Sino-Tibetan *w in Tibetan and Old Chinese

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From the perspective of Baxter's (1992) Old Chinese (OC, which is generally followed by Schuessler 2009), the fate of a putative Sino-Tibetan (ST) *_w_ in Tibetan and Old Chinese is quite straight-forward: In Tibetan *_w_ was deleted everywhere in all environments; in word-initial position loss of *_w-_ resulted in (smooth) vocalic onset, it is argued here that this feature is represented by the letter *'a-chung*, e.g. *'oŋ* 'come' from **waŋ*; some such words have developed a new, or alternative, *y*-initial (e.g. *yoŋ* beside *'oŋ*). Vocalic onset (with *'a-chung*) is also the outcome of loss of other initial consonants (e.g. suffix *'u* from *bu*). In Old Chinese *_w_ survived only as part of labiovelars, in absolute word initial position (later Middle Chinese initial jw̱-), and in configurations **hw-* (voiceless **w*), **ʔw-* and **sw-* (*s*-prefix). Drawn into the discussions are side-issues, like the elimination of **ɦ-* from the Old Chinese phonemic inventory; OC final **-r* metathesis, monophthongization in closed syllables, ST labiovelars, as well as a number of new etymologies. This paper confirms by and large the conclusions of Handel (2009) and Jacques (2013), but with some adjustments and elaborations.

Keywords: Old Chinese, Written Tibetan, *'a-chung*, Sino-Tibetan **w*, Tibetan *wa* 'fox', Sino-Tibetan 'friend'

1. Introduction

The initial and post-initial (i.e. pre-vocalic) semi-vowel **w-* occurs in many Tibeto-Burman languages, including Lolo-Burmese (Written Burmese, WB), Kuki-Chin (KC, Lushai =Mizo), and some Himalayan branches, but what happened to a presumed Sino-Tibetan (ST) **w* in Sinitic and Tibetan[1] is not readily

1. I understand the term "Tibetic" in Tournadre 's sense (2013). Yet I will use the customary term "Tibetan", as in "Amdo Tibetan", "Written Tibetan", and "Old Tibetan".

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apparent. The issue has been touched in many works, but more specifically the works of Handel (2009) and Jacques (2013) are dedicated to this phoneme. I find myself largely in agreement with these two investigators, but will suggest to view a few details from a different angle, and add some points for consideration.

This paper considers first the fate of medial *-*w*- in OC and Written Tibetan (WT) (§ 2 and § 4), and secondly the fate of word initial **w*- in OC and WT (§ 3). In broad outline, the fate of **w* is rather simple: in Tibetan it disappeared everywhere (except for TB **wa* > *o*). In Old Chinese (OC) **w* survived mostly in initial position and after velars with which it formed labiovelars. OC **ʔw-*, **hw*- and *s(-)w*- (with *s*-prefix) do also occur; in most other environments, there is no trace of ST medial *-*w*- in Chinese. In addition to some new proposals for ST etymologies and rejection of others (see Conclusion), the discussions will also include consideration of

- WT smooth vocalic ingress (*'a-chung*) as a result of loss of an initial consonant or **w*- (§ 4)
- WT vocalic ingress replaced by initial glide *y*- (§ 4.3)
- diphthong leveling and *-*r* metathesis in OC (§ 2.6)
- elimination of OC **h*- ((82) note)
- etymology of WT *wa* 'fox' and the source of WT initial *w*- (§ 4.4)
- etymologies of 'friend' (§ 5)

1.1 Preliminaries

Results of ST comparisons are closely linked to the Old Chinese reconstruction that an investigator relies on, and consequently can differ dramatically from scholar to scholar. Baxter (1992) (and an amended version (Schuessler 2009, abbreviated OCM)) is in my judgement the most plausible. This is the basis for the following discussions. The later stage "Middle Chinese (MC)" was actually not an actual language, but is a system based on the 601 AD dictionary *Qièyùn* and should more accurately be called "*Qieyun* System (QYS)" (see Coblin & Norman 1995).

Here are a few notes on TB sources. Much welcome fieldwork has been undertaken and published. Yet such work is not, or only sparingly, cited here: (1) the problem is accessibility. (2) Unprocessed raw material from field work is useless for the non-specialist without some historical context. How is the modern Standard Tibetan word ṭhO̲qo 'friend' (Goldstein 1984) contributing to the understanding of Proto-Tibeto-Burman?

Written Tibetan
This being a historical study, I consider older material, dictionaries, more valuable then those for modern languages: Jaeschke (1881); Das (1902); Li & Coblin (1987). Tibetan transcription follows Wylie, except his *c* has a diacritic added: *č* to avoid confusion with the symbol *c* used elsewhere; *'a-chung* is *'*; *ng* = here *ŋ*, except for terminology that is used in Western literature, therefore *'a-chung*.

Written Burmese: Benedict (1972); Matisoff (2003), based on Judson's Dictionary.

Proto-Lolo-Burmese: various publications by Matisoff, and others. See STEDT.

Kuki-Chin: VanBik *Proto-Kuki-Chin* (2009).

Lushai (Mizo): Lorrain (1940).
Older dictionaries may have preserved items and forms which might have been lost by the 21st century. The wealth of material in this dictionary far surpasses that of the distilled higher level reconstructions that must rely also on less prolific sources. Lorrain's cumbersome spellings have been adjusted, as has been done in publications by Benedict and Matisoff. I have added the tones: L = low level; R = low rising, F = high falling; H = high level.

Naga: Bruhn, Proto-Northern-Naga (2014).

Western Himalayan languages, Kanauri
Summaries on various languages by D. D. Sharma (1989; 1992). These are full of spelling errors which can, however, be easily spotted.

Eastern Himalayan languages: Kurtöp (Hyslop et al. 2016); Lepcha (Mainwaring 1898).

STEDT is otherwise consulted for Chepang, Proto-Tani, and other TB languages.

TB reconstructions: Matisoff (2003), also other suggestions are found in STEDT; often with adjustments.

2. Medial Sino-Tibetan/Tibeto-Burman *-*w*- in Written Tibetan and Old Chinese

Handel (2009: 239–280) has made a detailed study of OC medial *-*w*- and its ST origins, i. e. its TB contacts, evaluating the relevant OC reconstructions of Gong Hwang-cherng (in his various publications, see bibliography) and Baxter (1992). He concludes that

1. PTB, like OC, has *-*w*- only in front of low and front vowels (*a, ə, e, i* in OC), not back vowels (although I suspect that configurations like **wu(-)* and **wo(-)* have also occurred in ST);
2. ST medial *-*w*- has been preserved in many TB languages, but in OC this medial survived only after velars, forming a new set of consonants: labiovelar (*kw*- etc.) (Handel 2009: 239–241). I cannot find comments on possible labiolaryngeals (*hw-, ʔw*-). The OC initial **hw*- represents a voiceless **w*-, the **h* is secondary (*Qieyun* System /Middle Chinese *xw*-). An initial labiolaryngeal **ʔw*- would be unusual; we could treat the **ʔ*- as representing some pre-initial like **s*- after which **w*- survives in OC.
3. WT, which has no medial w, changed TB **wəy* (or, as we prefer **wi*) to WT *-yi* (as shown below, the WT *y*- is secondary), and PTB *wa (from ST **wa* and **wə*) to *-o(-)* (Handel 2009: 239).

2.1 Middle Chinese medial *-w-/-u-*

Unlike OC, the *Qièyùn* System (QYS of 601 AD, = Middle Chinese (MC)) has many syllables with medial *-w*- or *-u*-. There is no phonemic contrast between Karlgren's/Li's MC medial *-w*- and *-u*-. This medial is always non-phonemic in a labial environment.

But in syllables that end in a dental (**-t(s), *-s, *-n*) or diphthong with **-j* (or written **-i*), these MC medials are common. Although Karlgren (1957) and Li Fang-Kuei (1971), followed by Gong Hwang-cherng (1980), projected these medials back into OC, Baxter (1992, following Jaxontov 1960), Baxter & Sagart (2014) and others have shown that complementary distributions reveal that MC *-wəT/-uəT* and *-waT/-uaT* as well as *-wəi/-uəi* and *-wai/-uai* have resulted from insertion of an off-glide *ə* (after **u*) and **a* (after **o*): **-un* > MC *wən, *-on* > MC *-wan, *-ui* > **wəi, *-oi* > **wai*, with environmentally and structurally conditioned variants in later Chinese (e.g. MC *-uân, -wan, -jwɐn, -jwän*). Handel (2009: 258–262) discusses such MC words, taken from Gong's publications, with suggested TB cognates. Some examples (for the sake of clarity, I write here **-oj, *-uj* for Schuessler's (2009) usual **-oi, *-ui*):

(1) *tuō* 脫 MC *thwât* I < OCM **lhôt* 'to free', PTB **s-lwat*

(2) *tuò* 唾 MC *thuâi`* I < OCM **thôj-s* 'to spit', WT *tho-le* < *thol-e* '*debs-pa* 'to spit'

(3) *dùn* 頓 MC *dwən`* I < OCM **dûns* 'dull', WT *rtul* 'blunt, stupid', TB **r-tul ~ *r-til*[2]

(4) *lún* 論 MC *ljwen* III < Han *luin* < OCM **run* 'discuss'

(5) *huǐ* 虺 MC *xjwei´* III < OCM **hmruj?* 'snake', TB **m-rul*: WB *mrwe*, WT *sbrul* <**s-mrul*

(6) *lèi* 類 MC *ljwei`* III < Han *luis* < OCM **rus* 'kind, sort'

(7) *léi* 縲 MC *ljwi* III < OCM **ruj* 'rope, creeper', PKC **ruy, *hruy* 'rope', WB *ruî* 'creeper'

(8) *shuǐ* 水 MC *świ´* III < OCM **lhuj?* 'water, river', PKC **luuy* 'river, brook'

Because of labiovelars, syllables of the type MC *KwaT/KwəT* are ambiguous, e.g. *guān* 官 MC *kuân* can derive from OC **kôn* or **kwân*; occasionally early rhymes in poetry can clarify the rime (in this case the OC word seems to have been **kwân* according to Baxter 1992; Baxter & Sagart 2014). Other forms end in *-i* for which TB cognates seem to indicate a diphthong that could be either OC **-wai* or **-oi*:

Table 2.1 *-uai or *-oi

	ST	OC	TB
(9)	**kwai, koi*	**kwâi? /*kôi?* 蜾 'wasp'	**kway*: WB *kwâi*, PKC **khway*
(10)	**pwai*	**pâi-s* 播 'winnow'	**pway:* WB *phwâi* 'chaff', PKC **waay* 'chaff'

Notes:

(9) *guǒ-luǒ* 蜾蠃 MC *kuâ´-luâ´* 'species of small wasp': in MC as well as TB languages the rime is consistently *-way*, yet it may go back to **-oy*. The OC word is actually a reduplication; OC must have been **kôi?-rôi?*, because there was no medial *-w-* after non-guttural consonants like **r*. STEDT #2370.

(10) *bò* 播 MC *pwâ`*: Matisoff (2000: 143–144); STEDT #2585. The rimes everywhere suggest **-way*.

These secondary MC medials will not concern us. Therefore, in OC an earlier ST medial w survives only after velars and laryngeals, also after an s-prefix.

2.2 Medial *-*w*- after velar initials, followed by /i/: **Kwi(C)*

In WT, the *-*w*- is lost without a trace (often the palatal glide *-y-* develops in front of high front vowels, therefore the *-y-* does not represent a change from *-w-*). In Chinese, a velar or laryngeal preserves ST medial *-*w*- by forming labiovelar **k*^{w}- (Handel 2009: 241, 246–252, 256 and the following pages) and perhaps labiola-

2. This etymon belongs to a well-represented ST word family, see Matisoff (2003, hereafter also HPTB): 419, 422, 500, 504.

ryngeal initials. I will simply write **kw-, *khw-, *gw-, *ŋw-, *ʔw-, *hw-*. The OC front vowel *i is reconstructed where the *Qièyùn* System has Division IV (and the so-called *chóngniǔ*, Division 3/4) type syllables after grave initials.

Table 2.2 Medial ST *-*w*- after velar initials with vowel /i/

	ST POC	OC	TB	WT
(11)	**kwiʔ*	**khwî-nʔ* 犬 'dog'	**kwiʔ*: WB *khwê* 'dog' Chepang *kuyʔ*	*khyi* 'dog'
(12)	–		**kwil*: WB *khwe* 'to curve, coil'	'khyil-ba 'to wind, coil'
(13)	**wir*	**s-win* 旬 'cycle'	**wir*: PKC **ver~vir* 'drill, bore'	
	~ **kwir*	**kwin* 鈞 'potter's wheel'	**kwir*	*'khyir-ba* 'turn in a circle'
(14)	–		**kywi*: WB *kywê* 'wild yam'	*skyi-ba* 'edible tuber'
(15)	–	**kwit* 橘 'orange'	From AA: cf. Khmer *kwic* 'tangerine'	

Notes:
The QYS distinguishes two syllable types: type A which includes syllables without a medial *-j-*; it comprises further "divisions" (*děng* 等), i.e. Division I has central and back vowels without *-j-*, as *gāng* 岡, QYS *kâŋ*; Division IV has QYS medial *-i-* as in *jiàn* 見 QYS *kien* ˋ. Division II has a distinct vowel timbre, as in 更 QYS *kɐŋ* from OC **krâŋ* from OC medial **-r-*. Type B syllables, identical with Division III, have a QYS medial *-j-*; here some rimes make the further distinction between syllables with a suspected OC medial *r*, symbolized by Division 3/3, and an OC front vowel, symbolized by QYS Division 3/4. This means that QYS syllables of Division IV and 3/4 had an OC front vowel /e/ or /i/, the other Division (with the exception of some words in Division II from media **r*) did not.

