EAST BODISH REVISITED

TIMOTHEUS A. BODT
SOAS University of London

§1. INTRODUCTION

Ever since Shafer (1954), linguists have tacitly presumed that there is a linguistic subgroup spoken in a contiguous area of central and north-eastern Bhutan, north-western Arunachal Pradesh and south-central Tibet called 'East Bodish'. There have been several subsequent comparative studies into this sub-group, starting with Michailovsky and Mazaudon (1994), to most recently Hyslop (2022). Given the fact that increasing amounts of reliable linguistic data have become available[1], we would expect the reconstruction of 'Proto-East Bodish' to have reached a certain level of sophistication. Comparative studies of this proposed subgroup are hampered, however, by complex linguistic contact situations at various time periods, both for clusters within the proposed sub-group, and for individual linguistic varieties. The main contact languages that complicate this situation are the different varieties of Central Tibetan (such as liturgical and literary Tibetan, 'standard' Lhasa Tibetan, Lho-kha Tibetan and Dwags-po Tibetan) and related Dzongkha. All these varieties are related to the East Bodish languages at some higher level. They are also divergent from Written Tibetan to various degrees, and most of these varieties have not been adequately described themselves. Moreover, the diverse contact languages have influenced the languages of the East Bodish subgroup at various moments in their individual linguistic histories. This situation makes distinguishing between inherited and borrowed East Bodish forms speculative at best, and impossible at worst. However, this should not withhold us from trying to progress the reconstruction of the linguistic

[1] Here, I do not agree with Hyslop's assertation that there is a 'paucity of data' on these languages (Hyslop 2022: 57). Although Hyslop makes reference to the available western linguists' descriptions of these languages, there is no mention of the Chinese, Indian and Bhutanese sources that have been consulted for the analysis in the present paper. Conversely, other data such as the Dzala data collected by Carol Genetti in 2009 (mentioned in Hyslop 2022: 57) have not yet appeared in published form.

history of this proposed subgroup, and this paper is a humble contribution to that endeavour.

Hence, the objective of this paper is to present new data and analyses contributing to the reconstruction of 'East-Bodish', and at the same time to examine its relation to Tibetan. The paper presents possible sound correspondences and shared retentions and shared innovations at the phonological and lexical level. This paper does not claim that there is no East Bodish subgroup in Trans-Himalayan. Subgroups can also be based on criteria other than purely linguistic ones, such as a shared cultural history, which to some extent seems to be the case for East Bodish. Since van Driem (2007b), the status quo has been that two of the 'languages' of this subgroup, 'Dakpa' and 'Dzala', constitute a coherent cluster and first-level branch of the proposed East Bodish subgroup of Bodish, with the other East Bodish languages of the 'Bumthang group' forming a second coherent cluster of this East Bodish subgroup.

Here, I offer two alternative proposals. These proposals presume that the 'Bodic' taxon of the Trans-Himalayan languages encompasses a range of related languages straddling the great Himalayan range from Baltistan in the West till Amdo and Kham in the East. In other words, including the languages of northern and north-western India known as 'West Himalayish', the 'Tamangic' or 'Tamang-Gurung-Thakali-Manang' languages of Nepal, the 'Southern Bodish' languages of Sikkim, southern Tibet, and Bhutan, the 'East Bodish' languages of Bhutan, Arunachal Pradesh, and southern Tibet, and all the varieties of 'Central' Tibetan spoken on the Tibetan plateau. The parent language of all these languages I call Proto-Bodic.

In the present status quo, Proto-Bodic split in Proto-Central Bodic (and subsequently all the Bodish languages that derive from it), and its sister language Proto-East Bodic (resulting in all the 'East Bodish' languages, including Dakpa-Dzala and the Other East Bodish languages), i.e. Figure 6.

In the first alternative proposal, Proto-Dakpa-Dzala may rather be considered a separate offshoot directly descending from Proto-Bodic, distinct from both Proto-East Bodic that resulted in the other East Bodic languages, and also distinct from Proto-Central Bodic (resulting in the Tibetan varieties), i.e. Figure 7. As a second alternative hypothesis, Proto-Dakpa-Dzala may descend from Proto-Bodic *via* Proto-Central Bodic, with the Bodish varieties as a sister branch, while the other East Bodish languages form a separate branch descending directly from Proto-Bodic via Proto-East Bodic, as illustrated in Figure 8. Both these

latter proposals would consider the present East Bodish subgroup a paraphyletic, rather than a monophyletic subgroup.

The evidence presented in the present article and evaluated in §11 strongly points in the direction of Figure 7.

§1.1. Previous research and publications

There have been several earlier comparative studies focusing on the linguistic group that since Shafer's (1954) article has become known as the 'East Bodish' group.[2] Shafer's own studies described the divergence of 'Dwags' from Tibetan (Shafer 1954, 1955). The data on which Shafer based his analysis came largely from Hodgson (1853), with additional forms from Campbell (1874: 142–147). Shafer argued that Dwags derives from Proto-East Bodish, and that Proto-East Bodish is at par with Proto-West Bodish and Old Bodish, with the modern Central Tibetan varieties deriving from the latter (Figure 1). Shafer considered the East Bodish languages the most conservative or archaic branch of Bodish, more conservative in some respects than Old Tibetan or 'Old Bodish', of which he considered Classical Tibetan to be the literary exponent.[3] According to Shafer, 'Dwags' contained "certain archaic phonetic features not preserved in Old Bodish" and concluded that "Dwags must be descended from a proto-East Bodish dialect" and that:

> […] these features that are more archaic than Old Bodish and that are shared by Rgyarong are the reason for considering Dwags descended from proto-East Bodish. But Rgyarong is considered a language and not a Bodish dialect, because of its divergent morphology [...] and vocabulary. (Shafer 1954: 349–350).

