Tibetan

However, none of the total of 31 m-C_{ua}- examples lost aspiration.¹

The interpretation of *a-chung* is still a debate (see Handel 2004:614-616 for a concise review). Some scholars argue that *a-chung* should be some sort of nasal (Li 1933, Róna-Tas 1966, Beyer 1992), while others propose a glottal stop for *a-chung* (Benedict 1972:123, Matisoff 1970, Pulleyblank 2000). Whatever interpretation may stand, here I would like to emphasize a difference between *a-chung* and prefix m-, that is, as shown above, *a-chung* has a weak function to de-aspirate the following root initial, but the m- prefix does not. If this observation is right, the tentative ST related words, OC 梗 *kraŋx < WT mk^hraŋ [hard, solid, firm] is probably dubious because the de-aspiration of root initial occurs even following prefix m-. Therefore, according to this observation, the two patterns, III(a) and III(b), can be explained by internal sound change. That is, m-C_{ua}- only produces III(a), while 'C_{ua}- can result in either of them, but how it is conditioned remains unclear.

3. Layers in Sino-Tibetan related words?

According to the analyses in §2, some one-to-many matches are attested, for instance, I(a), I(b) and I(c) suggests the one-to-three match between WT and OC; II(a), II(b) and II(c) shows another one-to-three match between WT and OC. Now, the question is how to explain their formations.

Taking as examples the three patterns, I(a) (WT C_v-C_v- < OC *-C_v), I(b) (WT C_v-C_v- < OC *-C_{uu}), and I(c) (WT C_v-C_v- < OC *-C_{ua}), it is unlikely that these three patterns are due to internal sound changes. In Tibetan dialects, after the loss of voiced pre-initials, the root initials either remain voiced or devoiced, but not both (cf. Jiang 2002:222). And we have not yet found that the three different patterns are conditioned by some circumstances.

Could one of the three patterns be due to a morphological process in OC? For instance, the words of I(b) (WT C_v-C_v- < OC *-C_{uu}) pattern are derived from earlier roots with voiced initials due to some devoicing morphological modification in Chinese. Or, the words of I(a) (WT C_v-C_v- < OC *-C_v) pattern are derived from earlier roots with unvoiced initials due to some voicing morphological modification in Chinese. In fact, some similar processes are proposed for some initial alternation in Chinese, i.e. intransitive voicing of prefix N- (Sagart 2003:757-768). In the following examples,² the intransitives are argued to be secondary:

¹ One example may show the voicing function of m-, i.e. mtsho (WT) > mdzə ʔe rə mo (Hongyuan Tibetan) [loops and whorls on a finger].

² The reconstruction in the three pairs follows Baxter's (1992) Middle Chinese system.

別 pjet (III) [to separate, distinguish]: 別 bjet (III) [to take leave]

敗 paejH [to defeat]: 敗 baejH [to be defeated]

張 trjang [to stretch]: 長 drjang [long]

Among Chinese words in I(a), I(b), or I(c) pattern, to my knowledge there is no such pair available.

Language contact can provide a possible explanation for this one-to-three match (cf. Chen 2003). That means that I(a) (WT $C_V-C_V- \triangleleft OC *-C_V$), I(b) (WT $C_V-C_V- \triangleleft OC *-C_{uu}$), and I(c) (WT $C_V-C_V- \triangleleft OC *-C_{ua}$) indicate different layers of the Sino-Tibetan related words. According to rank theory (Chen 1996, Wang & Wang 2004), for a certain layer, if the percentage of related words in high rank (Swadesh 100 basic words) is higher than that in low rank, this layer is very likely to be inherited; otherwise, the layer may be borrowed. Sometimes the limited number of high/low rank may not be significant enough to tell the status, and we can use another ranking, that is, kernel rank (high rank + low rank) vs. non-kernel rank (cf. Chen 1996, H. Wang 2006). In the I(a) pattern, there are six kernel rank words (焚 [burn], 是 [this], 耳 [ear], 二 [two], 霧 [fog], 五 [five]). In the I(b) pattern, there are five (頤 [neck], 幾 [few], 晝 [day], 臧 [good], 四 [four]). In the I(c) pattern, there is one (寢 [sleep]). The distribution is shown as follows:

	I(a)	I(b)	I(c)
kernel rank	6/12 = 50%	5/12 = 42%	1/12 = 8%
non-kernel rank	20/35 = 57%	12/35 = 34%	3/35 = 9%
Trend of rank	Rising	Falling	Rising

Therefore, the layer I(b) is possible to be inherited from Proto-Sino-Tibetan, while layer I(a) and I(c) to be borrowed into Chinese.

Similarly, we can list the distribution of II(a), II(b), and II(c) between ranks as below:

	II(a)	II(b)	II(c)
kernel rank	5/7 = 71%	0/7 = 0%	2/7 = 29%
non-kernel rank	5/11 = 45%	2/11 = 18%	4/11 = 36%
Trend of rank	Falling	Rising	Rising

This may suggest that II(a) is inherited from Proto-Sino-Tibetan, while II(b) and II(c) are borrowed into Chinese.