(11) *quǎn* 犬 MC *khiwen´* IV. Handel (2009: 256 and the following pages). STEDT #1764. A ST/OC suffix **-n* that forms nouns, or is attached to nouns, has been recognized by Benedict (1972), Matisoff (2003: 176–177, 444–453,), Sagart (1999, but abandoned later), Schuessler (2007: 74–76), Barbara Geilich *Nasal-Suffigierung in indo-chinesischen Sprachen* (Diss. Münster 1993); Jīn Lǐxīn 金理新 "漢藏語的名詞後綴 -n" in *Minzu Yuwen* 民族語文 1998 (1).

(12) Old Burmese (inscriptions) *kūy* 'coil'. STEDT #2310.

(13) *xún* 旬 MC *zjwen; jūn* 鈞 MC *kjiwen* 3/4. STEDT #2310. OC initial **k-* seems to be a nominal prefix (Sagart 1999: 98 and the following pages; Jacques 2019: §3.1).

(14) WB *kywê* is "Dioscorea pentaphyllia L.", WT *skyi-ba* is "Sophora moorcroftiana (Benth.)" (thanks to Guillaume Jacques for providing these identifications). Obviously Jaeschke's gloss 'potato' is to be understood metaphorically as 'a plant that plays a role comparable to a European (South American) potato'.

(15) *jú* 橘 MC *kjiuet* 3/4.

2.3 Medial *-*w*- after non-velar initials, followed by /i/

OC, as based on the *Qièyùn* System and phonetic series, has no syllables of the type *Twe(C), Twə(C), Twa(C)*, nor *Twí(C)*, except in the latter case there is the similar looking rime *Túj* (as in (8) *shǔi* 水 **hlujʔ*) that patterns with *Tun* (as in (4) *lún* 論 **run*) and *TuT* (as in *zú* 卒 **tsût* and (6) *lèi* 類 **rûs*). Syllables of the type *Two(C)* and *Twu(C)* are impossible because of labial dissimilation. A ST medial *-*w*- was lost already in OC; this is shown by the mutual exclusion in phonetic series of QYS syllables like *tì* 涕 *thieì* (ST **twi*) and *zhuī* 隹 MC *tświ* (OC, pre-Chinese **túj* < **tulʔ*).

The **w*- survives in OC after the prefix or pre-initial **s*- (QYS *s-, sj-* or *zj-*), especially in type B syllables, i.e. Division III (with *-j-* or *-i*):

(16) *suī* 雖, MC *swi* III, *swi according to *Shuōwén* 'some kind of lizard', whatever it might have been (the graph points to some insect or reptile), the graph was borrowed for 'although', written with *wéi* 隹 **wi* as phonetic.

(17) *suì* 穟穗, MC *zwi* ` III, **s-wis* 'ear of grain'.

In WT, medial *-*w*- disappears without a trace, see Table 2.3a.

Table 2.3a Medial *-*w*- after non-velar initials

	ST POC	OC	TB	WT
(18)	**twiʔ*	**thîʔ(-s)* 涕 'a tear'	**twiʔ*: PKC **tuy* 'water' Chep. *tiʔ*, Kanauri *ti* 'water'	*mčhi-ma* < **m-tyi* 'a tear'
(19)	**dwi ʔ*	**dîʔ* 弟 'younger brother'	**doy, *toy*: WB *thaw* 'youngest'	–
(20)	**nwi ʔ*	**nî* 泥 'mudd, mire'	**noyʔ*: PKC **nooy* ~ **nay* 'muddy, dirty'	–
(21)	**pwi* **bwi*	**bi(-n)ʔ* 牝 'female'	**pwi*: Lushai *puiR* 'female'	–
(22)	–		**bwi*: WB *pwn* 'bamboo rat' Lush. *bui*	*byi-ba* 'rat, mouse'
(23)	*mwi	*mis 寐 'sleep'	**mwi*: WB *mwê* 'sleep'	*rmi-ba, rmis* 'to dream'

Notes:

(18) *ti* 涕 MC *thiei* ` and *thiei* ´. STEDT #298. The Tibetan sound change *č-* < *ty-* is revealed even by a cursory acquaintance with WT, and should require no elaboration, and no appeal to some authority:

k-	*t-*	*p-*
ky-	--	*py-*
--	*č-*	--

Such an origin of WT *č* has long been known (even a look at Jaeschke (1954: 7), *Tibetan Grammar*, from the 19th century, would suffice). It has been pointed out, or applied as a matter of course, by Benedict (1972: 84, perhaps the *locus classicus*, if one insists), and Coblin (1986: 147), among others, and more recently Tournadre (2013: § 4.5).

(19) *dì* 弟 MC *diei ʴ, *dîʔ* or **dâiʔ*. Baxter (1992) suggests OC **dəjʔ* or **dujʔ* (Baxter & Sagart (2014) have **lˁəjʔ*); but as I am showing in these pages, loss of this **u* would be regular in OC. Jingpo *doi* [toi$_{55}$] '三哥 third eldest brother', 三姐 third eldest sister' (Xú et al. 1983).

(20) *ní* 泥 MC *niei, *nî* or **nâi*. STEDT #4821.

(21) *pìn, bì* 牝 MC *bi ʴ* 4/4, *bjien ʴ* 4/4. STEDT #1622. The vacillation between final *-i* and *-n* is interpreted by some as proof for an OC final **r* (starting with Karlgren 1957; Baxter & Sagart 2014), but this is not likely in this etymon; final **-n* is probably the familiar nominal suffix (see § 2.6 below).

(22) STEDT #2186.

(23) *mèi* 寐 MC *mi ˋ* 4/4. There is the possibility that the medial *w* in (21–23) and potentially any TB **pw-, *bw-, *mw-* is secondary (Handel 2009: 270; Matisoff 2000); yet the Jingpo form indicates that the *p-w-* sequence is sometimes real, note STEDT #130; Benedict (1972: 196), *śemǝwi* 'heavy with sleep'.
In Old Tibetan (OT) documents, after initial /m/ the front vowels /e/ and /i/ add a medial /y/, as expected, where standard WT has settled on *y*-less spelling, e.g. OT *myi* 'not' for WT *mi*, OT *rmyi-lam* 'dream' for WT *rmi-lam*, OT *myed* 'not have' for WT *med*. See, for example, the OT *Shàngshū* (*Shūjīng*) version (Coblin 1991).

Superficially the two finals **-wi(T)* (as in (11) **khwîn?* 犬), and **-uj* (or **-úi*) (as in (7) **ruj* 縗, (8) **lhuj* 水) are in complementary distribution, distinguished by a shift in the "peak of sonority" (Handel 2009: 257, 265). Yet OC **wí* occurs only in Type A syllables (Division I/IV, II with no *j*), as well as in *chóngniǔ* Division IV syllables (i.e. "3/4"), and *-uj* in Type B syllables (Division III and 3/3). After non-velars, OC medial **-w-* was lost in **-wi*, but the **-u-* survived as main vowel in **-uj*, as it did in all **-uT* syllables.

QYS *tiei ʴ* IV 涕	< OC **tîʔ* 'tears'	< ST **twí*, PKC **tuy* 'water', WT *mčhi-ma* 'tears'
vs.		
QYS **świ ʴ* III 水	< OC **hlujʔ* 'water, river'	< ST **hlúy*, PKC **luy* 'river'

This can be observed even within the same cognate set where a rounded element in syllable type B (Division III with MC *-j-*) is lost when the derivation shifts to type A (Division II):

(23a) *shuāi* 衰 MC *ṣwi* III, **srui* 'to diminish' vs. *shài* 殺 MC *ṣăi* ` II, **srêts* or **srâts* 'diminish, reduce'.
The vowel in **srêts* suggests derivation from **srwai+ts* (not **sroi+ts*), in spite of *chuī* 衰 **k-sroi* (= **k-srwai?*) 'reduce' (see 2.6 for diphthong leveling).

The medial **-w-* must have been lost in OC **Tw-* syllables before the inception of writing, because syllables like MC *tiei* IV (< ST **twi*) and MC *tświ* III 隹 never mix in phonetic series (as mentioned above). Proto-Chinese and ST must have had both rimes *-wi* as well as *-uj*. Dempsey (2003: 80; 82–84) has suggested that this distinction also existed in Northern-Burmese which contrasts **-uj* vs. **-wi*.

For items (19) 'younger brother' and (20) 'mud' data suggest that the TB rime should be **-oy* (HPTB: 221 and the following pages), not **-uy* (= OC **-uj*); a distinction of TB **-oy* vs. **-uy* is based on Kuki-Chin languages and Jingpo, where, however, the distinction does not appear to be systematic. WB and OC treat the words as if the rime was ST **-wi*. The differences in TB and OC forms would have resulted from accent shifts; when a **dóy* changes to **doí*, the result would be phonetically (close to) **dwí*, where the new medial **-w-* is of course deleted in Chinese; the same development in ST **noí* 泥 > Proto-Chinese **nwí* > OC **nî* 'muddy'. See the summary of the steps in Table 2.3b:

Table 2.3b

		弟	泥		弟	泥
	ST	***doi***	***noi***	**OR**	***dui***	***nui***
-ui ~ -oi					**doi*	**noi*
Accent on *ó*	KC	**doy*	**noy*		**doy*	**noy*
Accent on *í*	WB	t^hwe^B			t^hwe^B	
	PC	**dwi?*	**nwi*		**dwi?*	**nwi*
Deletion of *-w-*	OC	**di?*	**ni*		**di?*	**ni*

The ST sources for these two words might have had the rime **-ui* or **-oi*, the results in TB and OC would be the same, except if we assume **ui*, an additional step would be required for Kuki-Chin-Jingpo. The OC forms of these two words could theoretically also have been (19) **dôi?* and (20) **nôi*; the pre-final *ə* would be parallel to the set of nos. 3 to 6. Then an alternative explanation might be that the ST rime was actually ST **-wəi* where the first two elements merged into /o/ in some TB languages, while the medial **-w-* regularly dropped in Chinese. Yet normally ST **-əi* would be expected to become TB **-ai*, a **-wəi* should then show up as *-wai* in WB (see (10)), not as *-we*.

There is also the possibility of OC dialect variation, as in

(24) *wèi* 喂 MC *ʔjwei`*, (**ʔui-s?*) 'feed animals' (*Yùpiān* 玉篇 of ca. 543 AD), PKC **vulʔ* 'keep/rear animals' (Lushai suggest that this is the expected OC form), vs.
wèi 餧 MC *ʔjwe`, *ʔoi-s* 'feed (an animal)' (*Lǐjì* 禮記).

These could, however, be mere graphic variants, yet this **-ui* ~ **-oi* variation is not unique, note:

(24a) *shuāi* 衰 MC *ʂwi, *srui* 'to diminish' vs. *chuī* 衰 MC *tʂhwie, *k-sroi* 'reduce, graduate'

(24b) *ruǐ* 蕊 蘂 MC *ńźwi´* ~ *ńźjwe´*, OC **nuiʔ* ~ **noiʔ* 'hang down' (if indeed one could project these alternative readings back into OC; MOC #19–19 and #19–20).

The word *tuò* 唾 MC *thuâ`*, OC **thôi-s* 'to spit', WB *thwê*, may come to mind in this context, discussed by Handel (2009: 260). Yet it is related to WT *tho-le*, etymologically *thol-e*, see Schuessler (2007: 505).

2.4 Medial *-w- after velar initials, followed by /a/, /ə/ or /e/: **Kw-*

When followed by the ST vowels **a, *ə* (both merged into TB **a*) or **e*, the development in Chinese was as above (**Kw-* > OC **Kw-* etc.; Handel 2009: 246 and the following pages; 251 and the following pages). In Tibetan, the TB **-wa-* became WT *-o-*, something that has long been noted (see Hill 2011a :451–452; 2011b: 707–721; for the history of the relevant scholarship).

Table 2.4 *w after velar initials

	ST POC	OC	TB	WT
(25)	**kwa*	**kwâ* 孤 'alone, solitary'	**kwa* or **gwa*	*sgos* 'private, individual'
(26)	**kwa*	**kwâ* 罟 'a net'	**kwa*: WB *khwa'* 'kind of net'	
			**kwa-n*: WB *kwan* 'casting net'	*rkon-pa* 'fowler's net'
(26a)	**gwa*	**gwâ* 狐 'fox'	**gwa*: Pattani *guha*	(cf. (78))
			Pumi $gu\varepsilon^{13}po^{55}$	
(27)	**gwa*	**g(w)âʔ* 戶 'door, opening'	**gwa*	*sgo* 'door'
			cf: WB *ə-wa'* 'opening of door'	

Table 2.4 *(continued)*

	ST POC	OC	TB	WT
(28)	**khwə*	**khwə* 丘 'village, district'	**khwa*: PKC **khua* 'village, cosmos'	–
(29)	**kwar*	**khwânʔ* 款 'hole'	**kwar*: Lush. *khuar~khur* 'hole'	
(30)	**kwak*	**kwak* 攫 'to seize'	**kwak*	*'gog-pa, bkog* 'seize, take away'
(31)	**khwaŋ*	**khwaŋ* 匡 'crooked'	**khwaŋ*: WB *khwaŋ* 'bent, curved'	*khoŋs* 'crooked, bent, curved'
(32)	**gwra*	**gwrâ-s* 樺 'kind of birch'	**grwa*	*gro-ga* 'birch tree/bark'
(33)	**gwrat*	**gwrâts* 話 'speak, word'	**grwat*	*gros* < **grots* 'advice, speech'
(34)	–		**swa*: WB *swâ* 'tooth'	*so* 'tooth'
(35)	?	**kwrâŋ* 觥觶 drinking horn: PHM **krɔŋ*^{A} 'horn'; TB **g-ruŋ* or **gruŋ* 'horn' (HPTB: 145)		

Notes:

(25) *gū* 孤 MC *kuo*.