---

[2] Of course, prior to that, there had been perfunctory notes relating to the languages of the group, such as in White (1909): "Of the people of the east who live beyond the Pele-la *the bulk of the population is not of Tibetan origin, nor do they speak Tibetan*. I give a few words they use, spelt phonetically, which seem to me different to those of Tibetan derivation. Gami = fire, Nut = barley, Mai = house, Tyu = milk, Yak = hand, Tsoroshai = Come here. Their origin is not clear, but they are allied to the people of the Assam Valley and to those living in the hills to the east beyond Bhutan. They are of a different type to those in the west, smaller in stature, the complexion is darker and features finer cut, and their dress is different. They also profess Buddhism, but are not so observant of its customs, nor are there so many monasteries and Lamas to be met with as in the other part of Bhutan. Sir Ugyen Wangchuk estimates that there are about 200,000 of them." (emphasis added by the author of this paper).

[3] Note that, more recently, Bialek (2022: 9) writes: "Classical Tibetan is the most renowned *Middle Tibetan* language. It is a standardised form of Old Literary Tibetan that assimilated some of the later developments of Middle Tibetan languages …" (emphasis added by the author of this paper).

Despite these observations, Shafer placed Dwags, and East Bodish, under Bodish proper, while assigning rGyalrong to a separate branch.

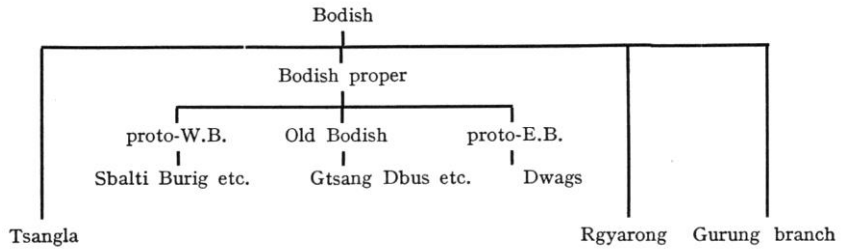

Figure 1. Shafer's classification of the Bodish languages (Shafer 1954: 349; 1966–1974: 113).

A quarter of a century later, Aris (1979a, 1979b, 1980: XV–XVI) realised that Shafer's identification of Hodgson's language 'Tákpa' with the southern Tibetan region of Dwags-po (Shafer 1954: 350 fn. 1), an error earlier also committed by Thomas (1948: 15)[4], resulted in Shafer's use of the language name Dwags (see also van Driem 2001: 916), and perhaps also to the misrepresentation of Dwags as a Tibetan 'dialect'. However, none of the Dakpa variants is known to have been spoken in Dwags-po, and the connection between the language/people and this region is based on superficial similarity of the names, rather than any known historical relationship.[5] Instead, Aris realised the close connection between Dag-pa (i.e. Hodgson's Tákpa and Shafer's Dwags and Aris' own eastern Bhutanese Dag-pa and rTa-wang Mon-pa) and the languages of the Bumthang region in Central Bhutan.

Shafer's initial work was followed by a 40 year hiatus in which no new work on these languages appeared, likely as a result of the geopolitical developments in the area, including the annexation of Tibet

[4] "South of the Brahmaputra perhaps the most easterly district which is definitely Tibetan is Dwags-po, where the language, the 'Tákpa' of Hodgson, is a clearly Tibetan dialect" (Thomas 1948: 15). With 'Brahmaputra' Thomas obviously meant the Yarlung Tsangpo in Tibet, and not the Brahmaputra in Assam.

[5] Curiously, there is a speech community called Dwags-po in Tibetan and 白马 Báimǎ in Chinese living in Sichuan and Gansu provinces of China (Lawa 2021: 304–307). While the phylogenetic status of this language has long been the subject of discussion, some consensus now seems to be reached that it is, in fact, a Tibetic/Bodic language (Chirkova 2017). Again, any connection between the name of this community and the Dwags-po region of Central Tibet may be purely coincidental.

by China, the lack of accessibility to the North-East Frontier Agency (now Arunachal Pradesh) of India, and the persistent difficulty to conduct research in Bhutan. The only exception was a publication on Cuònà Ménbā (= Dakpa) in a series aimed at describing the languages of China's 'national minorities' (Lù 1986). In 1989, Nishida published a synopsis of Lù's (1986) Dakpa data and provides some phonological correspondences with Written Tibetan (Nishida 1989).

In a hitherto unreferenced publication, Yìxī (1992) compares the phonology, lexicon, morphology, and syntax of the same Cuònà Ménbā language to written Tibetan, 巴松 Bāsōng (Basum), 拉萨 Lāsà (Lhasa / Ü) and 日喀则 Rìkāzé (Shigatse / Tsang) Tibetan. Yìxī (1992: 122) concludes that although Cuònà Ménbā has 50 words (or 4.5%) not cognate with other Tibetan varieties, the very similar phonology and grammar are sufficient grounds to consider Cuònà Ménbā as 'Tibetan'.[6] Yìxī (1992:122) then considers that the Central Tibetan language can be divided into six 'dialects': 前藏 Old Tibetan, 后藏 Modern Tibetan, 阿里 Ālǐ (Ngari), 夏尔巴 Xiàěrbā (Sherpa), 巴松 Bāsōng and 措纳门巴 Cuònà Ménbā.[7]

In 1994, Michailovsky and Mazaudon published a study describing the divergence of the 'Bumthang' group from Tibetan 'as exemplified by Kurtoep' (Michailovsky and Mazaudon 1994: 546). Michailovsky and Mazaudon remark that:

> It will be clear from the data cited below that Bumthang and Dakpa are not the same language. Nevertheless, they have much in common, and we can *tentatively* place them in the same subgroup. (Mazaudon and Michailovsky 1994: 246, emphasis added by the author of this paper).

