

DUHUMBI CODA APPROXIMANTS /Y, R, L, W/

The Duhumbi approximants /y, r, w/ can occur in onset, medial and coda position. This analysis has been favoured over the alternative analysis of considering coda sequences as diphthongs. The following sections describe the distribution of the approximants /y, r, l, w/ in Duhumbi, the approach to coda approximants/diphthong vowels in other linguistic descriptions, the historical origins of the Duhumbi approximant rhymes and the arguments in favour of and against either choice.

DISTRIBUTION OF APPROXIMANTS /Y, R, L, W/

The Duhumbi approximants /y, r, l, w/ behave phonotactically and morphophonologically very similar to most of the other consonants:

- They can all occur in onset position. The approximant /r/ is common in coda position in Duhumbi, whereas cognate lexemes from Khispi have the approximant /l/ as coda. It would, therefore, not be unconventional to allow the other approximants /y, w/ in cod position as well. Unlike other consonants, however, the approximants /y, r, w/ have been attested as the second element in C_iG-cluster, too. Other Western Kho-Bwa languages also permit the approximant /l/ in this position and the lateral approximant has been reconstructed for Proto-Western Kho-Bwa onset clusters.
- The allophonic distribution of the vowels /o/ and /e/ in the Duhumbi rhymes with approximants /y, r, w/ is the same as in other closed syllables, namely the allophone [ɔ] of vowel /o/ and [ɛ] of vowel /e/.
- Duhumbi morphophonology also does not contradict the analysis of the approximants as consonants. Similar to nouns ending on any consonant other than plosives /k, p, t/ or fricative /s/, i.e. nasals /n, m, ng/ and approximant /r/, the allomorphs of the genitive suffix /-aʔ/ and the agentive suffix /-oʔ/ repeat the final consonant of the noun root /-y/ and /-w/, i.e. e.g. *wam* 'house' > *wam-maʔ* house-GEN, *mar* 'butter' > *mar-raʔ* butter-GEN, *lej* 'leg' > *lej-jaʔ* leg.GEN and *lej-joʔ* 'eg-AGT, *shoj* 'bull' > *shoj-jaʔ* 'bull-GEN' and *shoj-joʔ* bull.AGT, *khow* 'water' > *khow-waʔ* water-GEN and *khow-woʔ* water-AGT. However, this repetition would also be consistent if the nucleus is seen as a diphthong with final /i/ or /u/, e.g. *bi* ANA > *bi-joʔ* ANA-AGT and *bi-jaʔ* ANA-GEN, *hu* 'naga' > *hu-waʔ* naga.GEN and *hu-woʔ* naga.AGT.

Ultimately, it was decided to allow the occurrence of glides /y, w/ in coda position, albeit in a slightly restricted phonotactic environment. This avoids having to posit distinctive Duhumbi diphthong phonemes that, unlike the simple vowel phonemes, are allowed only in open syllables.

The permitted Duhumbi rhymes with the approximants /y, r, w/, with the attested initial consonants and consonant clusters and examples, are illustrated in Table 1.

Table 1. Coda approximants in their attested distribution

coda	rhyme	C _i	example
-y	-oy [-ɔj]	Ø/k/khr/g/ng/pr/ph/th/b/br/d/c/ch/ny/h/s/sh/l/w	<i>oj</i> 'husband'
	-uy [-yj]	ph/pr/br/th/d/j/r/sh	<i>ɛuj</i> { <i>da</i> } 'to copy'