(26) *gū* 罛 MC *kuo*. The final *-n* in TB **kwa-n* is the nominal suffix, see §2.6 below.

(26a) *hú* 狐 MC *ɣuo*. STEDT #2255; Huang Bufan (1992: (325)). Sharma (1989: 29, 127) transcribes the word as Pattani /guha/, Tinani /gwaṇ/. It seems that there are two distinct ST roots or stems of the word: **wa* ((78)) and **gwa*. See also §4.4.

(27) *hù* 戶 MC *ɣuó,* **gâʔ* 'door'. Gong's **gwaʔ* (with **-w-*, = OCM **gwâʔ*) is possible, but questionable. Here I reluctantly follow him, because phonology and meaning seem too close to WT *sgo* for coincidence. Alternatively, *hù* 戶 could be compared with TB **m-ka* 'opening, mouth' (HPTB: 173).

(28) *qiū* 丘 MC *khjəu*. STEDT #2773. Chinese suggests that two etyma for 'village' are to be distinguished: **khwə* 丘 and **rwə* (OC **rəʔ* 里, see (39) below); they may have merged in some TB languages.

(29) *kuǎn* 款 MC *khwân ˊ* 'hole' (HPTB: 401; STEDT #665): the OC rime could be either **-war* or **-or*; but Lushai distinguishes these two. West Tib. *kor* 'hollow in ground' (Jaeschke 1881) is probably related to the root for 'round'.

(30) *jué* 攫 MC *kjwak*.

(31) *kuāng* 匡 MC *khjwaŋ*.

(32) *huà* 樺 MC *ɣwa`, *wrâ-s* or **gwrâ-s* 'kind of birch' (Gong 2002: 204, OC **gwrags*). In OC the graph 華 wrote words with initial **wr-*, yet 樺 appears only later when both OC **wr-* and **gwr-* had merged into Han period *ɣw-*. STEDT #314. WT *gro-ga, gro-kha* 'birch tree/bark' with the suffix *-ga/-kha*.

(33) *huà* 話 MC *ɣwai`* = WT *gros* 'speech, talk, advice, council' (Gong 2002: 85) see (96) below.

(34) TB **swa*, STEDT #632.

(35) *gōng* 觥觵 MC *kwɐŋ* II 'drinking vessel of buffalo horn' [Shījīng]. This loan seems to belong to a widely encountered root, not only in TB, but also in unrelated languages: Proto-Hmong-Mien (PHM): (Ratliff 2010, **klɛɔŋ*, yet Ostapirat (2016) has **kr-* + back vowel), PVietic **kərəŋ* (Ferlus). STEDT #814 lists forms which may be related, like Lalung [Tiwa] *kroŋ*, Garo *groŋ* 'horn'.

2.5 Medial *-*w*- after non-velar initials, followed by /a/, /ə/ or /e/: **Twa(-), *Twə(-)*

When a configuration **-wa(-)/*-wə(-)* follows a non-velar initial, the **w* is deleted just as after velars in Tibetan (TB **wa* > WT *o*), in OC the medial **w* is deleted as well:

Table 2.5 **w* after non-velar initials (POC = Proto-Chinese)

	ST	POC	OC	TB	WT
(36)	**twa*		**thâ-s* 吐 'to spit'	TGTM *^{B}*t*^{h}*wa* 'saliva'	–
(36a)	–		–	Kanauri *thwa* 'up'	*mtho-ba* 'be high'
(37)	**twa*	*da-k*	**dâk* 度 'to measure' ~	**twa*: WB *thwa* 'measure with a span'	*mtho* 'a span'
			**dâ* 圖 'plan, calculate'		
(38)	**twar*		**tân* 單 'single, unit'	**twar*	*thor-bu* 'single, separate'
(39)	**rwə*		**rəʔ* 里 'village'	**rwa*: WB *rwa* 'town, village'	–
(40)	**tswə*		**tshâʔ* 采 'color'	**tswaʔ*	*tshos* 'paint, dye, to color'
(41)	**pwar*		**bâi* 皤 'white'	PKC **waar* 'pale, white'	–
			**brâk* 白 'white'	Karen **ʔ(b)wa*	
(42)	**pwar*		**pâi-s* 播 'spread, sow'	**bwar*: Chepang *waar* 'to sow'	*'bor-ba* 'throw, cast'
				PKC **woor-I* 'scatter'	

Table 2.5 *(continued)*

	ST	POC	OC	TB	WT
(43)	**wəm*		**wəm* 熊 'a bear'	**-wam*: Jiarong *tə-wam*	*dom* < **d-wam* 'a bear'
				Kurtöp *wam*	
				WB *(wak)wam* 'a bear'	
				Motuo Menba *ʔom-ɕa*	
				PKC **wom* [1132]	
(44)	**nwe*		**ne* 哫 'forced laugh'	**nwe* 'laugh': WB nwi	–
				PKC **nu(u)y, *hnu(u)y* 'laugh'	
(45)	**nwe*	**nwe-t*	**net* 熱 'warm'	**nwe?*: KC-Lai *nwê* 'be warm'	–
				WB *nwê* 'warm'	
(46)	**swer?*		**sên-s* 霰 'hail'	**swer?*: Chep. *wer* 'hail'	*ser-ba* 'hail'
(47)	**twəi*	**twi-C*	**tî-n* 顚 'eyetooth'	**twai*: WB *cwai* 'eyetooth'	*mčhe-ba* <**mtye-* 'eyetooth'
				Pattani *čhwa* 'tooth'	
(48)	**lwai*	**lwe-C*	**lek-s* 易 'easy'	**lwai*: WB *lwai* 'easy, yielding'	*legs-pa* <**le-k-s* 'good, happy'
(49)	PKS		**lha-s* 舍 'to rest overnight'	Proto-Kam-Sui **s-lwa*^{B} 'to rest'	
			but cf. *shuì, *lho(t)s* (< *lhwas?*) 說 'to halt, rest overnight' (*Shījīng* 50,3; 150,3)		

Notes:

(36) *tù* 吐 MC *thuo ˊ, thuo ˋ* 'spit' is distinct from WT *tho-le* < *thol-e* which corresponds to *tuò* 唾 **thôi-s* 'spit'. STEDT #603: TGTM = Tamang-Gurung-Thakali-Manangba group.

(36a) Kanauri: Chitkuli (Sharma 1992: 201). STEDT #2702 has a root **twa* (*m-twa-n).

(37) *dù* 度 MC *duo ˋ*, OC **dâks* 'a measure', *duó*, MC *dâk*, OC **dâk* 'to measure'; *tú* 圖 MC *duo*, OC **dâ* 'plan, consider, calculate'. Occasionally Sinitic roots show a consonantal extension whose meaning is not (yet) understood. See § 2.6 below.

(38) *dān* 單, MC *tân* 'single, unit' (Baxter & Sagart 2014, **Cə-t'ar*). STEDT #5377. Matisoff (2003: 262) connects this word with PTB **day* 'single'. The basic WT meaning seems to be 'scattered (items)' = 'individual (items, such as books)'.

(39) *lǐ* 里, MC *ljɨ ˊ* 'village, town'. STEDT #2773. See also item (28) above. WT *ra-ba* 'enclosure, yard' looks like a potential cognate, but its root is **ram*, note WB *ramˀ* 'surround', *ə-ramˀ* 'a

fence forming an enclosure', and Tibetan *ra-mo* (from ram-mo?) 'enclosure, fence, wall'; cf. also WB *khram* 'fence, enclosure' (HPTB: 299). WT *ra* can also be connected with other Sinitic words, see Coblin (1986: 78).

(40) *cǎi* 采 MC *tshậi ˊ*. STEDT #5814.

(41) *pó* 皤 MC *bwâ, pwâ* (MOC #24–54); *bái* 白 MC *bɐk* (MOC #2–38). STEDT #165, #6713. Karen: see Matisoff (2000: 145; 2003: 429). See § 2.6 for the OC final *-*k*.

(42) *bò* 播 MC *pwâ ˋ*. Matisoff (2000: 160–161); STEDT #2184.

(43) *xióng* 熊 MC *juŋ* 'a bear' (MOC #38–6). STEDT #2777. Jiarong Benzhen *tə-wam?* (from Sun 1986, see STEDT).

(44) *ér* 呪 MC *ńźje*. STEDT #1105. Dempsey (2001: 215 and the following pages) suggested that WB -i goes back to TB *e.

(45) *rè* 熱 MC *ńźjät*. STEDT #5891. The phonetic series *GSR* 330 (= MOC #20–13) has the rime *-*et*. The word *ruò* 爇 'to burn' (MC *ńźjwät*, from OC **not* or **niot*) was probably written with a graph from the same phonetic series because of similarity in sound and meaning. These words may perhaps be related, but the OC rime for the latter was probably *-*ot*; this would make it comparable to WT *rŋod-pa* 'to roast', but the rime OC *-*ot* does not cause palatalization of a velar *ŋ-. The initials in this phonetic series point to OC *ŋ-, not *n-, but phonetically the MC initial normally derives from *n-. The WB initial *n-* might derive from earlier *ŋ-*. In spite of this uncertainly, the words appear to be related. An additional problem are the divergent WB rimes in 'laugh' WB *nwi* vs. 'warm' *nwê*.

(46) *xiàn* 霰 MC *sien ˋ*. STEDT #671; HPTB: 399. Chepang may be unrelated, then the ST root should be **ser*.

(47) *diān* 巔 MC tien. STEDT #635; Pattani: Sharma (1989: 32). Dempsey (2003: 79) reconstructs Northern Burmish *-*oj*. For the diphthong leveling see the following § 2.6. TB has a palatalized initial.

(48) *yì* 易 MC *jie ˋ*. STEDT #2426. Dempsey (2003: 79) reconstructs Northern Burmish *-*oj*. Tibetan *-g* / OC *-*k* is a root extension, *-s* a suffix, the vowel *e* the result of diphthong leveling (see the following § 2.6).

(49) *shè* 舍, MC *śja ˋ* (*Shījīng* 199, 5); PKS = Proto-Kam-Sui (Thurgood 1988). This PKS loan which is old (*Shījīng*) fits into the same pattern of medial *-w-* deletion.

The Chinese word *dòng* 洞 **dôŋ-s* 'hole' seems to agree with this pattern: it could be related to WT *doŋ* 'hole, pit, ditch', but not to TB **dwa:ŋ* 'pit, hole' (the MC counterpart should then be *dâŋ*), Tiddim Chin *wa:ŋ*, whereas WT could be the regular outcome of either earlier **dwaŋ* or **doŋ* (STEDT #822). Matisoff (HPTB: 269) and Hill (2011b: 711) connect the WT word to HPTB **dwa:ŋ*, not to Chinese; Handel (2009: 270) connects Chinese *dòng* 洞 with TB. A ST **dwaŋ* should be expected to result in OC **daŋ*. We might speculate, however, that all the forms could perhaps be derivable from a ST **d-woŋ* or **dwoŋ*, but then TB forms like *waŋ* would still need clarification.

2.6 Monophthongization and metathesis in closed syllables

In cognate sets within and between ST languages, words alternate occasionally with forms with and without a final consonant. Often the morphological role, or phonetic conditioning, is not clear, as in OC **brâk* vs. TB **brya* 'hundred', or WT *'og* 'below', WB *ok* 'under part/space' vs. OC **ɦôʔ* (or **woʔ?*) 'behind'. Hill (2019: 202) lists items of the former kind (OC **-k* = TB **-*), and the latter kind (OC **-* = TB **-k*) (Hill 2019: 203 and the following pages). He is proposing phonological solutions. I consider such a final consonant either a root extension or a suffix. Other added consonants are morphemes, like **-n* which derives nouns in Tibetan and Chinese, in the latter often added redundantly to mark nouns. When a consonant is added to a root that ends in a diphthong, the result is leveling into a single vowel (Schuessler 2009: 68–69, with more examples):

(47) **twəi* PC **twi-C* > OC **tî-n* 齲 'eyetooth', TB **twai*, WB *cwai* 'eyetooth', WT *mčhe-ba* <*mtye- 'eyetooth, canine'

(48) **lwai* PC **lwe-C* > OC **lek-s* 易 'easy', TB **lwai*, WB *lwai* 'easy, yielding', WT *legs-pa* 'good, happy'

(48a) **maiʔ* 靡 (mǐ) 'there is no, *nihil*' + **-t* > **met* 威 (*miè*) 'to destroy, annihilate', and
**mêt* 蔑 (*miè*) 'there is no, destroy' = WT *med-pa* 'there is no'

Note also the OC rimes **-au* and **-auk* (MOC #16 and #17), for example: *mào* 皃 **mrâuh* serving as phonetic for *mò* 藐 QYS *mâk, måk* from OC **mrâuk* where the *au* may have been pronounced *ɔ* because a diphthong in a closed syllable would be structurally unique and unlikely in OC. And these items with final dentals:

(50) *fèi* 吠 'to bark': Lushai *bauʔ* < *baus*: ST **baus* > MC *bjwɐi`* (non-phonemic secondary medial *-w-*), from OC *\*bas* < *\*\*bwas*, from earlier *\*bos*. The OC final *\*-s* (or possibly *\*-ts*) belongs to the root, otherwise the MC outcome would have been MC *ˣbjäu`*. The Austroasiatic item **pus, *puəs, *pos* 'barking deer' (Shorto 2006 #1911) may be a phonological coincidence, especially since the characterization of that animal's sounds as 'barking' may be a European notion.