Furthermore, the same authors state that they "... offer comparisons with Dakpa, Written Tibetan (WT) ...", indicating from the onset that they do not yet provide evidence for the internal coherence of the East Bodish subgroup itself.

---

[6] 笔者认为措纳县门巴族所使用的语言是藏语 "The author believes that the language spoken by the Monba people in Cuònà county is Tibetan."

[7] As critical footnote: Yìxī's (1992) study was based on a review of Lù (1986) with a 56-year old Cuònà Ménbā speaker who lived in 琼结 Qióngjié (Tib ḥphyoṅs-rgyas), the main city of 山南 Shānnán (Tib lho-kha) province / prefecture, who had not been back to his hometown for 20 years and had 'forgotten many words'. In addition, a lot of the vocabulary presented in the publication concerns likely later loans from Central Tibetan.

In subsequent years, there were a few additional publications on East Bodish languages that, for various reasons, largely escaped the attention of western linguists: a description of Khengkha (Yangzom and Arkesteijn 1996), an overview of four (Cuònà) Ménbā (= Dakpa) varieties by Lù (2002), and a description of Tawang Monpa (= Dakpa) (Wangchu 2002).

In his 2001 book on the languages of the Himalayas, van Driem describes East Bodish, including Dakpa and Dzala, as a sub-group of the language family, writing that "[Shafer] treated the [Dakpa] language as the representative of a distinct group which he called 'East Bodish' (...), a term which I have adopted for the whole subgroup" (van Driem 2001: 916) and that "Today we know that [in addition to Dakpa] East Bodish also comprises the regional languages of central and north-eastern Bhutan, such as Dzala and Bumthang" (2001: 828). Furthermore, regarding their classification, van Driem (2001: 849) observes that "Certainly East Bodish languages like Bumthang and Dzala are not Tibetan dialects in any sense, for they descend not from Old Tibetan, but from a now extinct language which was a close relative of Old Tibetan". Following Shafer's 1954 observation about the conservative or archaic nature of the East Bodish languages, van Driem adds that:

> Certainly, languages of the Bumthang group appear to be archaic in that they preserve initial clusters which do not even occur in Classical Tibetan, but whether and how East Bodish is archaic is something which has yet to be determined by research into the historical grammar and phonology of these languages. (van Driem 2001: 908).

Van Driem (2001: 908–933) also provides the first description of the various languages that he considers as belonging to East Bodish languages, and states that:

> Today in light of present knowledge of the Bumthang group of languages and other East Bodish tongues, Dakpa appears to be *the most aberrant member* of East Bodish or, at least, to *constitute a group on its own* within East Bodish. (van Driem 2001: 916, emphasis added by the author of this paper).

A synopsis of this information can also be found in van Driem (2007a).

In 2004, Bielmeier (2004: 398–400) shows how Shafer's earlier classification and his terminology are not tenable. Shafer's use of East Bodish as a branch at the same level as West Bodish and Old/Central Bodish does not allow him to properly place and name South(ern) Bodish and the 'eastern dialects' (Kham and Amdo) of Tibetan.

In 2007, van Driem claims that "... Dzala and Dakpa appear to form a coherent subgroup within East Bodish" (2007b: 1) and that, furthermore:

> Despite the Central Bodish influence, *Dakpa too is obviously an East Bodish language*. In fact, a comparison of the personal pronouns, the numeral system and much of the core vocabulary shows that *Dakpa is the closest linguistic relative of Dzala within East Bodish*, not just one of its closest geographical neighbours. (van Driem 2007b: 6, emphasis added by the author of this paper).

But whereas van Driem's evidence, limited to a 'comparative wordlist' (2007b: 6–10) with no phonological comparison or mention of possible lexical innovations, does indeed hint towards the closeness of the languages 'Dakpa' and 'Dzala', it does not actually show that Dakpa and Dzala belong to 'East Bodish' and that this 'East Bodish' is distinct from 'Bodish'.

In 2008, DeLancey made a comparison of morphological and syntactic features of Kurtöp versus Tibetan. DeLancey (2008: 36–37) concluded that while Kurtöp cannot be considered a variety of Tibetan, the relationship between Kurtöp and Tibetan is extremely close, and that the time depth of divergence must be quite shallow.

In 2010, building on the earlier work by van Driem (2001: 849) and Bielmeier (2004: 398–400), Hill (2010b) published an alternative to Shafer's earlier Bodish *Stammbaum*, in addition to Shafer's Central and South Bodish subsuming Shafer's West Bodish Balti and Ladakhi as direct descendants of Old Tibetan, excluding rGyalrong which by then had been shown to be a sub-branch of Qiangic (Jacques 2004: 3)[8], and excluding Shafer's Gurung and Tsangla branches due to a lack of evidence. Bodish or 'Bodish proper' now included all the linguistic varieties of, and those closely related to, Tibetan, including Dzongkha and Drenjongke, as the direct descendants of Old Tibetan. Still, Hill proposed the known 'East Bodish' languages to derive from a common ancestor, i.e. 'Proto-East Bodish'.