coda	rhyme	C _i	example
	-ey [-ej]	k/kr/kh/khr/g/gr/ng/t/th/d/p/pr/ph/b/br/m/c/ch/ j/ny/ts/tsh/r/l/y/w/s/z/sh/zh/hr	<i>lej</i> 'leg'
	-ay [-aj]	∅/h (k/kr/kh/khr/g/gr)	<i>haj</i> 'pus'
-r	-ar [-aɾ]	∅/k/kh/g/ng/t/th/d/n/p/ph/b/m/c/ch/j/ts/tsh/s/sh/ z/zh/h/y/w/	<i>ar</i> { <i>da</i> } 'to dry'
	-er [-ɛɾ]	p/b/m/t/th/d/ch/ny/tsh/s/z/sh/h	<i>der</i> 'amnion'
	-ir [-iɾ]	∅/k/kh/g/t/p/ph/b/d/c/ny/ts/s/z	<i>ir</i> { <i>da</i> } 'to mount, ride'
	-or [-ɔɾ]	∅/k/kh/g/t/th/d/n/ph/b/ch/j/ts/tsh/h/s/sh/zh/j	<i>or-ba</i> 'snore (n)'
	-ur [-uɾ]	k/kh/g/t/th/d/n/ph/m/c/ch/j/s/sh/z/zh/w	<i>wur</i> { <i>da</i> } 'to collapse'
-w	-aw [-aw]	∅/h	<i>aw</i> { <i>da</i> } 'to itch'
	-ow [-ɔw]	∅/k/kh/g/ng/t/th/d/n/ph/b/m/ch/j/ny/ts/sh/zh/l/y	<i>k^how</i> 'water'
	-iw [-iɰ]	ph/d/hr/s/z/zh/h/r	<i>diw</i> 'bullet'

The absence of rhymes /-iy/ and /-uw/ from the inventory is not remarkable considering the phonetic similarity between vowel /i/ and approximant /y/ and between vowel /u/ and approximant /w/. The absence of rhyme /-ew/ is also not strange considering the relative paucity of attestations of rhymes with vowel /e/ in general.

As Table 1 shows, there is a complimentary distribution of the Duhumbi rhymes /-ej/ and /-aj/, with the occurrence of /-aj/ limited to following an open onset (i.e. a preglottalized vowel), e.g. *aj* [ʔaj] 'quarrel (n)', and when preceded by the glottal fricative /h/, e.g. *haj* [haj] 'pus'. The reason for this distribution is purely phonotactic, based on the relative distance of the vowels [a] and [ɛ] from the glottal point of constriction of these consonants. This is illustrated by the fact that this rhyme, when preceded by the velar onsets or velar plus rhotic onset clusters /k, kr, kh, khr, g, gr/, can be either [aj] or [ej], e.g. *kej* [kej ~ kaj] 'beeswax'.

Similarly, there is a complimentary distribution of the Duhumbi rhymes /-ow/ and /-aw/, with rhyme /-aw/ occurring when preceded by the obligatory glottal onset, e.g. *aw* {*da*} [ʔaw] 'to itch', or by the glottal fricative /h/, e.g. *haw* {*da*} [haw] 'to talk'.

In the Duhumbi rhyme /uj/ the vowel /u/ is almost exclusively realised as a rounded close front vowel [y]. Since rounded front vowels are typically absent in native Duhumbi lexemes, this is an indication that this diphthong and the lexemes in which it occurs are Bodish loans.

CODA APPROXIMANTS VS. DIPHTHONGS IN OTHER LANGUAGES

The distribution and phonotactic restrictions applying to the Duhumbi coda approximants are very similar to those described for the Bodo-Garo languages and Tshangla. The analysis of similar phonological structures in these languages has resulted in varying approaches.

Although Joseph and Burling (2006) reconstruct diphthongs *ai, *ao and *ui for Proto-Bodo-Garo and describe most languages in terms of 'diphthongs', their transcription of these diphthongs are inconsistent. For Tiwa, for example, they list the 'diphthongs' /-iw, -ew, -aw, -ow, -uw, -ey, -ay, -oy, -uy/ (Joseph and Burling 2006: 7). For Bodo, they list the diphthongs /iu, eo, ou, ao, oi, ai, ui and ui/ but make a note that "Diphthongs seem never to occur in a syllable with a final consonant, unless, of course, the glides themselves, are regarded as consonants. Since the glides in these diphthongs are phonetically quite distinct from the preceding vowel, it is tempting to interpret them as y and w instead

of *i*, *o* and *u* but for present purposes the choice of transcription makes little difference.” (Joseph and Burling 2006:15).