(51) *nuán* 妧 MC *nwan[]* 'to quarrel': OC would have been **nôn* from earlier ***nau-n*, derived from *nǎo* 惱 MC *nâu´* 'to anger, irritate', OC **nâuʔ*.

Tibetan underwent the same monophthongization, as in

(52) *sgren-mo* <**sgruai-n* or **sgroi-n* 'naked', cognate to *luǒ* 裸 **rôiʔ*, 'naked'; cf. Lushai *ruak*^{F} 'naked'.

When a consonant (like *-n* or *-k*) is added to a Proto-Chinese, or OC, syllable final *-*r* (from ST *-*r* = TB *-*r*), the latter metathesizes with the vowel (Schuessler 2007: 69; 2022):

(53) *huán* 環鐶 MC *ɣwan* II, **wrân* 'ring' (Baxter 1992: 373 **wren*) from **war+n*, note TB **war*, WB *wân* 'round, circular', see (63).

(54) *pó* 皤 MC *buâ, puâ*, OC **bâi* 'white', TB **pwaar*, PKC **waar*; + *-k: bái* 白 MC *bɐk*, OC **brâk* < **bar-k* 'white', see (41).

(55) *sè* 色 MC *ʂjək*, OC **srək* 'color', from Proto-Chinese **sər+k*: note Lushai *saar*^{H} 'prismatic color'.

(56) *mài* 脈 MC *mɛk*, OC **mr̂ək* 'vein', from Proto-Chinese **mər+k*, note Lushai *mar*^{H} 'the pulse'.

This survival of a ST final *-*r* as medial in OC indicates that a final *-*r* still had existed in some early stage of Sinitic; a survival into OC has been argued from Karlgren (1957) to Starostin to Baxter & Sagart (2014), but is debatable (Hill 2014 has a summary). In any case, a TB final *-*r* (presumably from ST *-*r*) typically corresponds to a final *-n* in Chinese (e.g. (13), (29), (38)), but in several words presumed OC cognates have additionally also a medial *-*r-* as in (53)/(63) *huán* 環鐶 **wrân* 'ring'. Here the *-*n* is the suffix that marks or creates nouns, as 'ring' derived from the notion 'round', as also in (11) *quǎn* 犬 **khwîn* 'dog' (cf. TB **kwi*), *mín* 民 'people' (cf. TB **mi* 'person') (Benedict 1972 and others since). When attached to a root-final *-*r*, the result is this metathesis which allows the ST final *-*r* to survive as a medial in OC. Therefore, the final *-n* in *wrân does not reflect a ST *-*r*, but rather this suffix. I suggest that this is also the explanation for other nouns with medial *-*r-* + final *-n*; for example, *bǎn* 板 **prân?* 'board' (= WT *'phar* 'small plank') derives from ***par+n*, and *yàn* 鴳鶵 **?râns* 'quail-like bird' (= TB: Lushai *?aar*^{H} 'fowl') derives from ***?ar+n* (see also Schuessler 2009: 86; more details in Schuessler (2022) "R-metathesis and monophthongization in Old Chinese closed syllables").

2.7 Tibetan *wa-zur*, suffix *-a*

There is an exception to the absence of medial *-w-* in Tibetan: the *wa-zur* (see recently Hill 2006: 87–90; Jacques 2009); also rare initial WT **w-* This subscript diacritic for *w* occurs in the rime *-wa* (as in *grwa* 'corner, school'), plus a few debatable other cases. However, this medial *w* is secondary and is the result of the addition of the suffix *-a* (Jacques 2009; 2013). This *-a* marks, or derives, nouns. Whether it is a suffix in its own right, or derived from *-ba*, as Jacques (2009;

2013: 290) holds, is of no concern here. When attached to a root that ends in the vowel *-o* or *-u*, the result is the rime *-wa* (written with this "wa-zur"). Hill (2011a: 451) discusses the literature on this letter and lists WT nouns that end in *-wa* (Hill 2006: 88 and the following pages). Here follow some examples, analyzed à la Jacques:

grwa < *gru-a* 'corner'	in composites	*gru*, as in *gru-gsum* 'triangle'
rwa < *ru-a* 'horn'	in composites	*ru*, as in *lug-ru* 'ram's horn'
rtswa < *rtsu-a* 'grass'		OC 草 **tshûʔ*, QYS *tshâú* 'grass'
wa < *'o-a* 'fox'	in composites	OT *'o*, as in *'o-dom* 'fox pendant' (Coblin 1994)

Note that the almost unique word with WT initial *w-*, *wa* 'fox' (more below (78)), agrees with this pattern. That the Tibetan *-wa* did not monophthongize to *-o* is due to the morphological nature of the final *-a* (Jacques 2009).

We should add that this Tibetan a-suffix also attaches to roots that end in a consonant; in composite words the *-a* tends to be omitted, just as in the examples above:

sgo-ŋa < *sgoŋ-a* 'egg'	in composites	*sgoŋ*, as in *sgoŋ-čhu* 'egg-white
tha-ga-pa < *thag-a-* 'weaver'	from the root	*thag*, as in *'thag-pa* 'to weave'

3. Initial ST *w- in Old Chinese

Tibeto-Burman and Sino-Tibetan initial **w-* is deleted in Written Tibetan, but ST **w-* survives in Old Chinese.

Thanks to internal reconstruction, an Old Chinese initial **w-* had been identified as the source of QYS initial *jw-* and *jəu-*, *ju*, the so-called *yù sān* 喻三 initial. This QYS initial occurs only in Type B syllables with *j*, i.e. Division III syllables with, after grave initials, subdivisions 3/3 from Baxter's medial **-r-*, and 3/4 reflecting OC high front vowels **e* and **i*. The initial OC **g-* that has been postulated by Karlgren (1957) and Li Fang-Kuei (1971), and recently again as **ɢ-* by Baxter & Sagart (2014) in such *j*-initial syllables, as in QYS *jəu´* 友 'friend', *jwaŋ* 王 'king', or *ju´* 雨 'rain', appears exclusively before a /w/ or back vowel, and is therefore automatic and non-phonemic (Baxter 1992; Sagart 1999; Schuessler 1987, 2009). This non-phonemic **g-* of earlier scholars is based on interpretations of phonetic series such as these:

Table 3a. OC phonetic series **kw-* ~ **w-*

GSR	929e	域	QY *jwək*	OCM **wək*	Karlgren **g̊iwək*	'territory'
	929a	或	QY *ɣwək*	OCM **wâk*	K. **g'wək*	'someone'
	929o	國	QY *kwək*	OCM **kwâk*	K. **kwək*	'state'
GSR	739a	王	QY *jwaŋ*	OCM **waŋ*	K. **g̊iwang*	'king'
	708a	皇	QY *ɣwâŋ*	OCM **wâŋ*	K. **g'wâng*	'august'
	739m	匡	QY *khjwaŋ*	OCM **khwaŋ*	K. **k'i̯wang*	'square basket'

An OC **g-* is especially difficult to justify in phonetic series that have only QY *jw-* and /or *ɣw-* initials, like

GSR	571	韋	QY *jwei*	OCM **wəi*	K. **g̊iwər*	'go against'

There are several phonetic series like these for which those who assume the closest possible phonetic similarity between its members postulated an OC initial **g-* (i.e. **gjw-*) for the QYS *yù-sān* initials (jw-) to bring them closer to QYS *ɣ-* and velars. But the initial *ɣ-* can now also be viewed as secondary that emerged in front of, or in connection with, OC **w-* in Type A (*j*-less) syllables. OC syllables with true initial **g-* (Karlgren's **g'-*) retained this consonant in MC as *gjw-* in Type B syllables, and *ɣw-* in Type A syllables. Thus, MC *ɣ-* has two OC sources: one secondary in front of OC **w-*, and one original OC **g-*.

Therefore, the QYS initial *jw-* (yù-sān) derives from an OC plain phonemic **w-* (友 **wəʔ*, 王 **waŋ*, 雨 **waʔ*). The corresponding Type A syllable (no medial *j*, QYS Divisions I/IV/II) developed a QYS initial *ɣw-*. Note the parallelism with syllables with initial **r-, *l-* and also **j-*:

Table 3b. OC resonant initials

	Type B:	**QYS**	**OC**	**Type A:**	**QYS**	**OC**
*r-	*liáng* 良	*ljaŋ*	*raŋ	*láng* 郎	*lâŋ*	*râŋ
*j-	*yáng* 羊	*jiaŋ*	*jaŋ	?		
*l-	*yáng* 陽	*jiaŋ*	*laŋ	*dàng* 盪	*dâŋ́*	*lâŋʔ* (≠ *dâŋ* 堂)
*w-	*wáng* 王	*jwaŋ*	*waŋ	*huáng* 皇	*ɣwâŋ*	*wâŋ* (≠ *gwâŋ* 黃)

QYS forms of the type *dâŋ* and *ɣwâŋ* are ambiguous because they can also derive from OC **d-* and **g-* respectively, as in **dâŋ* 堂 and **gwâŋ* 黃. In recent years, Zhèngzhāng Shàngfāng (2003); Pān Wùyún (1997), Sagart & Baxter (2014) have

adopted a uvular hypothesis (OC **q-* initials) (but see Schuessler 2015). This hypothesis requires a voiced counterpart to **q-*, therefore they have repurposed the OC **w-*initials as **ɢw-* or **[ɢ]w-*.

There are many, more or less well known, examples of OC **w-* relating to TB **w-*, but without WT cognates (for the latter see § 4 and § 7):

Table 3c. OC *w- = TB *w-

	ST	POC	OC	TB
(57)	**waŋ*		**wâŋ* 煌 'brilliant'	**waŋ*: WB *waŋ* 'glossy, shiny'
				PKC **waaŋ-I, *waan-II* 'to light, shine'
(58)	**waŋ*		(**gwâŋ* 黃 'yellow')	**waŋ*: WB *wâŋ* 'brightly yellow'
(59)	**wa*		**wa* 于 'to go, to'	**wa*: Jingpo *wa* 'go away', PCN *a-wa* 'to go'
				Chep. *waah-saa* 'walk'
(60)	**wa*		**wa-s* 芋 'taro'	**wa*: WB *wa'* 'tuber'
(61)	**waʔ*		**waʔ* 雨 'rain'	**r-wa*: PKC **ruaʔ*
				Chep. *waa.saa* 'to rain'
(62)	**wal*	**wai-n*	**wen* 員 'circle', 圓圜 'round'	**wal*: PKC **wal* 'encircle, make ring'
		OR:		
	**wel*	id.	**wên?* 繯 'tie round, encircle'	PKC **weel* 'circle, go (round)'
		OR:		
	**wəl*		**wəi* 圍 'surround, encircle'	
(63)	**war*	**war-n*	**wrân* 環鐶 'ring'	**war*: WB *wân* 'round, circular'
(64)	**waʔ*		**waʔ* 禹 'insect'	**was*: PTB **was* 'honey, bee' (HPTB: 432): Kanauri *wăs*, PKC **waʔ*
(64a)	**woi*	**wa-n*	**wan* 猿 'monkey'	**woi*: Jingpo woi^{33}, PNN **wo:y*
(65)	**wər*		**wəiʔ* 煒韡 'bright (of an object)'	**war*: OKuki *war* 'light' n.
			**wəns* 煇 'brightness'	Maring *war* 'bright light'
(66)	**wis*		**s-wis* 穗 'ear of grain'	**wis*: Lushai *vuis* 'to ear (cereal)'
(67)	**wui*	**wəi*	**wəi* 違 'go against'	*wui: Lushai *vŭi* 'offended'
(68)	**weŋ*		**wreŋ* 禜 'avert'	**weŋ*: Lush. *veeŋ^{L}/veen^{L}* 'ward off'

Table 3c. *(continued)*

	ST	POC	OC	TB
(69)	**wet*		**wets* 衛 'patrol, walk around'	Lush.*weet*^{F}/*veʔ*^{L} <*wes* 'cause to encircle'
				PKC **weeŋ-I, *ween-II* 'guard, watch'
(70)	**weŋ* or **wen*		**wêns* 縣 'district'	PKC **weeŋ* 'neighbor, area, district'

Notes:

(57) *huáng* 煌 MC *ɣwâŋ*. Cf. STEDT #5159.

(58) *huáng* 黃 MC *ɣwâŋ*. STEDT #5518.

(59) *yú* 于 MC *ju*. STEDT #2774. PCN = Proto-Central-Naga (Bruhn 2014).

(60) *yù* 芋 *ju* `. Cf. STEDT #2592 which, however, applies to WT *gro*. The word 'tuber' may be an area word: Chinese *yù* 芋 *wah 'taro' (and similar edible plants), Proto-Hmong-Mien (Miao-Yao) **vəuB2*.[3]

(61) *yǔ* 雨 MC *ju* ´. STEDT #2080.

(62) *yuán* 員圓圜 MC *jwän* (MOC #23–10, 23–11). STEDT #2060.
huán 繯 MC *ɣiwen* ´, *ɣwan* ` (MOC 23–11). STEDT #5138.
wéi 圍 MC *jwei* (MOC 28–5).

(63) *huán* 環鐶 MC *ɣwan* (MOC 23–11). Cf. STEDT #2060. Perhaps related to (77).

(64) *yǔ* 禹 MC *ju* ´, **waʔ* 'insect' is an obsolete word, glossed in *Shuōwén* as *chóng* 虫蟲 'insect, worm' (as pest). STEDT #2778.

(64a) *yuán* 猿 MC *jwɐn*. STEDT #2782. PNN = Proto-Northern-Naga (Matisoff 2003; French 1983). The OC final *-n* is the nominal suffix replacing the final **-i* or **-y*. ST **o* (**wo-*) changed to OC **a* (**wa-*) because of labial dissimilation.