[8] More recently, based on the phylogenetic studies by Sagart et al. (2019) and Zhang et al. (2019), Jacques and Pellard (2020: 14–17) provided additional evidence to consider rGyalrongic, Qiangic, Lolo-Burmese, Ersuic and Naic as a single "Burmo-rGyalrongic" clade of the Trans-Himalayan language family. The latter authors also provide evidence for a larger "Tibeto-rGyalrongic" clade, which merges "Burmo-rGyalrongic" with the Bodish languages (Jacques and Pellard 2020: 17–18).

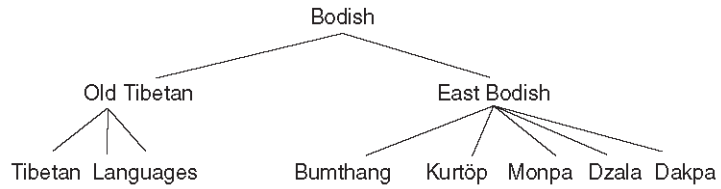

Figure 2. Bodish *Stammbaum* (Hill 2010b: 111 in Hill 2019: 8)

Like van Driem's classification of East Bodish, Hyslop and Hyslop and Tshering's writings (Hyslop 2008, 2013a, 2013b, 2014, 2015; Hyslop and Tshering 2009) also presume that there is an East Bodish subgroup of which Dakpa and Dzala are coherent members. Hyslop compares forms from East Bodish languages and provides a few sound changes within East Bodish (2013, 2015: 81). However, none of these sound changes holds for *all* the presumed East Bodish languages, with Hyslop (2015: 281) observing that: "In many cases we have found exceptions to these sound changes [...]". Moreover, the material by Hyslop neither contains a detailed overview of regular sound correspondences, nor compares these sound changes to other Bodish languages, including Tibetan. Despite this, in subsequent presentations and publications (Hyslop and d'Alpoim-Guedes 2021, Hyslop 2022), Hyslop reconstructs several Proto-East Bodish forms and comments on the possible livelihood, environment and culture of its speakers.

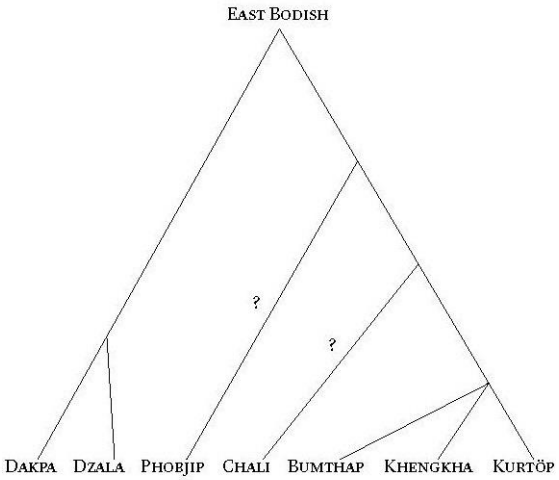

Figure 3. Proposed phylogeny of the East Bodish languages (Hyslop 2013a, in Hyslop 2017)

In the final years of the first decade and throughout the second decade of the 21st century, linguistic research in Bhutan receives a significant boost, both through the activities of the Dzongkha Development Commission (DDC) and through work by van Driem, Hyslop, and several others. This results in lexical lists, dictionaries, and grammatical descriptions of Mangdep (Dorji 2011; Nishida 2009, 2010, 2019; Bosch 2016; DDC 2018b), Kurtöp (Hyslop et al. 2016 and Hyslop 2017), Bumthang (van Driem 2015 and DDC 2018) and Dzala (DDC 2017).

The work by Bosch (2016) on Upper Mangdep includes some solid observations of a historical-comparative nature. Bosch (2016: 27) presents an updated version of the phylogeny of East Bodish in Hyslop (2013a), mainly by adding some new proposals for names of the internodes.

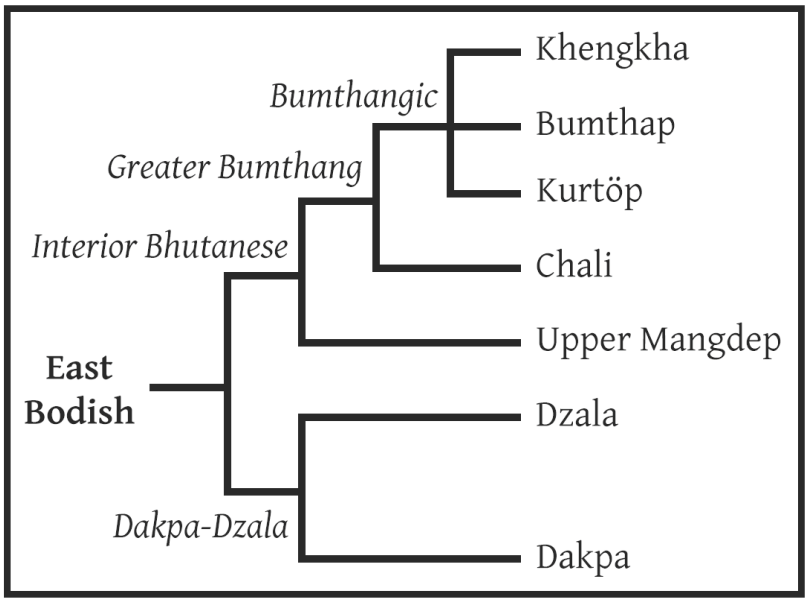

Figure 4. East Bodish phylogeny in Bosch (2016: 27).