For Trashigang Tshangla, Andvik (2009: 13-15) describes the monomorphemic vowel sequences /ai/ and /au/, the derived sequences /oi/ and /ui/ and the sequences /iu/ and /eu/ occurring in loanwords that are often realised disyllabically. The observation that Tshangla vowel sequences do not occur in closed syllables like the other vowels leads him to conclude that they do not occupy a single vowel slot. In favour of the analysis of the diphthongs as a VC sequence with as consonant element the approximant /w/ or the glide /y/ he mentions that both these consonants occur in syllable-initial position, and their occurrence in syllable-final position would enhance the economy of the phonological description. But as overriding arguments in favour of the analysis as vowel sequences he mentions that unlike for the other coda consonants there would be phonotactic restrictions on the occurrence of the consonants /w/ and /j/, that no other palatal consonants or liquids occurs in coda position, making the occurrence of the approximant /w/ and glide /j/ in this position unnatural, and finally, that the Tibetan script ‘and any presumed psychological reality this might imply’ allows for vowel sequences, but not for coda /w/ and /y/.

For Bjokapakha Tshangla, on the other hand, Grollmann (2014: 23) favours the analysis as coda palatal glides because of morphophonotactic considerations, although her dataset includes only two attested examples.

Parker (1169) describes the ambiguity of interpretation of the initial consonant cluster /kw/ in for example /kwa/, as it might be interpreted as a diphthongal nucleus [kūā] or as secondary articulation (labialisation) of the onset [k^wa].

THE ORIGIN OF DUHUMBI APPROXIMANT RHYMES

The Duhumbi approximant rhymes can be either inherited or borrowed. Duhumbi has a limited stock of native, inherited lexemes with approximant rhymes. These inherited lexemes have clear cognates in the other Western Kho-Bwa languages that allow for reconstruction at the Proto-Western Kho-Bwa level. The second source are borrowed lexemes. Even in these lexemes, there are regular correspondences between the source lexeme in the borrowing language, as most commonly reflected in the written Tibetan spelling, and the reflex in Duhumbi.

NATIVE LEXEMES

The Duhumbi rhymes with palatal glide /y/ are in most cases archaic retentions of Proto-Western Kho-Bwa palatal glides in coda position. The deictic system of Khispi and Duhumbi shows evidence of metathesis of these coda glides to palatalisation of the onset. Forms between square brackets are non-attested intermediate forms.

bya [bja] ‘down (distant, invisible)’ < *beyta* [bejta] ‘downwards’, *peybe* [pejbe] ‘down there’

khya [k^hja] ‘down (distant, visible)’ < *k^heyta* [k^hejta] ‘downwards’

lya [lja] ‘up (distant, invisible)’ < *leyta* [lejta] ‘upwards’; *leyle* [lejle] ‘up there’

thya [t^hja] ‘that side, there’ < *theyta* [t^hejta] ‘towards that side’

cho [t^hɔ] ‘this side, here’ < *[t^hɔ] > *choyta* [t^hɔjta] ‘towards this side’

Metathesis of the glide from the coda position to a palatalisation of the onset may also be inferred from comparative evidence from Tibetan, e.g. Duhumbi *boj* {*da*} [bɔj] ‘to scold’ > Tib. *spyo-ba* ‘to abuse, revile, scold’.

There is a small number of lexemes that cannot be positively attributed to borrowing at any stage in the linguistic history of the language and does not have attested cognates in the other Western Kho-Bwa languages. For some of these lexemes, there are however cognates in other Tibeto-Burman languages. Examples include *dej* {*da*} [dej] ‘grow in size, become bigger; be big’, cf. PTK **dei* BIG.

The origin of the Duhumbi labial rhymes can, similarly, be distinguished in a native and a borrowed source. The Duhumbi rhyme /-ow/ often has cognates in the other Western Kho-Bwa languages that suggest a native root. In many lexemes, the difference between the short coda vowel [ɔ] and the long coda vowel [ɔ:] found in the Sartang and Sherdukpen varieties is maintained in Duhumbi through the off-glide [-ɔw]. In that way, the off-glide /-ɔw/ could be considered as an alternative realisation of the vowel /o/, or, had the choice been to consider the off-glide rhyme /-ow/ as a diphthong [ou], as an allophonic realisation of the long vowel /o/ in coda position. Examples include *khow* [k^hɔw] ‘water’ vs. *-k^ho* [k^hɔ] LOC, cf. Khoina and Jerigaon Sartang [k^hɔ:], Khoitam Sartang [k^hɔ: ~ k^ho:], Rahung Sartang [k^ho: ~ k^hɔw], Sherdukpen [k^ho:]; and *banthow* [bant^hɔw] ‘eggplant’ vs. *-t^ho* [t^hɔ] ‘through, by means of’, cf. Bodo फानठाव *fantaw*, Khoina [ma-t^hɔ:], Jerigaon [mæ-t^hɔ:], Khoitam [mæ-t^hɔ: ~ mæ-t^hɔw], Rahung [p^h-t^hɔw ~ p^h-t^ho:], Rupa [man-t^hɔ:], Shergaon [ban-t^hɔ:]. The cognate lexemes from some of the Sartang varieties seem to indicate that the simplification of the labial rhyme to a monophthong vowel is a relatively recent one.