(65) *wěi* 煒韙 MC *jwei* ´; *yùn* 煇 MC *jwən* `. Maring, Old Kuki, see Matisoff (2000: 145); STEDT #5683.

(66) *suì* 穗穟 MC *zwi* ` (MOC 29–8, 29–9).

(67) *wéi* 違 MC *jwei*.

(68) *yíng* 縈 MC *jiwäŋ*.

(69) *wèi* 衛 MC *jwäi* ` (MOC 28–5). STEDT #5149.

(70) *xiàn* 縣 MC *ɣiwen* ` irregularly lost its labial glide in Mandarin. STEDT #5161. After front vowels there is occasional uncertainty between -n and -ŋ.

3. Weera Ostapirat, p.c.

3.1 OC *ʔw- / *ʔu- from ST *w-?

In some words, OC has *ʔw-, *ʔu- or *ʔo- for TB *w-, instead of the expected OC *w-. We may speculate that some pre-Han dialect pronounced (71) *weŋ, for example, as ʔueŋ (*ʔweŋ); compare the spread of Mandarin pronunciations of the word for 'five' 五 from [wǔ] to [ǔ] to [ʔǔ]. (75) might have a hint that such a dialectal divide between *w- and *ʔw- could go back to ST. Or one could add *ʔw- as a labiolaryngeal to the labiovelars:

Table 3.1 OC *ʔw/*ʔu-/*ʔo for TB *w-

	ST	POC	OC	TB
(71)	*weŋ?		*ʔueŋ 縈 'entwine'	*weŋ: Lush. *veŋ?* 'wear round waist'
(72)	*wul		*ʔui-s 餵喂 'feed animals'	*wul: PKC *vul? 'keep/rear animals'
			cf. *ʔoi-s 餧 'feed (an animal) '	cf. WB *kywê* 'give a meal, feed'
(73)	*woŋ		*ʔôŋs 瓮 'swollen'	*wuŋ: PKC *wuuŋ 'swell, swollen'
(74)	*wjal ?		*ʔuai or *ʔoi 倭 'winding'	PKC *vial 'curl up, encircle (like snake)'
			*ʔuai-lai 委佗 'graceful, compliant'	
(75)	*wai,	*oi	*ʔuai 萎 'to wither'	PKC *ʔuay, *wuay 'wilt, wither'
			cf. *ʔuans, *ʔons 苑 'wither'	

Notes:

(71) *yíng* 縈 MC *ʔjiwäŋ*. STEDT 'encircle'. Lushai *veŋ*^{R} I, *ven*^{L} II.

(72) *wèi* 餵喂 MC *ʔjwei`* (MOC #28–9); *wèi* 餧 MC *ʔjwe`* (MOC #19–9). STEDT #2783. Lushai has two words: *vil*^{R} 'look after, tend, take care of', and *vulʔ*^{L} 'keep or rear (animals)' (STEDT #5166). If not a vocalic variant, OC *ʔoi-s could be unrelated and be connected with STEDT #6173 *-*way*.

(73) *wèng* 癰 MC *ʔuŋ`*, and related words in MOC #12–4 = GSR 1184. STEDT #5173. Lushai *vuuŋ*^{H} I, *vuun*^{L} II 'to swell'.

(74) *wēi* 倭 MC *ʔjwe* (MOC #19–10). STEDT #5141. 委佗 *wēi-yí*, QYS *ʔjwe-jie* (MOC #1809). The OC rime of 委 should be *-wai*, because it must rime with 佗 which can only have the rime *-*ai* (not *-*oi*).

(75) *wēi* 萎 MC *ʔjwe* (MOC #19–10). STEDT #3529.

4. TB initial *w- in Written Tibetan

WT has hardly any words with initial *w-*. Therefore, inherited ST/TB initial **w-* has been difficult to identify. Simon (1930) proposed the equations WT *g(r)-* = QYS *jw-*: (107) WT *grod* 'stomach, belly' = *wèi* 胃 MC *jwəi* ˋ 'stomach', and (94) WT *grogs* 'friend' = *yǒu* 友 MC *jəu* ˊ (see §7). Like Karlgren (1957) and Li (1971), Gong Hwang-cherng (1995) considered our OC **w-* as actually starting with an initial velar /g/, as pointed out above. Gong has a representative collection of suggested equations WT *g-* and *gr-* corresponding to OC initials that we would set up as OC **w-*. Sagart (2006) identifies WT *g-, gr-* directly with TB **w-*.

However, Guillaume Jacques (2013: 297) has suggested that the "regular outcome of **w-* was *ɦ-* [i.e. WT *'a-chung*, here *'a*] (when followed by *a*) or *j-* (when followed by a front vowel)"; this has been quietly assumed before in the cognate set (76) (Schuessler 1976: 257, 2007: 508; Coblin 1986: 86, and certainly others). On this we will elaborate in what follows.

The fate of TB **w-* in Tibetan is simple: just as TB *medial *-w-* is deleted everywhere in Tibetan (**wa* becomes *o*), *initial* TB **w-* is deleted everywhere as well (**wa-* also becomes *o-*), the exposed initial vowel is written with the vowel-support *'a-chung*. Thus TB **waŋ* becomes *oŋ*, **wa* becomes *o* (the Tibetan writing system requires the transcription *'oŋ, 'o*). Because of continuing debates concerning the WT letter *'a-chung*, some clarifying summary seems in order; hardly any of the following arguments will be new.

4.1 Vocalic onset in Written Tibetan

In Tibetan, vocalic onset of a word is written with one of two letters, either *ʔa-chen* ཨ, or *'a-chung* ཨཱ; the latter is usually transcribed as <'> or <ḥ>.[4] It has engendered much discussion.

Most traditional writing systems have evolved as practical expedients for communication; they have not been designed by modern linguists applying the strict principle of one sound or phoneme = one symbol. Furthermore, many languages, including English and WT, have borrowed and adapted systems that have been created for a different language. For example, both English and WT make a phonetic distinction between aspirated and unaspirated stops as in *tick* [tʰ] vs. *stick* [t], and WT *'thig-pa* 'to drip, drop' vs. *btig-pa* 'to let drop'. In both languages these sounds are in complementary distribution (with rare historically explicable exceptions in WT) and therefore reflect a single phoneme. English adopted the

4. Though not used by Tibetans, the terms "*(ʔ)a-chen*" and "*'a-chung*" are well established in Western literature.

Latin alphabet which had a single symbol for the phoneme, while WT adopted an Indic alphabet which allowed a graphic distinction between the sounds because of phonemic contrasts in aspiration (e.g. तथा *tathā*, i.e. *tatʰā*, 'thus'). Adopted alphabets require reinterpretation and modification of letters for sounds that did not exist in the donor language. European languages have adopted the Latin alphabet that includes the letter <h> for [h] which is restricted to word or syllable initial position and potentially free for other uses. In English, <h> has its Latin value (as in *have, Sahara*), or can be silent (*herbs, Sarah, ghost*); it is liberally employed to modify letters for representing non-Latin affricates or fricatives, thus English *ch, sh, th, gh* (as in *enough*). In Rhaeto-Romance <ch> represents an affricate (*chesa* 'house'), while in neighboring Italian it does the opposite in preventing palatalization (*che* [ke] 'what'). In German, post-vocalic <h> indicates a long vowel (*ihn* 'him' vs. *in* 'in'). In WT <lh> and <hr> write voiceless liquids, with concomitant aspiration.

A single letter can thus have more than one 'diacritic' function. Such adaptive strategies also seem to apply to WT which has two vocalic onsets where the Indic donor alphabet has only one type, and where the letter *'a-chung* has been variously interpreted as representing the sounds [ɦ], [ɣ], and/or as a vowel support, and/or more complex features, i.e. especially prenasalization, as discussed below (§ 4.1.2). But first we must turn to its counterpart, the letter *ʔa-chen*.

4.1.1 The Tibetan letter *ʔa-chen*

The letter *ʔa-chen* is pronounced with a high tone (Goldstein 1984: 1230) in Modern Tibetan tonal dialects and languages which points to a voiceless initial. Traditional grammars and investigators describe this letter as vowel support with initial [ʔ]: e.g. Jaeschke (1954: 4); Lalou (1950: 2) "un consonne qui sert de support vocalique"; Hahn (1974: 4); Beyer (1992: 43). This was also the letter's earlier value, as confirmed by transcriptions from Tang period Chinese: *yī* 一 MC *ʔjet* 'one' = WT *ʔit* (Hill 2005: 108 citing Zhang); *è* 惡 MC *ʔâk* = OT *ʔag* (Coblin 2002: 175), *yú* 於 MC *ʔjwo* = OT *ʔu* (Li & Coblin 1987: 472). Also Sanskrit (Skt) words, e.g. *ʔā-nanda* from Skt Ānanda (Hill 2005: 122), WT *ʔAŋ-ga* from Skt Aṅga (place name) (cf. Beyer 1992: 43), as well as indigenous Tibetan words, though few, with initial vowels, like the pre-syllable *ʔa-* in kinship terminology (shared with other TB languages, see Matisoff 2003, 2018: 8–9), *ʔol* 'throat' < TB, and *ʔa-* in exclamations. <ʔa> occurs with any vowel diacritic: *ʔa, ʔi, ʔu, ʔe, ʔo* (e.g. Jaeschke 1881: 603–608). Yet Tibetan [ʔ] has been called into question (Hill 2005: 109), together with the Sanskrit vocalic initial which, so the argument goes, cannot have been a glottal stop because this could not explain sandhi combinations (e.g. Mahendra can result from *mahā+indra*, but cannot from *mahā+ʔindra*). This argument is not decisive. English: [ʔit is] has in many dialects a glottal

stop in the first word, but sandhi usually eliminates it in the following [is]. German is a glottal stop language, if you will, thus there is *ʔarbeit* 'work' and *geʔarbeitet* 'worked' (with the symbol *ʔ* added here), but the Swiss dialect, though is has *ʔarbeit*, has *gearbeitet* in combination. The same holds true for Tibetan: <ʔa> occurs exclusively in word initial position, but within words, suffixes and in some sandhi forms, a vocalic-initial syllable uses the glottal-stop-less <'a> instead, note *mi'u* 'dwarf', *kha'i* 'of the mouth', *-'o* 'finite word ending', *-'o-č(h)og* 'collective suffix' (Li & Coblin: 454 and the following pages). Even if Skt had no [ʔ], speakers of other languages would have identified vocalic onset with their non-phonemic glottal stop.

Thus, in WT, a word that begins with a vowel starts with <ʔa>, originally probably a sub-phonemic glottal stop.

4.1.2 The letter *'a-chung*

The letter *'a-chung* is pronounced with a low tone (Goldstein 1984: 1026) in Modern Tibetan tonal dialects and languages, which indicates either absence of an initial consonant, or a voiced initial. Different proposals have been made concerning its function as well as its phonetic origin and nature (e.g. Hill 2005; 2009: *'a=y*; Matisoff 2018: traditional grammars). The arguments about the phonetic value of this letter stem from its use in three distinct environments on which most or all descriptions of WT agree, and from attempts to find a common phonetic denominator, or other explanation.

The three generally recognized WT uses of *'a-chung* are the following (cf. Jaeschke 1881: XIV and descriptions of WT since).

a. <'a> is prefixed to the initial consonant of a word which is in some dialects pronounced with, or left traces of, pre-nasalization or an initial nasal (*sku-'bum* name of the monastery "Kumbum", i.e. "ku-mbum"). Matisoff (2018 and earlier) has suggested "rhinoglottophilia" as the TB morphophonemic explanation for sounds which are written with the WT letter *'a-chung*; this is not contradicted by our interpretation of the other uses of the WT letter *'a-chung*. But we are here not concerned with pre-nasalization, only with syllable initial <'a> in WT.
b. Functioning as vowel support or place holder (support vocalique (Lalou), Vokalstütze), <'a> is added to CCa type syllables to prevent them from being read as CaC. The letter combination *ga+da* གད is normally understood as *gad*; to write *gda* would be impossible with the Tibetan writing system if it were not for this place-holder (*a* by itself), therefore *gda* must be written གྡ་ *gd'a* (conventionally transcribed as *gda* or *gda'*). For practical consistency of spelling and simplicity, a word like /bka/ is also written *bka'* བཀའ་ even though

ད་ would be sufficient. Thus, only a single convenient spelling rule is required for all CCa words, although it is sometimes argued that བཀའ་ *bka'* proves that འ = *y*. Hill also points out that in Old Tibetan manuscripts some words and particles are occasionally written with an added <'a> (e.g. ལའ་ *-laa'* instead of the later standard ལ་ *-la*) suggesting to him something other than /a/. Yet this is just one of several OT spelling inconsistencies (cf. Tournadre 2013: §4.5). A subscript <'a> ྃ indicates long ā in Skt transcriptions, as in *ʔā-nand* from Skt. *ānanda* (Hill 2005: 122) where it cannot possibly represent ɣ, therefore Hill claims that this subscript letter "is not the same character as the letter" འ་. This subscript འ appears also in transcriptions from ancient Chinese, as in *'g'am* འགམ་ for *găn* 感 QYS *kậm ´* (*London Long Scroll*, line R. 18), and *k'og* ཀོག་ for *jué* 覺 QYS *kåk* (line R. 38).[5]

c. *'a-chung* functions as a vowel-support in syllable initial position (with inherent /a/ when not modified by a diacritic), as in *'am* འམ་ 'interrogative particle', *mi'u* མིའུ་ 'dwarf', *kha'i* ཁའི་ 'of the mouth', *'oŋ-ba* འོང་བ་ 'to come'. It is this use that is relevant for the inquiry into the fate of initial **w-*.