Bosch (2016: 28) also remarks that:

> Sound changes affecting these [initial consonant] clusters do not consistently unify languages into groups, and, presumably due to language contact (where there are no other conditioning factors), there are often multiple reflexes of the same cluster within a language.

He presents some examples of this in his Figure 4 (Bosch 2018: 29). But although Bosch (2016: 35–36) states that "[...] there is good linguistic evidence to distinguish Tibetic languages and East Bodish languages", he does not provide any conclusive evidence that *all* the presumed East Bodish languages have made the same phonological innovations.[9] Indeed, Bosch (2016: 38–39) states that:

> [...] despite even the close affinity between East Bodish and Tibetic, no literature to my knowledge conclusively demonstrates a genetic common ancestor by shared innovation, beyond what appears to be intuition.

[9] Bosch observes that the East Bodish languages have not participated in the Tibetic phonological innovation *ml- > *md-* but retained the underlying Proto-Bodish onset cluster and that the East Bodish languages made several lexical innovations (including 'seven' and the 2nd and 3rd person pronouns).

In 2019, Hill, after listing several unique phonological innovations shared by the varieties of 'Bodish proper' (i.e. Central or U-Tsang, Kham and Amdo Tibetan, i.e. those languages derived directly from Old Tibetan), remarked that "The Tibetan sound changes so far presented do not affect the East Bodish languages; they are innovations unique to Old Tibetan" (Hill 2019: 21). Subsequently, Hill proposed a new *Stammbaum* of the Bodish languages (Figure 5), stating that his 2010 *Stammbaum*:

> [...] implies that all of the East Bodish languages share common innovations that Old Tibetan does not share. No one has proposed any such common innovation. Until such a change is proposed, the most reasonable Stammbaum is simply to derive the various 'East Bodish' languages and Old Tibetan itself from the Bodish proto-language. (Hill 2019: 9)

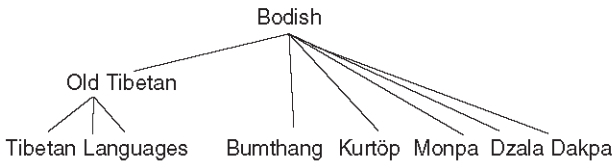

Figure 5. Bodish *Stammbaum* (Hill 2019: 8).

Hill (2019: 8–9) continues to write that:

> Tibetan shares innovations with the East Bodish languages; these shared innovations allow us to divide the history of Tibetan into two phases: a more recent phase, during which its fate was independent of the East Bodish languages, and an early phase when together with the East Bodish languages it was a single tongue. It is not possible in every case to determine whether or not an East Bodish language underwent the same change as Tibetan. All changes which happened after the earliest change not shared by the East Bodish languages must be independent of the changes in the East Bodish languages. I use evidence from Kurtöp and Mstho-sna [*sic* Mtsho-sna] Monpa (Wenlang dialect) as representatives of the East Bodish family. The internal phylogeny of the East Bodish family and this family's historical phonology is not a concern here (cf. Hyslop 2008, 2013).

Despite the emergence of more and more data on individual East Bodish varieties and Hill's explicit doubts regarding the validity of East Bodish as a subgroup of Bodish, a thorough study of the language group in the

spirit of the comparative method has not been published. Whereas Hyslop (2015) and Hyslop and d'Alpoim-Guedes (2020) make inferences about the livelihood strategies of the speakers of the Proto-East Bodish language, Donohue (2020) compares lexical forms in several dialects of Bumthang, also including other East Bodish and regional languages, and Ikeda (2021a, 2021b) presents an initial grammatical overview of Khengkha as well as a vocabulary of the language with comparative Tibetan, Bumthang and Tshangla evidence.

Most recently, Hyslop (2022) uses 'the comparative method' to reconstruct 'aspects of the [Kurtöp] language to Proto East Bodish – the parent language to Kurtöp and other East Bodish languages'. Hyslop then compares the reconstructions with Written Tibetan and examines influence from Classical Tibetan on Kurtöp.[10] Although Hyslop provides numerous reconstructed lexemes from various lexicosemantic fields as well as a few bound morphemes, she does not provide a consistent, systematic overview of the phonological correspondences on which these reconstructions are based, save the few that had already been identified by Hyslop and other authors and that are presented in slightly modified form in Table 3.2 (Hyslop 2022: 60). Moreover, Hyslop's working hypothesis is obviously that the East Bodish subgroup exists, as she states (curiously repeated on two consecutive pages):

> There is still little work on the subfamily as a whole, but Hyslop (2013) does provide evidence that links the languages together in one sub-group (Hyslop 2022: 56 and again 2022: 57).

Because this most recent work by Hyslop only became available after the present article had been reviewed and accepted, an in-depth analysis and comparison of the material it contains could not be included here.