The Duhumbi lexemes with rhyme [-ow] often form near-minimal pairs with lexemes with open syllables with the simple vowel [ɔ]. Examples of this include *mow* [mɔw] ‘first harvest’ vs. *mo* [mɔ:] ‘divination’, cf. Tib. *mo*; *khow* [k^hɔw] ‘water’ vs. *kho* [k^hɔ:] ‘up (distant and visible)’, with variant *khwa* [k^hwa] and the suffix *-kho* [k^hɔ] LOC or the prefix *kho-* in for example *kholok* [k^hɔlɔk] ‘head’.

The Duhumbi lexeme *bowra* [bowra] ‘cut bamboo stalk’, see also the nickname for the Duhumbi people *bowra bowki* [bowra bowki], might have a very common Proto-Tibeto-Burman root **g-p^wa/r-p^wa* bamboo, with metathesis of the approximant.

From a historical-comparative point of view, the existence of the approximant rhymes in native Duhumbi lexemes is important, because they appear to be archaic retentions. The plausible phonemic form in the proto-language is reconstructed based on the available comparative information from all the varieties of Western Kho-Bwa. Subsequent comparison with the other presumed Kho-Bwa languages Bugun and Puroik has resulted in the most likely reconstruction of Proto-Kho-Bwa roots **baj* FIRE and **k^hwa* WATER (Proto-Western Kho-Bwa: **k^ho*), that are slightly different from the earlier presumed **k^ho* and **bwa* by van Driem (2001:). In other words, rather than the Kho-Bwa languages, these languages could be called the Khwa-Baj languages.

NATIVISED LOANS FROM BODISH AND TSHANGLA

Beside the archaic retentions from the proto-language in native lexemes, there are two other sources of approximant rhymes, namely nativised loans from Bodish and from Tshangla.

There are several nativised loan lexemes from the Bodish languages, mostly related to governance and religion, where the Duhumbi coda palatal approximant is derived from a coda

lateral approximant /-l/, fricative /-s/ or marginally plosive /-d/ in the original lexeme, as attested from the Written Tibetan spelling. Many of these nativised loans have also been borrowed in Tshangla, where the Duhumbi diphthongs correspond to cognate Tshangla diphthongs.

In lexemes borrowed from Bodish, Bodish rhymes *-al/-el/-as* and in only one attested form *-ad* correspond to Duhumbi *-ej*; Bodish rhyme *-ol/-os* and in one single attested lexeme *-od* corresponds to Duhumbi *-oj*; and Bodish rhyme *-ul* corresponds to Duhumbi *-uj ~ -yj*. Examples of these correspondences are provided below.