However, the above analysis has to meet a problem about numerals.³ According to the tentative identification, ‘two’ and ‘five’ are borrowed while ‘four’ and ‘nine’ are inherited. This would be very unlikely since higher numerals are more easily borrowed than the lower according to general observations. Therefore, the interpretation in terms of historical stratification fails to explain the formation of the two sets of one-to-many matches (I(a), I(b), I(c); II(a), II(b), II(c)).

In summary, neither morphological process nor historical stratification can provide a sound account. This leads us to think that some examples in the two sets may be not ‘related words’ at all. Looking into ‘nine’ as the example: OC 九 *kjəgwɣ [nine] < WT dgu. The exact initial match, k < dg, is not supported by any parallel example in the list. In the rigorous definition of sound correspondence, such a match should not be counted. Sadly, regardless of such problems, the numerals as Sino-Tibetan cognates have been taken for granted for a long time.

4. The prefix in WT is acquired independently?

If we suppose that some prefixes in WT are acquired independently, they must be used for some reason. A sound change like *n- > *gn- is very unlikely. Even so, another problem may arise, such as why this change does not spread to other words with n-initials. Therefore, most likely, the acquisition of these prefixes in WT is due to their morphological function. Naturally, this will require two tasks: (1) The morphological function should be detected; (2) The semantic equivalence between Tibetan and OC should be justified after counting in the morphological function of those prefixes. For examples of ST-related words with exact semantic matches, this interpretation may not work. Pertinent examples will be those with different meanings between Chinese and Tibetan, and their difference can be accounted for by the prefix in WT. For instance:

OC	WT
披 *phrjal [divide]	’bral [to be separated, parted from]
順 *djənh [obey, submissive]	’dul [to tame, to subdue, conquer]
曲 *k ^h juk [bend, cooked]	’gugs [to bend, to make crooked]
援 *gwjan [to succour]	’grol, pf. grol [to become free, to be liberated, released from]
洽 *grəp [unite, accomplish]	’grub [to be finished, accomplished]

Table 11: Examples of causative prefix *a-chung* in Written Tibetan

³ I thank the anonymous reviewer for pointing this out to me.

The above examples seem to show the causative function of *a-chung* and its voicing function in WT. Therefore, these sets of ST related words are comparable in semantics.

However, some examples that follow might be better left aside until a morphological explanation or other interpretation is available.

OC	WT
顫 *tjan [shivering, trembling]	'dar [to tremble, shudder, shiver, quake]
絡 *rak [silk thread, cord, bridle]	'grags [to bind]
慈 *dzjæg [affectionate, loving]	mdza [to love, as friends or kinsmen do]
鑽 *tsuan [to bore, perforate, penetrate]	mtshon [any pointed or cutting instrument]

Table 12: Examples for unknown function of *a-chung* or m- prefix in WT

Of course, it is possible to propose ad hoc morphological functions of *a-chung* or m- prefixes in WT in order to explain any semantic difference between OC and WT in the above examples. However, to make the comparison seriously will require parallel examples, either among candidates of Sino-Tibetan related words, or in WT.

5. Conclusion

In the Sino-Tibetan area, more and more tentatively related words are proposed. Now may be a good time to pay much more attention to examining the correspondences of words related both phonetically and semantically. In the preface of his monograph, Gong Hwang-cherng stated:

漢藏同源詞的認定，是以原始漢藏語的存在及從原始漢藏語到各個別語言有規律的演進為前提。同源詞的認定應該建立在整個音韻系統的對應上，而對應關係必須能合理解釋漢語與藏緬語從原始漢藏語演變的過程。這樣的基本認識，似乎在一些著作中全然缺乏。我們要找真正的同源詞，必須不斷地檢討，不斷地改進，正如羅杰瑞所說，我們必須從可靠的同源詞中去發現正確的對應關係，再從正確的對應關係中去發現更多的同源詞。(Gong 2002:iii)

Following this tack, this paper examined the initial correspondences of Sino-Tibetan related words in terms of rigorous requirements. Thanks to Gong's substantial work on Sino-Tibetan-related work, this paper can have some observation on the formation of initial correspondences between Tibetan and Chinese. The formation of these correspondences may involve internal sound change (see III of §2) or a morphological process (§4).

Some correspondences between Chinese and Tibetan are involve stratification. Given the fact that Tibetans and Chinese came into contact thousands of years ago, it may be unrealistic to regard all related words between Tibetan and Chinese as Sino-Tibetan cognates (Bodman 1980). Moreover, the establishment of many initial correspondences is still in need of parallel examples, morphological explanation, or stratification. We have to realize that this is a handicap in justifying genuine Sino-Tibetan cognates.

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漢藏語關係詞聲母對應之檢討

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本文借重龔煌城先生識別的漢藏關係詞來分析漢藏之間的聲母對應，主要考察了上古漢語與藏文複輔音聲母 $Cv-C-$ 之間的關係，發現漢藏關係詞中反映出的一對多現象，而對這些現象的不同解釋說明了一個漢藏比較中亟需解決的問題，即，應該以藏語複輔音的哪一成分來匹配上古漢語中的單一聲母？內部演變、接觸造成的時間層次或者構詞變化在文中逐一試用來解決其中的矛盾。但是，仍然有相當多的“漢藏關係詞”之間的語音對應關係不能得到合理解釋。結果說明，當前的漢藏關係詞認定在語音對應上的基礎性研究亟待加強。

關鍵詞：漢藏，聲母對應，龔煌城，詞階法，層次