4.1.3 *'a-chung* as smooth vocalic onset

The literature that relates to Standard Central and Western Tibetic dialects and languages describes initial <'a> as smooth vocalic ingress with weak initial breath: Jaeschke (1954: 4) "... a mere vowel *without* that audible opening of the throat", i.e. without *ʔ*; Lalou (1950: 2): "semi-voyelle... support vocalique, ... comme la notation d'une sorte d'écho, d'une suggestion sonore très peu articulée". German authors describe the sound as an initial "Hauch", i.e. 'breath': Hahn (1974: 4) "gehauchter Stimmeinsatz" (breathed voice onset), Schwieger "leicht gehauchter Stimmeinsatz" (gently breathed onset, Hill 2009: 116), Schmidt "ein schwacher Hauch" (a weak breath) (cited by Hill 2009: 115). A Tibetan source describes <'a> as "articulated from the cavity of the mouth" (Hill 2005: 110) which Hill takes for a velar or glottal articulation, but may just as well describe vocalic ingress with or without [ɦ], or simply the pronunciation of the common default vowel [a]. Thus, all these descriptions point to initial [ɦ] or zero. In fact, it is impossible to pronounce smooth vocalic ingress without some kind of airflow; thus, what is transcribed as [ɦ] may be phonemically unnecessary.

The zero initial consonant in <'a> is furthermore proven by the deletion of obstruents in suffixed syllables: the genitive suffix *-gyi* becomes *-i* (written-*'i*) after vowels, the diminutive suffix *-bu* becomes *-u* (written *'u*); what is left is the pure vowel written with the vowel support *'a-chung*, e.g. *mi'u* མིའུ་ 'dwarf' (from underly-

5. These forms from the *London Long Scroll* (India Office Collection of the British Library, Chapter 9.II.17) have been kindly provided by Prof. Coblin (cf. Coblin 1995).

ing *mi-bu), *rte'u* རྟེའུ་ 'colt' (from *rta-bu), *kha'i* ཁའི་ 'of the mouth' (from *kha-gyi). This usage is confirmed by transcriptions of Chinese diphthongs in the 10th to 11th century Dunhuang *London Long Scroll* (Coblin 1995), e.g. Tibetan *kha'ï* for *kāi* 開, QYS *khậi* (line R. 74); Tibetan *ka'u* (line R. 78) and *'ka'u* (line R. 81) for *gāo* 高 QYS *kâu*; Tibetan *di'u* for *tóu* 頭 QYS *dəu* (line R. 83); Tibetan *yi'u* for *yóu* 由 QYS *jiu* (line R. 77).

4.1.4 Velar and uvular fricatives for *'a-chung*

Hill (2009: 117–122) has assembled lists of reported dialect pronunciations for *'o-ma* 'milk', *'od* 'light', *wa* 'fox', beside *rte'u* 'colt'. The first two words show a pronunciation with vocalic ingress in almost all sources (which is not the same as "in all locations"), with occasional instances of initial *ɦ-* and *w-*, even *ʔ-*, in the West, *ɣ-* or *ʁ-* in the East. Hill (2005: 113) concedes as a hypothetical possibility that the velar or laryngeal fricatives in Eastern dialects may be secondary. This is indeed the case, due to substrate interference whose features are discussed by Thomason and Kaufman (1988: 110 and the following pages) and Schrijver (2014: 59). The substrate criteria that Schrijver summarizes do apply here: (a) Eastern Tibetic initial *ɣ-* and *ʁ-* "cannot be explained plausibly on the basis of general structural principles, such as economy, simplicity and symmetry." (b) The initial state of the Tibetic "sound system does not pre-programme the language to undergo these changes." (c) "The changes … form a coherent system in themselves," suggesting substrate influence rather than borrowing. (d) The changes from zero initial consonant or [ɦ] to Eastern initial *ɣ-* and *ʁ-* "do not spread from a center to the periphery." A substrate of Qiangic languages with their rich inventory of uvulars and velars, including fricatives (see Evans 2001) can explain these Eastern features.

Among others, Hill (2009: 122) offers Amdo forms for 'colt', like *rtiɣə*, as evidence for his hypothesis that WT <'a> originally represented a *ɣ-*. But the diminutive suffix was originally *-bu*, after vocalic finals the *b-* was deleted and the surviving /u/ written with the vowel support <'a> (hence WT *rte'u)*. The Amdo *ɣ* cannot be an original proto-Tibetan sound, nor can it directly derive from *-b-*; it can only have replaced *-b- after* the loss of this voiced stop either as epenthetic insertion, or as a result of strengthening of *ɦ*.

Stage	Phonetic change	WT	East: Amdo
I	Underlying form	**rta-bu*	
II	Deletion of medial stop	*rte'u*	*rte'u* or *rte-ɦu*
III	Velar/uvular fricative	*rte'u*	*rtiɣə*

The velar or uvular fricatives *ɣ-* and *ʁ-* can only be a secondary regional innovation. A hypothesized *ɣ* never existed in the protolanguage and in WT, no matter how archaic Eastern dialects may be in other respects.

(I assume that Hill's interpretation of the Amdo form for 'colt' is correct. But actually Amdo forms for WT *rte'u* are not that straight-forward. Sun (1986: 2003) has a Ndzorge form *ʰtiɣʁ* which he tentatively associates with a WT form "*rteḫu.gu* (?)"; he defines *-ɣʁ* as a "diminutive suffix" (Sun 1986: 28). Roerich (1958: 125) records Amdo *ˣtī* for 'colt').

4.1.5 *'a-chung* as vowel support and diacritic

Foreign transcriptions also show that *'a-chung* is without specific phonetic content, these do not support a *ɣ*. Coblin (2002) has studied Old Tibetan (OT) transcriptions of Tang period Chinese as well as Sanskrit. There <'a> + consonant combinations represent, among others, MC *m-* (pronounced at that time more like *mb-*): OT *'bog* for *mù* 目 Tang period *mbok* (QYS *mjuk)* 'eye' (Coblin 2006: 138), *'b-* also for Tang period as well as Skt *v-: 'bug* for *fù* 復 Tang *vuk* (QYS *bjuk*) (Coblin 2006: 138), OT *'ba-yo* for Skt. *vāyu* (Coblin 2002: 179), even Tibetan *''tsyen* འཙེན་ for Chinese *qián* 前 QYS *dzien* (*London Long Scroll*: line R. 160; འའ་ are stacked on each other). An additional function of <'a> is to flag labiodentals, and often indicates that an initial consonant is voiced (Coblin 2002; also in transcriptions from Turkic, see Hill 2005: 121). QYS *ɣ-* is not transcribed with <'a> as the *ɣ*-theory should predict, but with the combination *'h-*: *'heg, 'hog* for *xué* 學 MC *ɣåk* (Coblin 2002: 175), and even *''hu* འའུ་ for *hù* 護 QYS *ɣuò* (*London Long Scroll*, line V. 18).[6] Thus there can be no doubt that *'a-chung* was not an initial consonant, not *ɣ*.

With Coblin, the only conclusion to be drawn from all the evidence past and present is that *'a-chung* played the role of a diacritic, hence vowel support, place holder, and marker for unusual pronunciation of a letter (pre-nasalized, unknown sound in a foreign language and the like, especially marking voicing). This role of *'a-chung* is reminiscent of <h> in European languages.

4.1.6 Smooth vocalic onset (written with *'a-chung)* resulting from loss of an initial consonant

WT dictionaries, e.g. Jaeschke (1881: 498–503) or Das (1902: 1114–1122), reveal that there are not many words with *'a-* initial. The overwhelming majority of these has the back-vowels /o/ and /u/, *'e* is missing altogether, *'i* occurs just once as a

6. I am aware of only one case of OT *'a-chung* = QYS *ɣ*: OT *'o = hù* 戶 QYS *ɣuò* (Li & Coblin 1987: 454); this may be an unorthodox spelling, note one occurrence of OT *waŋ* 皇 QYS *ɣwaŋ* for the usual OT *hwaŋ* (Li & Coblin: 453).

sandhi form for *-gyi*. Some words with initial *'a* make the impression of being expressive in nature (*'a-ti-wa* 'tumble over', *'a-'ur* 'shaking or rattling sounds', *'ab-pa* 'to bark', *'ar-po* 'angry', and the like), or are foreign loans like *'u-lag* (the spelling of *wu̲laà* according to Goldstein 1984: 1026) 'corvée transport'.

However most of the other words written with the letter *'a-chung* came to start out with a pure vowel (without even a non-phonemic glottal stop) after loss of an initial consonant:

<'> for **w-: 'u-* and *'o-* from loss of **w-* in syllable initial position, as will be shown below (§ 4.2).
<'> after loss of *b-: -'u* sandhi for the diminutive suffix *-bu*
<'> after loss of *g-: -'i* sandhi for the genitive suffix *-gyi*
<'> after loss of *ŋ-: 'a-* probably in *'an-bu* from *ŋan-bu* 'my humble self', according to Das (1902: 1114)
<'> after loss of *y-: 'a- in 'aŋ*, a sandhi form for *(k)yang* 'ever'
<'> for underlying *ʔ-*
  a. in *'am* "interrogative suffix" (always in a sentence position that is subject to sandhi);
  b. in *'o* "finite verb ending" probably for underlying *ʔo* (unless it could be *wo*), as final particle it is always in a sentence position that is subject to sandhi.
  c. *'u-thug* a variant of *ʔu-tshugs* "break out into violent passion"

<ʔ> can only occur at the beginning of a word, not in the middle (in suffixes or compounds). Therefore, the second syllable in a word like *'a-'ur* "shaking or rattling sounds", whatever its ultimate underlying form, can only be *'ur*, never *ʔur*.

Thus, this consonant-less initial, i.e. smooth vocalic ingress, is a Tibetic innovation that has resulted from the loss of an initial consonant. It became phonemic and could then occur in expressive words and loans.

4.2 WT initial *'a-chung* after loss of TB or ST **w-*

The lost consonant of many of the words that start with <'o> and <'u> was, I suspect, an earlier **w-*. This can be surmised already by the striking preponderance of words with initial *'o-* and *'u-*, that contrasts with the near absence of words with initial WT *w-*. This is confirmed by several words with initial WT *'o-* (most from **wa-*), as well as *'u*, that correspond to TB or ST ones with initial **w-*. (Goldstein 1984: 1026–1030 transcribes Tibetan *'u* and *'o* as [wu] and [wo] which is also found in some Western Tibetan dialects (Hill 2009: 117–122), as well as in the ini-

tials of Himalayan cognates or loans.) As just explained, after loss of the initial **w-*, the WT words are left with a pure vocalic onset, written with *'a-chung* (Table 4.2). Some have replaced zero initial with *y-* (see § 4.3 below).

Table 4.2 WT *'a-čhung* = TB, OC **w-*

	ST	OC	TB	WT
(76)	**waŋ*	**waŋʔ* 往 'to go to'	**waŋ*: WB *waŋ* 'go/come in, enter'	*'oŋ-ba, yoŋ-ba* 'to come'
			Chep. *waaŋ-saa* 'come'	
(77)	**war*	**wânʔ* 輾 'rotate'	**war*: Lepcha *var* 'go round'	*'or* 'eddy, whirlpool'
(78)	–	(cf. (26a))	**wa*: Qiang: Guiqiong *wə*^{35} 'fox'	*'o < wa* 'fox' (Old Tibetan),
			Western Tani *wa-mu*:	
(79)	**wa*	**wa* 杇 'bathtub', 盂 'bowl'	**wa*: Kurtöp *wa* 'water container'	*'o-a >wa* 'gutter' (of wood)
(80)	–		**wa*: Deng *wo*^{31}*-ma*^{55}	*'o-ma* 'milk'
(81)	–		**wo*: Jingpo *wo51* 'that, there'	*'o, 'u* 'this'
(82)	**wo(k)?*	**wôʔ* 後 'after, behind'	**wok*: WB *ok [ɔk]* 'under part'	*'og, yog* 'below'
			Lepcha *wok*	
			Kurtöp *wako*	
(83)	–		**wat*: Cuona Menba *wot* 'light'	*'od* 'light' (noun)
(84)	–		**wo(s)?*: Lepcha *wo-sŭ*	*'o-se* 'mulberry'
(85)	–		**wu*: Kurtöp *wu* 'a kiss'	*'u, 'o* 'a kiss'

Notes:

(76) *wǎng* 往 MC *jwaŋ ˊ*. STEDT #1812.

(77) (*huà*) 輾 MC *ɣwân ˊ, ɣwâ ˊ* 'rotate', Karlgren's gloss is 'turn round (as a wheel)': Mandarin *huà*, there are additional QYS readings (see GSR 351-l), cognate to *huán* 桓 (see Schuessler 2007: 284). Lepcha *var* 'make a circuit, go round', *vor* 'to surround'. Tibetan adds a pre-initial /k/ to the root, resulting in the word family *'khor* 'turn around', *sgor-mo* 'round', etc. The Tibetan k-initial in words for 'turn' is also seen in (13). Alternatively, TB could be connected with *yùn* QYS *jwən ` * OC **wəns* 暈 'vapor, halo', 運 'revolve, turn round'; then ST would be **wər*. – The ST root *war might be the same as *war in (59) and (63).

(78) STEDT #2255; Huang Bufan (1992: #325; cf. (26a); (§ 2.7 above for the suffix *-a*.) It seems that there are two distinct ST roots of the word 'fox': **wa* and **gwa* ((26a)), see § 4.4.

(79) *yú* 杅盂 MC *ju*. Kurtöp gloss: 'a semi-circular shaped container for water, running or still' (like a gutter?). The Chinese graph indicates a container made of wood. See § 4.4, and § 2.7 above for the suffix *-a*.

(80) 'Milk' is reconstructed as TB **wa* in STEDT #3464, but theoretically **wo* might also be possible.