1. Tibetan *-al/-el/-as/-ad* > Duhumbi *-ej*:

khrey [k^hɹej] ‘tax’, cf. Tib. *khral*; *brey* {*da*} [brej] ‘separate, divorce’, cf. Tib. *hbral* ‘be separate, be separated’, TSB [brai {be}]; *tcey ley* {*da*} [tɕej lej] ‘swim’, lit. ‘swim-play’, cf. Tib. *rkyal*, TSB [tɕai p^hi {le}]; *chak tshey* {*da*} [tɕ^hak ts^hej] ‘prostrate’, cf. Tib. *phyag htshal*; *gunyey* [gʊɹej] ‘seasonal migration’, cf. Tib. *dgun-nyal* ‘hibernation’; *hreyimi ~ hreyimin* [hrejmi ~ hrejmin] ‘servant’, cf. Tib. *srel* ‘rear, raise’; *jey* {*da*} [dɕej] ‘meet, visit (H)’, cf. Tib. *mjal*; *jey* [dɕej] ‘bet (n)’, cf. Tib. *rgyal ~ rgyan*; *key* {*da*} [kej] ‘place on back or neck, load’, cf. Tib. *hkhel* ‘load’, *sgal* ‘load on back’, *khal* ‘load (n)’, *keyru* [kejru] ‘landslide, flood’, cf. Tib. *sgal-rud* ‘load-falling’ or ‘fallen mass’; *lulu jeymo* [lulu dɕejmɔ:] ‘nightingale’, cf. Tib. *rgyal-mo* ‘queen’; *rey* [rej] ‘turn’, cf. Tib. *gral* ‘line, row, series’; *rey* {*ta*} [rej] ‘scratch with nails’, cf. Tib. *ral* ‘tear, cleft, split’, TSB [rai {pe}] ‘tear’; *kheyloŋ* [k^hejlɔŋ] ‘consent’, cf. Tib. *khas-len ~ khas-blaŋs* ‘pledge, promise, agree, consent’; *sey* [sej] ‘son (H)’, cf. Tib. *sras*; *seymo* [sejɹmɔ:] ‘daughter’, cf. Tib. *sras-mo*; *leygu ~ leygo* [lejgu ~ lejgɔ:] ‘Duar’, cf. Tib. *las-sgo* ‘work-door’; *ne shey* {*da*} [ne: ɕej] ‘guide around pilgrimage place’, cf. Tib. *gnas-bshad* ‘pilgrimage-explain’.

2. Tibetan *-ol/-os/-od* > Duhumbi *-oj*:

coy {*da*} [tɕɔj] ‘to keep in custody’, cf. TSB [tɕɔi t^ha {le}] ‘to keep in custody’, Tib. *skyol* IMP of *skyel-ba* ‘to carry, accompany’; *choyduŋ* [tɕ^hɔjduŋ] ‘lamp wick’, cf. Tib. *chos-sdong* ‘religion-wick’; *goychen* [gɔjtɕ^hɛn] ‘brocade silk’, cf. Tib. *gos-chen* ‘satin, brocade, silk’; *goynam* [gɔjnam] ‘broadcloth’, cf. Tib. *gos-snam* ‘broadcloth’; *soynam* [sɔjnam] ‘merit; alms’, cf. Tib. *bsod-nams* ‘merit, virtue; alms’; *soy* {*da*} [sɔj] ‘to propitiate’, cf. Tib. *gsol-ba* ‘to ask, request’.

3. Tibetan *-ul/-us* > Duhumbi *-uj ~ -yj*:

duypa [dyjpa] ‘dust’, cf. Tib. *rdul-ma*, TSB [dyipa]; *pruy* {*ta*} [pryj] ‘transform’, cf. Tib. *sprul* ‘change, transform’; *t^huy* {*da*} [t^hyj] ‘subdue’, cf. Tib. *btul* ‘subdue’; *duyma* [dyjma] ‘shortcut’, cf. Tib. *hdus-pa* ‘condensation, conglomeration, aggregate’; *duysum* [dyjsum] ‘three times of past, present, future’, cf. Tib. *dus-gsum* ‘three times’; *shuy* {*da*} [ɕyj] ‘copy’, cf. Tib. *bśus*.

There are a few exceptions to this latter correspondence, including *ngoy* [ŋɔj] ‘silver, money’, cf. Tib. *dnul*, but TSD [ŋɔi].

Some additional observations in this respect are:

1. In a small number of Duhumbi lexemes the same correspondence to the Bodish cognates can be observed, although the semantic content of the lexemes and comparative evidence from the other Western Kho-Bwa languages suggests a common root rather than a loan. These examples include *jey* {*da*} [dɕej] ‘faint; spread out’, cf. Tib. *brgyal*; *khreybu* [k^hɹejbu] ‘kidney’, cf. Tib. *mkhal-ma*; *khey* [k^hej] ‘one score, twenty’, cf. Tib. *khal*; *zhey* {*da*} [zɛj] ‘laugh; de-weed’, cf. Tib. *bźad* ‘laugh, smile (H)’; *khroy* {*da*} [k^hɹɔj] ‘shell maize’, cf. Tib. *bgrud* ‘husk, shell’; *broy* {*da*} [brɔj] ‘conduct Bonpo curative ritual’, cf. Tib. *hbrud* ‘recite’. Perhaps, these

lexemes represent very early loans from Bodish into the Western Kho-Bwa languages before their subsequent split.