The present article, through evaluating the three hypotheses of §1.3 against the available phonological and lexical evidence, argues that the subgroup of Trans-Himalayan hitherto called 'East Bodish' is actually a polyphyletic subgroup. This subgroup consists of 'Dakpa-Dzala' and

[10] In the Tibetan summary of the chapter (Roche and Hyslop 2022: 205), the hitherto unattested Tibetan spelling *kur-thob* for the name of the language is found. Most commonly, the name of the language is written as *kur-stod*, occasionally *skur-stod*, in the Tibetan script. This name has as transparent etymology 'upper Ku(-ri)', with Kuri the Tshangla name of the major river dissecting the erstwhile Kurtö region, now *lhun-rtse* district, of eastern Bhutan. Also innovative in this summary is the Tibetan form *śar bhoTaḥi skad* for 'East Bodish language'.

what I have given the unesthetic name 'Other East Bodish', and which may, in fact, be a polyphyletic subgroup in its own right.[11]

This article, furthermore, proposes that there are a few sound correspondences (§10) that set both the 'Bodish' languages *sensu stricto* (sometimes also called the Tibetan or Tibetic languages) and these 'East Bodish' (Dakpa-Dzala and Other East Bodish) languages apart from the other Trans-Himalayan languages. Following the standard practice in Indo-European historical linguistics, I propose the label 'Bodic' for this phylum. If it can be shown that the same set of phonological innovations also applies to what is hitherto known as the 'West Himalayish' and 'Tamangic' languages – and an initial superficial observation indicates it does – I propose to subsume these clusters under Bodic and rename them as the 'West Bodic' and 'South Bodic' languages, respectively.

Because there is hitherto no evidence that 'Bodish' and 'East Bodish' share innovations with each other that are not shared by 'West Bodic' and 'South Bodic',[12] and in line with the evidence of the present paper, I propose to consider 'Bodish' and 'East Bodish' as three independent branches of Bodic that I call 'Central Bodic', 'Dakpa-Dzala' and 'East Bodic'. Central Bodic[13] encompasses all the varieties that descend from Old Tibetan and the internal phylogeny of which remains largely unresolved (but cf. Hoshi 1992 and Tournadre 2014 for some surmises). This may include subdivisions that could be termed Western Bodish, including varieties such as Tö Ngari (Tib *stod mṅaḥ-ris*); Central Bodish languages such as the varieties of U-Tsang (Tib *dbu-gtsaṅ*) Tibetan; Southern Bodish languages such as Dzongkha (Tib *rdzoṅ-kha*) and

---

[11] Neither the previous literature nor the present article provides any evidence that all the known 'East Bodish' tongues of Central Bhutan, i.e. Khengkha, Bumthang, Mangde, Chali and Kurtöp, form a coherent subgroup. Regarding the label, I am open to suggestions here. While standard practice (cf. also 'Tamangic'), I tend to disfavour a name promoting a single variety, like 'Bumthangic', because this would reassert the historically dominant role of the Bumthang valley, while the Kheng region has for long been marginalised despite having a larger population.

[12] On the contrary, just like the Dakpa-Dzala and East Bodic languages, South Bodic and West Bodic do not share what are considered typical 'Bodish' or 'Tibetic' innovations, such as the lexical innovation *bdun* for 'seven' (Nishi 1986: 849, Beyer 1992: 7, Michailovsky and Mazaudon 1994: 2), e.g., Tamang *ŋis* (Lee 2011: 12), Bunan *ni.dzi* (Widmer 2014: 35), Dakpa Mámă *nis*^{55}, Khengkha *ɲit*.

[13] The use of 'Bodish' or 'Bodic' is favoured over the use of 'Tibetan' or 'Tibetic' (e.g., Tournadre 2014), which, as van Driem (2019, 2022) explains, does not appeal to the Bhutanese Dzongkha speakers. In Nepal, too, speakers of Bodic languages (such as Walungge, Yolmo, Sherpa etc.) distance themselves from the linguists' description of their languages as 'Tibetan' or 'Tibetic', for a range of socio-political and socio-cultural reasons.

Drenjongke (Tib *ḥbras-ljoṅ-skad*)[14]; and Eastern Bodish varieties such as the dialects of Kham (Tib *khams*) and Amdo (Tib *a-mdo*). East Bodic would encompass the several possibly related languages of Central Bhutan (Bumthang, Kurtöp etc.), whereas the varieties of Dakpa and Dzala form a third and distinct branch. This phylogeny is represented in Figure 7. This is the most conservative approach, in which East Bodic and Dakpa-Dzala, like West Bodic and South Bodic, are considered to descend from sister languages of Old Tibetan. Future research may unveil a closer genetic relation between Central Bodic, East Bodic and Dakpa-Dzala – or rather, a more distant connection between West Bodic and South Bodic on the one hand, and the combination of Central Bodic, East Bodic and Dakpa-Dzala on the other – than is suggested in the present paper. This would necessitate a subdivision of Bodic in West Bodic, South Bodic and Central Bodic, with Central Bodic encompassing Central Bodish (the Central Bodic of the present paper), Dakpa-Dzala, and East Bodish (the East Bodic or Other East Bodish of the present paper).

§1.2. The present evidence

Till present, only scant linguistic evidence indicating the coherence of 'East Bodish' as a valid subgroup of the Trans-Himalayan language family has been presented in the literature. The studies by Shafer (1954), Nishida (1986) and Yìxī (1992) compare varieties of Dakpa to Tibetan, Michailovsky and Mazaudon (1994) primarily compare the Bumthang varieties to each other and to Tibetan, and successive publications by Hyslop (2013a, 2013b, 2014, 2015, 2022) focus mainly on the internal structure of the East Bodish group without presenting coherent linguistic evidence for the proposals. The most detailed discussion can be found in Hill (2019), who adduced three primary shared sound changes between the East Bodish group and Tibetan versus Chinese and Burmese. I will recapitulate these sound changes, a shared lexical innovation, and several sound changes of Tibetan either not shared by the East Bodish languages or for which Hill did not have sufficient evidence, and critically evaluate them towards the end of the paper.

[14] With as two phonological innovations the palatalisation of Written Tibetan onset clusters /pr, phr, br/ and /kr, khr, gr/ and the change from Written Tibetan prefixed nasal stop onsets /sŋ/ and /sn/ to fricative /h/.