(82) *hòu* 後 MC *ɣəu ˊ*. STEDT #2542 'below'; Huang Bufan (1992)'s #725: WB is *ɔk* (not *ʔɔk*); WB has no syllable/rime *wok*. – This word with QYS initial *ɣ-* is reconstructed as OC **ɦoʔ* in Baxter's system, but is here set up as OC **wôʔ*. It has no velar initial in Min dialects, therefore the initial has been assumed to be a voiced ingress *ɦ* (Baxter 1992: 210, **ɦ(r)os*). In fact, this initial seems parallel to the one in, for example, *hé* 和 QYS *ɣwâ*, OC **wâi*. This OC **ɦ* is very rare, it occurs otherwise only with enclitic grammatical words like *hū* 乎 QYS *ɣuo*, OC **ɦa*, which is the result of sandhi. Therefore, it seems that **ɦ-* represents here really an initial **w-*, therefore *hòu* 後 QYS *ɣəu ˊ*, OC **wôʔ*. Also, GSR 1041p-t (Schuessler 2009: #16–8) *hào* 号 has this initial: OC **wâu-s*; also *xiāo* 鴞 *jäu,* **wau* 'owl'. This allows the elimination of the rare **ɦ* from the phonemic inventory of OC. ST *wu- has merged into the vowel *ʔu- in OC (Schuessler, 2022).

(83) STEDT #2271, also Eastern Tani *wat* 'glimmer'; Matisoff (2000: 144.)

Items (78) to (84) could be Tibetan loans in Himalayan languages; even so, the initial-less WT forms agree with the loss of a former *w-*.

4.3 Initial WT *y-* as hiatus deleter in place of earlier *w-*

WT has only few words with initial *'a-chung*. Several words with this initial have doublets with initial *y-*. Jacques (2013: 297) explains the /y/ in *yoŋ* 'to come' as a case of morphological palatalization; Hill (2009: 126) hypothesizes a sound change **ɣ* > *y*. I suspect that vocalic onset in absolute initial position, though possible and attested, tends to be avoided, at least in some Tibetan dialects:

'oŋ	*~ yoŋ*	'come', Gyen skad *ɦoŋ* (Hill 2006: 83, passim) (76)	
'og	*~ yog*	'below' (82)	
'ob	*~ yob*	'stirrup'	
'ug-pa	*~ yug-po*	'oats'	
'aŋ	*~ yaŋ*	'ever' (this is a sandhi variation)	
Kurtöp	*wer*	WT *yur-ma*	'weeding', *g-yur-ma* 'weeds' (89)
Kurtöp	*wur* 'swing, nod'	WT *g-yur-ba*	'droop, hang down' (90)
Kurtöp	*wen*	WT *yin*	'to be' (88)

Therefore, ST or TB initial **w-* are also hidden among WT words with initial *y-*, but also other initials which served as prefixes, note (43) **wəm* 'a bear' = WT *dom* < **d-wam*.

Table 4.3 WT *y-* for TB **w-*

	ST	OC	TB	WT
(86)	**wə*	**wəʔ* 有 'to have, there is'	**wa*	*yod-pa* <**yo-t* 'have'
(87)	**wə*	**wə-s* 侑 'to offer, sacrifice'	**wa*	*yon* < **yo-n* 'gift' (to priests)
(88)	**wi*	**wi* 維惟 'to be'	**wi*: PLB **wəy* 'to be'	
			Kurtöp *wen*	*yin-pa* < **yi-n* 'to be'
(89)	**wur*	**wən* 耘 'to weed'	**wur*: Kurtöp *wer* 'to weed'	*yur-ma* 'the act of weeding'
(90)	–		**wur*: Kurtöp *wur* 'swing, nod'	*g-yur-ba* 'droop, hang down'
(91)	**wu*	**wə* 尤 'guilt, blame'	**wu*	*yus* <**yu-s* 'blame, accusation'
(92)	**wə*	**wəʔ, *wə-s* 右 'right side'	**wa*	*g-yas* 'right side'
(93)	**waŋ*	(**kwâŋʔ* 廣 'wide')	**waŋ*: PKC **waaŋ* 'width, breadth'	*yaŋ* 'wide, broad, large'
				rgyaŋ-ma <**r-ʾaŋ ?* 'distance'

Notes:

(86) *yǒu* 有 MC *jəu ˊ*. Cf. STEDT #7344. The final *-d* in WT *yod* may have emerged in analogy to its opposite: WT *med-pa* 'not have, not exist'; *med* is of ST origin as OC **mêt* 蔑 (MC *miet*/*miè*) 'there is no, not' shows.

(87) *yòu* 侑 MC *jəu ˋ*. WT *yon* 'gift (to priests), offering'

(88) *wéi* 維惟 MC *jiwi* 'to be'. Kurtöp *wen* is from Jacques (2013: 298). Matisoff (1985a; 2003: 221 and the following pages.)

(89) *yún* 耘 MC *jwən*.

(91) *yóu* 尤 *jəu*.

(92) = (100).

(93) = (102).

One may speculate about the origin of the initial WT *y-* in such words. First, **wi-* and presumably **we* become automatically WT *yi-* and *ye-* via *i-* and *e-*. Then a prefix *g-* (as in *g-yag*) or others like *r-* cannot occur before a word that begins with *ʾa-chung: g(ə)-ʾaŋ* or *g(ə)-ʾur* are impossible, therefore a /y/ as hiatus deleter is

inserted here: *g-yaŋ, g-yur*. This /y/ may also have been added because of sandhi, for example the verb *yod-pa* 'have, there is' is of course placed at the end of a sentence or clause and is typically preceded by a word that ends in *-pa* or *-ba*, thus resulting in a vowel sequence which tends to be avoided. The initial *y-* may then have spread to other words in dialects and into the literary language.

A similar development from initial **w-* to later *j-/ y-* can be observed in Chinese, e.g. OC **wəʔ* 有 'have' (Baxter & Sagart 2014, **[ɢ]ʷəʔ*) > MC *jəú*, Mandarin *yǒu*; but here the mechanism was probably different from Tibetan.

4.4 WT initial *w-* and the second deletion of *w: wa* 'fox' and 'gutter'

To summarize, we have noted the following developments of **w*+vowel in Tibetan:

**wu*	> *u*	(written *'u*), also	> *yu*	cf. *'u* 'kiss', *yur-ma* 'weeding'
**wo*	> *o*	(written *'o*), also	> *yo*	cf. *'og ~ yog* 'below'
**wa*	> *o*	(written *'o*), also	> *yo*	cf. *'oŋ-ba ~ yoŋ-ba* 'come'
**we*	>	(ˣe >) *ye*		?
**wi*	>	(ˣi >) *yi*		*yin* 'to be'

Given these facts, there should be no initial /w/ in Tibetan. Nevertheless, initial <w> exists, but hardly. A special combination character ཝ with the value [w-] was created for these unique words. Just as *'a-chung* with the diacritic for /u/ results in the syllable initial *'u* ཨུ, so *'a-chung* with the diacritic for the subscript medial *-w-*, the *wa-zur*, became the original symbol for initial *w-*: ཝ (cf. Hill 2005: 114). The lower part of the classical form ཝ looks like the letter *b* བ, which mirrors exactly the Tang period Tibetans transcription of foreign initial *v-*: ཝཱ (Coblin 2002: 179).

WT words with initial <w-> include a foreign transcription, a loan, a sound symbolic word, additionally also *gi-waŋ* 'concretion of entrails' of unknown provenance, perhaps a few others (see Das 1902: 1061 and the following pages). The only common words with initial <w-> are *wa* 'fox' (78) and *wa* 'gutter' (79), one could add *wa-ba* 'goiter' (Das 1902: 1061). For practical purposes, two ST roots for 'fox' need to be distinguished: **wa* (found in Tani, Bodic, Cuona Menba, and Tibetan) and **gwa* (found in Qiangic, Western Himalayish languages, also Chinese *hú* 狐 **gwâ*; (26a); see STEDT for references); they are probably variants. Attempts to reconstruct a single proto-form for both may be one motivation for turning WT *'a-chung* into *ɣ-* (cf. Hill 2006; 2009). Here we are only concerned with the root **wa*. The Tibetan cognate to TB **wa* 'fox' is the anticipated regular OT form *'o* (see § 2.7 above). Therefore, WT *wa* as well as the homophone *wa* 'gutter' must be either unique phonological derivations from TB that require ad-hoc rules and laws; or they are loans; or they are Tibetan innovations. They are most

likely the latter, because as shown above (§2.7) these forms agree exactly with an existing Tibetan derivational pattern, i.e. these words are etymologically *'o+ the suffix -*a*; and agree with the existing phonetic development *u/o+a* > *wa* (cf. *ru+a* > *rwa* 'horn'). A simple internal Tibetan explanation, without additional ad-hoc rules, is preferable.

A second wave of *w*-deletion, this time limited to some languages/dialects East and West, led to the different regional pronunciations of 'fox', resulting in forms like *a, ɦa* and *ɣa, ʁa*. The steps from Tibetic (WT) *wa* 'fox' to modern forms (data from Hill 2009: 121–122; *rwa* 'horn' in parentheses for comparison):

Table 4.4 From *w-* to *ɣ-*

Stage	Phonetic change	West Tibet	Central Tibet	East: Khams	East: Amdo
I	Underlying form, WT	*wa (rwa)*	*wa (rwa)*	*wa (rwa)*	*wa (rwa)*
II	secondary initial *ɣ*	(same)	(same)	*wa* [ɣwa – 1x]	*ɣwa* (Dpari, Rebrong)
					ʁwa (Darlag 達日)
III	deletion of /w/	*a, ɦa*	*wa (rwa)*	*wa* [ɣa – 1x]	*ɣa, ʁa (ra)* (Huang 1992: #263)

(Examples from Hill (2009): West: Mngaris a^{55}-mo^{53} et alia, Ladakh *ɦatse*; Central: Lhasa wa^{11}-mo^{53}; East: Khams *wa-*; Amdo: Rme-ba *ʁa*, elsewhere *ɣa*).

We have already seen in §4.1.4 (discussion of *rte'u*) that the dialectal velar or uvular fricatives are secondary and due to contact with, probably, Qiangic languages. Here, they have secondarily developed in front of [w]. This common phenomenon is observed also in Lolo-Burmese languages like Lahu (Matisoff 2003: 46 and the following pages), Chinese (see §3 above), and Romance languages. A simple rule of *w*-deletion (where applicable) explains all Tibetan dialect forms. Therefore, the initials *a/ɦ* and *ɣ/ʁ* have different origins. (Hill (2006; 2009) wishes to derive everything from a /ɣ/ that he adds to the phonemic inventory of Tibetan).

5. OC **gwr-* vs. TB **grw-*

In some words, the original ST/TB initial **w-* is not apparent in WT because of some pre-initial consonant or initial consonant cluster (see (43) 'bear' above). Where OC has a putative **wr-* or labiovelar initial, TB has the reverse cluster configuration **rw-* (*rwa* > *ro*):

Table 5. OC **(g)wr-* vs. TB **grw-*

	ST POC	OC	TB	WT
(94)	**wrak*	**wrâk* 韄 to bind	**grwak*	*'grogs-pa <g-rog-s* 'to bind, tie, associate with'
				g-rogs 'friend'
				cf. *'grags-pa* 'bind'
(95)	**gwra*	**gwrâ-s* 樺 kind of birch	**grwa*	*gro-ga* 'birch tree/bark'
(96)	**gwrat*	**gwrâts* 話 speak, word	**grwat*	*gros <grots* 'advice, speech'

Notes:

(94) *huò* 韄 MC *ɣwɛk* (the OC rime and phonetic series indicate OC **-wâk*). For WT *grags-pa* 'bind', see STEDT #6132. Tamangish ^{3}*ro* 'friend' may be a Tibetan loan (STEDT #8016).

(95) *huà* 樺 MC *ɣwà*. See discussion below.

(96) *huà* 話 MC *ɣwaì*. STEDT #5393.

The equation WT *grogs* 'friend' = Chinese *yǒu* 友 MC *jəu ´* has been a staple of ST comparisons at least since Simon (1930). It is justified by OC reconstructions for 友 that start with an OC velar: Karlgren **gi̯ŭg*, Gong **gwjəgx* (based on Li Fang-Kuei 1971), or Baxter & Sagart's uvular **[ɢ]ʷəʔ*. Looking at the word families from which these comparanda were selected (probably because of identical glosses), I get a different picture. WT *grogs* 'friend, associate, companion, ..., assistant, fellow laborer' belongs to *'grogs-pa* 'be associated; to tie, to bind', *grags-pa* 'to bind' (both stems from **grwak~*gwrak*). The noun 'friend' is apparently a Tibetan derivation from 'bind, associate with'. The most direct Chinese cognate is *huò* 韄 **wrâk* 'to bind' (OC could theoretically also be **gwrâk*, but the phonetic series points to initial **w-*). OC suggests a ST root **wrak*. The lack of *g-* in the root initial is also supported by Tibetan dialects. The *g-* in *grogs* is a pre-initial (as in *g-yag* 'yak'), not part of the root, nor a concomitant feature of /w/. WT writing does not distinguish the sequence *g-r-* from the cluster *gr-* (unlike *g-y- ≠ gy-*; see Beyer 1992: 73), but dialects have preserved the distinction: *grogs* (pronounced without pre-initial) is in Amdo *roχ* (Xiahe – Huang Bufan 1992: #201) or *roʔ* (Amdo Sherpa – Nagano 1980: (218)), in contrast to 'cold' WT *graŋ-ba*, in Lhasa *t̪haŋ* (Goldstein 1984), Standard Amdo *graŋ*, Huang chung hsien *tʂhaŋ*, Dpa-ri *draŋ-wa* (Nagano 1980: (462)) where the root starts with the cluster *gr-*. Also Jaeschke (1881: 536) lists *rogs* 'friend' as "vulgar pronunciation", so does Beyer (1992: 73) *rɔ* for Lhasa. The WT pre-initial *g-* probably does not go back to the ST level. The traditional Chinese comparandum *yǒu* 友 'friend' was OC **wəʔ* (amending Baxter (1992)'s **wjɨʔ*). The word *yǒu* belongs to a root **wə* 'right (side) > assist(ant)' (Gong 2001, 2002: 204; Schuessler 2007: 581–582).