2. In a few compound lexemes with a second syllable with a palatal glide, a glide is inserted in some speakers at the end of the first syllable, e.g. *neyyu* [nejju ~ naju ~ neju] ‘turquoise earring’ cf. Tib. *sna-g.yu* ‘ear-turquoise’.
3. An apparent anomaly is the /uj/ in Duhumbi lexeme *bruy* {*da*} [bryj] write (***bri**), which is probably due to direct borrowing from Dirang Tshangla, cf. Tib. *ḥbri* ‘write’, TSB [d̥i {be}], TSD [brui {bo}] write.

In addition to the Bodish loans into Duhumbi, there are also Tshangla loans, where the following correspondences have been observed:

1. The Tshangla diphthong /ai/ has been preserved in Duhumbi as rhyme /-ey/, for example *kambeybu* [kambɛjbu] ‘cotton’, cf. TSD [kʰampʰei] and Dz. *ka-bal*; *meyron* [mɛjrɔŋ] ‘jackal’ cf. TSD [mairɔŋ]; *leysi* [lɛjsi] ‘banana’, cf. TSB [laisi], TSD [laisi]; *gugey* [gugej] ‘betelnut’, cf. TSB [guwai ~ gugai]; and *lanpey* [lanpej] ‘via, during’, cf. TSD [lanpai].
2. A Tshangla coda consonant /-n/ often corresponds to the Duhumbi rhyme /-ey/, e.g. *tukpey* ~ *tukmey* [tukpej ~ tukmɛj] ‘till, until’, cf. TSD [tukpan], also PBG ***duɪz-pV** ‘up to, until’, cf. Tiwa (*thúk*)-e ‘up to, until’; *teapkey* ~ *teapken* [teapkej ~ teapken] ‘complete’ cf. TSD [teapken]; *prusken* [pruskin ~ pruskɛj] ‘the same’, cf. TSB [prusken ~ pruskɪn]; *repkey* [repkej] ‘suddenly’, cf. TSB [repkin] ‘a little while’.

The Duhumbi rhyme /-ow/ occurs in some naturalised loans, corresponding most commonly with what has been described as a diphthong /au/ in the source languages. In these lexemes, the off-glide rhyme /-ow/ is the Duhumbi realisation of a diphthong in the source language. These include *gow* [gɔw] ‘amulet box’ cf. Tib. *gaḥu*, TSB [gau]; *tow* [tɔw] cooking vessel, cf. TSB [tau]; *rungow* [ruŋɔw] ‘stingy’ cf. TT [ruŋou], TSD [ruŋou]; *zhow* [zɔw] ‘bastard’, cf. Tib. *ḥa-bo* ‘cripple, lame’, BL [zou], TSD [zau], TT [zau]. The diphthong also occurs in a single interjection *atsow* [atsɔw] ‘ouch’. The lexeme for ‘gourd’, *low* [lɔw] is a Hindi loan, cf. लौकी [lauki] gourd.

The Duhumbi rhyme /iw/ is considered marginal because it has only been attested in the naturalised loans *diw* [diw] ‘bullet’, cf. Tib. *mde-ḥu* and *hriw* [hriw] ‘infant mortality’ and *siw* [siw] ‘smallpox’, both cf. Tib. *sre-ḥu* ‘infant death’; in certain Tshangla loans such as *ziw* [ziw] ‘key’, cf. TSD [ziw] and *ri* ~ *riw* [ri ~ riw] ‘mountain’, cf. TSD [riu ~ riwu]; and in onomatopoeia such as *hathiw* [hatʰiw] ‘sneeze (n.)’, *phiw* ~ *psiw* [pʰiw ~ psiw] ‘whistle’ and *ziwziw* [ziwziw] ‘teeming’.

REFERENCES

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