§1.2.1. Shared sound changes

According to Hill, there are three sound changes that East Bodish shares with Tibetan, namely, Schiefner's Law (Hill 2019: 26–28), Houghton's Law (Hill 2019: 25), and the change to *-as > *-os* (Hill 2015; 2019: 25–26). These sound changes set Tibetan and East Bodish apart from Chinese and Burmese, the two other languages with which Hill makes his comparison.

Schiefner's Law (Hill 2019: 26–28) concerns the softening of the voiced affricates, in particular, the softening of *dz- > *z-* and *ǰ- > *ź-* in Tibetan. For this, Hill presents both morphological evidence (alternations in verb paradigms) and comparative evidence from Chinese, Burmese and Japhug rGyalrong. Hill (2019: 28) continues to state that the evidence from the East Bodish languages such as Monpa and Kurtöp, with the cognate sets 'eat', 'copper', 'bridge', 'corner/edge' and 'pair/two', indicates that the phonological change implied by Schiefner's Law must have already taken place in Proto-Bodish.

Secondly, Hill (2019: 25) identifies Houghton's Law as one of the characteristic sound changes of Tibetan that is also shared by the East Bodish languages. Houghton's Law establishes a connection between the Chinese and Burmese velar nasal onset *ŋ-* and the Tibetan palatal nasal onset *ɲ-* through palatalisation of the velar nasal: *ŋ- > *ŋʲ- > *ɲ-*. Hill provides four cognate sets for the correspondence between Tibetan and Chinese or Burmese, out of which two ('fish' and 'borrow') have East Bodish evidence that confirms this, and one cognate set ('gums') has conflicting evidence.

According to Hill (2015; 2019: 25–26), the change *-as > *-os* would explain the fact that some East Bodish verb stems have an open vowel *-u*, and other East Bodish verb stems have an open vowel *-a*.

§1.2.2. Shared innovation in 'five'

In the concept 'five', East Bodish shares the innovation of a lateral prefix, which is not common in Trans-Himalayan languages (Fellner and Hill 2019: 162–163), even though Chinese is reconstructed with a consonant prefix: 五 *nguX* < *C.ŋˤaʔ. The lateral prefix may be a uniquely Bodish innovation, and if it is shared by the East Bodish varieties, this would lend evidence for a closer genetic relationship between Tibetan and the East Bodish languages.

§1.2.3. Conservative retentions

Hill (2019) also summarises the evidence where the languages of the East Bodish group have not participated in certain phonological innovations that are characteristic of the varieties of Tibetan proper. These include Bodman's law (Hill 2019: 18–19), Benedict's law (Hill 2019: 14–16), Laufer's Law (Hill 2019: 20–21), Conrady's Law (Hill 2019: 17–18) and Dempsey's Law (Hill 2019: 12–13) and indicate that East Bodish conservatively retained phonemes where Tibetan innovated. These conservative retentions also include Hill's observations that, unlike Tibetan, Kurtoep did not palatalise non-lateral consonants (2019: 16–17) and the observation that, unlike Tibetan, Kurtoep did not merge the onset *w- with *y*- (2019: 19–20).

§1.2.4. Other sound changes

Two other sound changes that Hill identified as unique to Tibetan, hence post-dating the split of the East Bodish languages, namely Chang's Law (Hill 2019: 9) and Coblin's Law (Hill 2019: 9), cannot be verified for the East Bodish varieties because their evidence is based on Written Tibetan forms that are not reflected in the attested East Bodish languages.

Hill (2019) also indicated that there are several other sound changes that set Tibetan apart from other Trans-Himalayan languages, in particular Chinese and Burmese, but that the evidence to support a conclusion that the East Bodish varieties also participated in these sound changes is hitherto limited. I will further examine some of these sound changes, namely: Li Fang-Kuei's Law (Hill 2019: 22–23); Simon's Law (Hill 2019: 28–29); the change *rl- > rǰ- (rd^{y}-) (Hill 2019: 29); and Peiros and Starostin's Law (Hill 2019: 32–33). In addition, Hill (2019) presents examples of the correspondence of Tibetan vowel /a/ to Chinese vowels /a/ and /ə/ (i.e. the Tibetan merger of vowels /a/ and /ə/, Hill 2019: 29–30), and the correspondence of Tibetan vowel /a/ before dentals, -*r* and -*l* to Chinese vowels /a/ and /e/ (i.e. the Tibetan merger of vowels /a/ and /e/ before dentals, -*r*, and -*l*, Hill 2019: 31–32), both of which I will also briefly discuss.

I will not pay more attention to seven other sound correspondences, either because of their tentative nature or because I don't find that the East Bodish evidence contributes much to their refinement, namely: Sa-skya Paṇḍita's Law, or *g- > *d*- before graves (labials and velars) and *d- > *g*- before acutes (dentals and palatals, Hill 2019: 23–24); the change *rl- > rǰ- (rd^{y}-) (Hill 2019: 29); the correspondence between Tibetan rhyme -*o* and Chinese rhymes *-aw and *-ew (Hill 2019: 21);

the reconstructed vowel *-əw-* as source of Tibetan *-u-* and Chinese **-o-* (Hill 2019: 34–37); the loss of *-y* in Tibetan (Hill 2019: 37–38); the reconstruction of complex coda **-rl*, which changes to *-l* in Tibetan and **-r* in Chinese (Hill 2019: 38–39); the reconstructed syllable **-kə* in the Trans-Himalayan proto-language reflected in Tibetan as final *-ḫ*, in Chinese as final **-k* and in Burmese as open syllables (Hill 2019: 39–40); and the reconstructed final **-k* corresponding to Tibetan *-g* and Chinese **-k* and the reconstructed final **-q* corresponding to Tibetan *-g* and Chinese **-ʔ* (Hill 2019: 40–41).