In Chinese, the ST *w survives as part of labiovelars (Handel 2009: 241). This is supported by the lack of **Tw-* and **Twr-* clusters. Compare again:

ST **(r-)w* 'rain'	ST **(r-)wa*	OC **waʔ* 雨	WB *rwa* < *r-wa*	
ST **rw* 'village'	ST **rwə*	OC **rəʔ* 里	WB *rwa* < *rwa* (39)	
ST **wr* 'bind'	ST **wrak*	OC **wrâk* 韄	WT *grog* < **g-rwak* (100)	
ST **Kwr-* 'speak'	ST **gwrat*	OC **gwrâts* 話	WT *gros* < **grwats* (33), (87)	
'horn'	ST **kwraŋ ?*	OC **kwrâŋ* 觵觥	TB **g-ruŋ* or *gruŋ* (Matisoff 2003: 145) (35)	

OC distinguishes the sequences **rw-* and **wr-*, TB languages all seem to reflect **rw-* (WT *o*, WB *-wa*). The Sinitic distinction must have been inherited from ST. Was there also a ST/OC sequence Krw-, parallel to **rw-* as in ST **rwə* 'village'? If so, a candidate might possibly be (see also (106) below):

ST **Krw-* ST **krwa ?* OC **krâʔ* 假 'come, go' WT *'gro* < *grwa?* 'go, walk'

If true, the OC and TB phonological developments are quite regular: *-wa->o* in Tibetan, *-wa-* in WB; in Sinitic the /w/ disappears after non-velar consonants like /r/. WB has words like *krwak* 'rat' and *prwak* 'boiling liquid', but Matisoff (2003: 321) interprets the pre-*w* phonemes as prefixes (**k-r-wak*), Dempsey (2001: 222–224; 2003: 98) suggests that the original Northern Burmese rimes point to *-ok* rather than *-wak*.

6. ST / TB *-wa-* / *-wə-* with complete loss of *w* in Tibetan

In several words earlier medial **w* was apparently lost in WT before, or without, combining TB **-wa-* to WT *-o*:

Table 6. **-wa-* > WT *-a*

	ST POC	OC	TB	WT
(97)	**ŋwal*	**ŋwâi-s* 臥 'lie down, sleep'	**ŋwal*	*ŋal-ba* 'to rest' (not *ŋol*)
(98)	**kwal*	**kwâi-s* 過 'pass over'	**kwal*	*r-gal-ba* 'step/pass over'
(99)	**kwam*	**kâmʔ* 敢 'dare'	**kwam* ~ **hwam*: WB wam' 'dare' Lush. *huam*^{H} 'dare'	*'gam-pa* 'to try, test'
(100)	**wə*	**wəʔ, *wə-s* 右 'right side'	**wa*	*g-yas* 'right side'

Table 6. *(continued)*

	ST POC	OC	TB	WT
(101)	**wrak*	**wrâk* 韄 'to bind'	**grwak*	*'grags-pa* 'bind', but also: *'grogs-pa <g-rog-s* 'to bind, tie'
(102)	**waŋ*	(**kwâŋʔ* 廣 'wide) '	**waŋ:* PKC **waaŋ* 'width, breadth'	*yaŋ* 'wide, broad, large' *rgyaŋ-ma <r-'aŋ ?* 'distance' *rgyoŋ-ba, rgyaŋs* 'extend, stretch'
(103)	**waʔ*	**waʔ* 羽 'wing, feather'	**waʔ*: Chep. *waaʔ* 'bird'	*bya* 'bird' < *b-ya* < **b-waʔ*
			PKC **waa* [1134]	Golok (阿力克) *wɛæ* cf. PLB **bya*^{2} 'bee'

Perhaps there might be a rare development TB **w* > WT *b*, but these sets could be chance resemblances:

(104)	**waŋ*	**waŋ* 王 'king'	**waŋ:* ?WB *aŋ* 'strength, power'	*dbaŋ* 'might, power'
			NNaga *waŋ* 'chief'	*dbaŋ-po* 'ruler' (not *doŋ*)
(105)	**wu*	–	**wu*: PLB **wu*^{2} 'head'	*dbu* 'head'
			WB *ʔû* 'head'	
(106)	**ŋwə*	**ŋwə* 牛 'bovine, cow'	**ŋwa*: Jingpo *ŋa*^{33}*, wa*	*ba <ŋwa* (?) via N-*wa ?*
			WB *nwâ* 'bull, ox, cow'	'cow, bovine'
			Centr. Monba *wa* 'cow'	

Notes:

(97) *wò* 臥 MC *ŋwâ* `. STEDT #129.

(98) *guò* 過 MC *kwâ* `.

(99) *gǎn* 敢 MC *kâm* ´. STEDT #5652. The absence of medial **w* in OC is due to labial dissimilation.

(100) *yòu* 右 MC *jəu* ´*, jəu* `. STEDT #2786 shows a widely represented TB root **ya* 'right', therefore OC may be unrelated.

(101) *huò* 韄 MC *ɣwɛk*. A ST **wrak* would explain the WT dual development into **g+wrak* > *grag* and **g+rwak* > *grog*. On the other hand, WT *grag-pa* could be related to a different root that is represented by OC **râk* > MC *lâk* > Mand. *luò* 'cord, bridle, thread' (Schuessler 2007: 371).

(102) *guǎng* 廣 MC *kwâŋ* ´. As much in ST comparisons, there is an alternative possible identification of WT *yaŋ* with Chinese *yáng* 洋 'wide (of rivers)', eventually 'ocean'.

(103) *yǔ* 羽 MC *ju ˊ* 'bird' (Matisoff 2000: 142–143; STEDT #1603). The association with Chinese 'wing' is semantically not ideal. Perhaps WT *bya* from *b-wa* via *b-'a* > *b-ya*. Jacques (2013: 293–294) draws attention to the fact that *b-* prefixed a root starting with *y-* as in *byib* 'to cover' from *yib* 'to hide' would be written *by-* just like a root with initial *b-* and medial *-y-*. Golok (阿力克) *wɛæ* seems to treat the WT *b-* as a prefix, *ɛ* as the root initial, but this is probably secondary. Alternatively, it has been suggested that WT *bya* may be related to PLB **bya*^{2}, WB *pyâ* 'bee' (Benedict 1972: 46 ((177)); Matisoff 2003: 63; STEDT #2187).

(104) *wáng* 王 MC *jwaŋ*.

(105) Matisoff 2000: 162; STEDT #385.

(106) *niú* 牛 MC *ŋjəu*. STEDT #2538. The Tibetan development might have been **ŋw-* > *ŋb-*> *b-*, comparable to (103), or to **N-m-* > *'b-* as in WT *'ba-po* 'spirit medium, shaman' from **N-ma*, cognate to *wū* 巫 MC *mju*, OC **ma*; an earlier **ŋ-* would not be the same as prenasalizaion symbolized by *'a-chung*. Yet as admitted above, these items may be chance resemblances.

7. Conclusions

Initial and medial ST **w* can be followed only by mid and front vowels, although there seem to be exceptions (as shown by Tibetan). In WT, the **w* is deleted in all environments, except for TB **wa* > WT *o* (probably with exceptions). WT syllables with smooth vocalic onset, represented in writing by the symbol *'a-chung*, result from the loss of a syllable-initial consonant, which was frequently an earlier (TB) **w-*. The rare initial *w-* is a Tibetic innovation. In OC, ST **w* combines with velars to labiovelars *k*^{w}*-, k*^{hw}*-, g*^{w}*-, ŋ*^{w}*-*; it survives also in absolute initial position, also when it is preceded by a pre-initial **s-* or perhaps **ʔ-*. Otherwise medial **w* is deleted in OC. Chinese also distinguishes between configurations ST **(-)wí* > OC **-i*, vs. **-új* (**-ui*). Sinitic suggests traces of a ST distinction between the combinations **wr-* and **rw-* (both > **rw-* in TB).

Publications past and present include unlikely cognate sets that equate WT initial *g-* or *gr-* with Baxter's (1992) OC **w-*. A representative collection can be found in Gong (2002) and Hill (2011a: 452), for example. For some of these we have alternative explanations, see among the above sets and discussions (e.g. (94) WT *grogs* 'friend', § 5). Others are implausible in light of what has been proposed in this paper; these items include:

(107) WT *grod* 'stomach, belly' (STEDT #2112) = *wèi* 胃 QYS *jwəi* ˋ, OCM **wəts* 'stomach' (Simon (1930); Gong (2002: 85), OC **gwrjəts* where the **-r-*, I suspect, has been inserted because of WT) – Unrelated, unless one assumes problematic WT prefix clusters. Phonetically, *wèi* 胃 could agree with WT *g-yod* 'large intestine, colon' (from a hypothetical **g-wət*), but this would be a semantic stretch; yet the reverse semantics occur in the etymon PTB **(s-)pu*:

WT *pho-ba* 'stomach', Jingpo *pu*^{31} 'bowels', OC **poʔ* 腑 'the bowels' (Matisoff 2000: 165).

(108) WT *sgro* 'feather' = (102) *yǔ* 羽 QYS *jwo ˊ, *waʔ* 'feather' (Gong (2002: 85), OC **gwrjagx*; Matisoff (2003: 172) follows Gong). Phonetically too different; Gong's OC medial **-r-* is just a guess. Possibly = *hóu* 猴 *ɣəu*, **gô* 'root of feather' (Matisoff 1985b: 437). In fact, the OC rime **-o* has no Division II syllables, therefore 侯 *ɣəu* might theoretically derive from an OC **grô*. Yet the Chinese word seems to be the same etymon as *hóu* 鍭 'arrow with metal point', whose basic meaning may be 'point' (of feather, arrow and the like) (Schuessler 2007: 279–280). Alternatively, a possible cognate might be *hé* <*ɣɛk, *grâk* 翮 'root of feather', (GSR 931d) 'wing'; a ST **-w-* would be deleted after **r*. 羽 may be connected with PTB **(b)wa* 'bird' (see (102)).

(109) WT *gro-ma* 'sort of tuber' (STEDT #2592) = (60) *yù* 芋 QYS *jwo ˋ, *wah* 'taro' (Gong 2002: 204, OC **gwrjags*; Matisoff 2003: 173), WB *wa*' 'tuber' (Sagart 2006: 211). – The same phonetic distance as in (107), WT is unrelated.

(110) WT *'gro-ba* 'to go' (STEDT #5569) = (59) *yú* 于 QYS *jwo ˊ, *wa* 'to go to, to' (Gong 2002: 87, OC **gwrjag*; Sagart 2006: 211), TB **wa* 'to go', WB *swa*. – Unrelated, same phonetic distance as in (107), (108). Alternatively, WT could be connected with *jiǎ* 假 *ka ˊ, *kraʔ* 'to come, go', *gé* 格 *kɐk, *krak* 'to come, go, arrive', see § 5.

(111) WT *'grod* 'to go, travel', *bgrod* 'to walk, go, wander' = *yuè* 越 **wat* 'transgress' (Gong 2002: 85, OC **gwrjat*). – Unrelated, *'grod* is derived from *'gro*.

(112) WT *'khor* 'circle' (STEDT #5748) = *guī* 歸 **kwəi* 'return' (Gong 2002: 291); *sgor-mo* 'round, circular' = WB *wân* 'round, circular' (Sagart 2006: 211). WT *gor-mo* cannot be separated from a root *kor* (whether from earlier **kor* or **kwar* is irrelevant), see Gong (2002: 25). WT *-or* should agree with a QYS *-ua-* vocalism. There are several roots in Chinese and TB of the type **wVi* ~ **wVl* ~ **wVr* ~ **wVn* meaning 'turn, round' that are difficult to sort out because of phonological mergers, see Schuessler (2007: 286–287).

(113) WT *go* 'place, room, space' = WB *ə-wa'* 'opening of door, hole' (Sagart 2006: 211). – Semantically and phonetically too far apart. Cf. also Matisoff (2007).

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Abbreviations

Chep.	Chepang
GSR	*Grammata Serica Recensa* (Karlgren 1957)
HPTB	*Handbook of Proto-Tibeto-Burman* (Matisoff 2003)
KC	Kuki-Chin languages
LB	Lolo-Burmese
Lep.	Lepcha
Lush.	Lushai = Mizo
MC	Middle Chinese
MOC	*Minimal Old Chinese and Later Han Chinese* (Schuessler 2009)
OC	Old Chinese (Schuessler 2009 ~ Baxter 1992)
OCM	"Minimal Old Chinese" (OC reconstruction, see Schuessler 2009)
OT	Old Tibetan (inscriptions, manuscripts)
PKC	Proto-Kuki-Chin (VanBik)
PLB	Proto-Lolo-Burmese
POC	Pre-Old Chinese
QYS	*Qièyùn* System = Middle Chinese
Skt	Sanskrit
ST	Sino-Tibetan
STC	*Sino-Tibetan: A Conspectus* (Benedict 1972)
STEDT	*Sino-Tibetan Etymological Dictionary and Thesaurus* (see Matisoff 2015)
TB	Tibeto-Burman
WB	Written Burmese
WT	Written Tibetan

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