§1.3. Three hypotheses

To forward the study of the presumed East Bodish group and its position within the language family and particular the Bodish branch, I would like to propose three hypotheses. Note, that these hypotheses include the overall suggestion made in §1.1. While Proto-Bodic is the ancestral language to all the Bodic (West, South, Central, East, Dakpa-Dzala) languages, Proto-Bodish is more strictly and narrowly the ancestral language to the Bodish (Central Bodic) languages.

I propose that we use labels with cardinal directions ending on *-ern* for the subgroups of Proto-Bodish, i.e. Bodish *in senso strictu* or 'Bodish proper': Old Tibetan and all languages that can be shown to derive from it: Classical / Written Tibetan, the Central Bodish languages (Central Tibetic), the Eastern Bodish languages (Kham, Amdo etc.), the Western Bodish languages (Ngari etc.), and the Southern Bodish languages (Dzongkha, Drenjongke, Dromowa). This would keep the labels West Bodish, East Bodish, and South Bodish available for possible subphyla of the West Himalayish or West Bodic languages, the East Bodic languages of the Bumthang and perhaps Dakpa-Dzala clusters and the South Bodic languages of the Tamang group, respectively, if they can be shown to be valid and coherent taxa.

My first hypothesis maintains the present status quo derived at by Bielmeier (2004), van Driem (2001: 828, 849, 916; 2007a) and Hill (2010b: 111, 2019: 8, 9, 21), suggesting that the ancestor of Dakpa and Dzala and the ancestor of the Other East Bodish languages such as Bumthang derive from a common ancestor, Proto-East Bodic, that split

off from its sister languages, including Proto-Central Bodic, at a certain moment in time. This phylogeny is represented in Figure 6.[15]

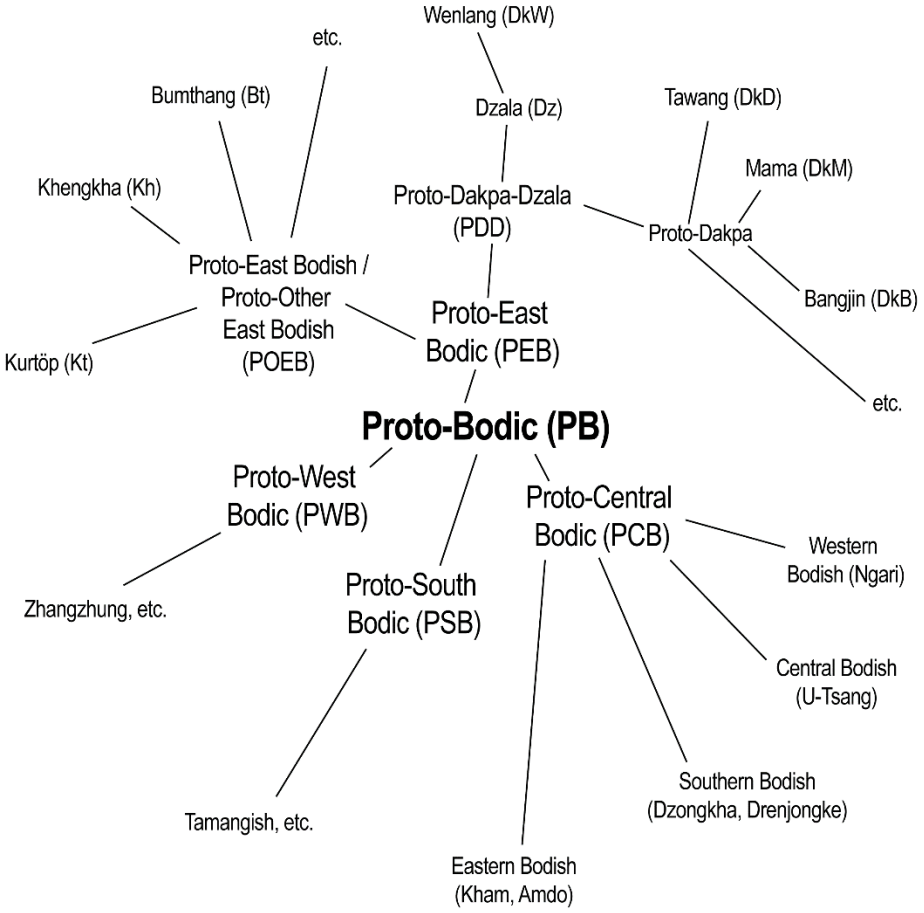

Figure 6. Neighbourhood network with East Bodic as a coherent subgroup (Figure courtesy Yeshy Tempa Sotrug).

The second hypothesis is that the language ancestral to Dakpa and Dzala was *not* Proto-East Bodic, but that Proto-Dakpa-Dzala represents a branch separating from the ancestral language Proto-Bodic; following the split of Proto-East Bodic but preceding the split and subsequent

[15] Note, that my analysis, and the following Figures, does not provide details of other presumably Bodic groups that may derive from Proto-Bodic, such as the large Tamangic group, which Mazaudon (1994) called the "TGTM" (Tamang-Gurung-Thakali-Manangi) group and the West Himalayish languages, both sometimes called West Bodish (Bradley 1997), as well as other languages of the subgroups denoted by "etc.".

divergence of the Central Bodic languages. This phylogeny is represented in Figure 7.

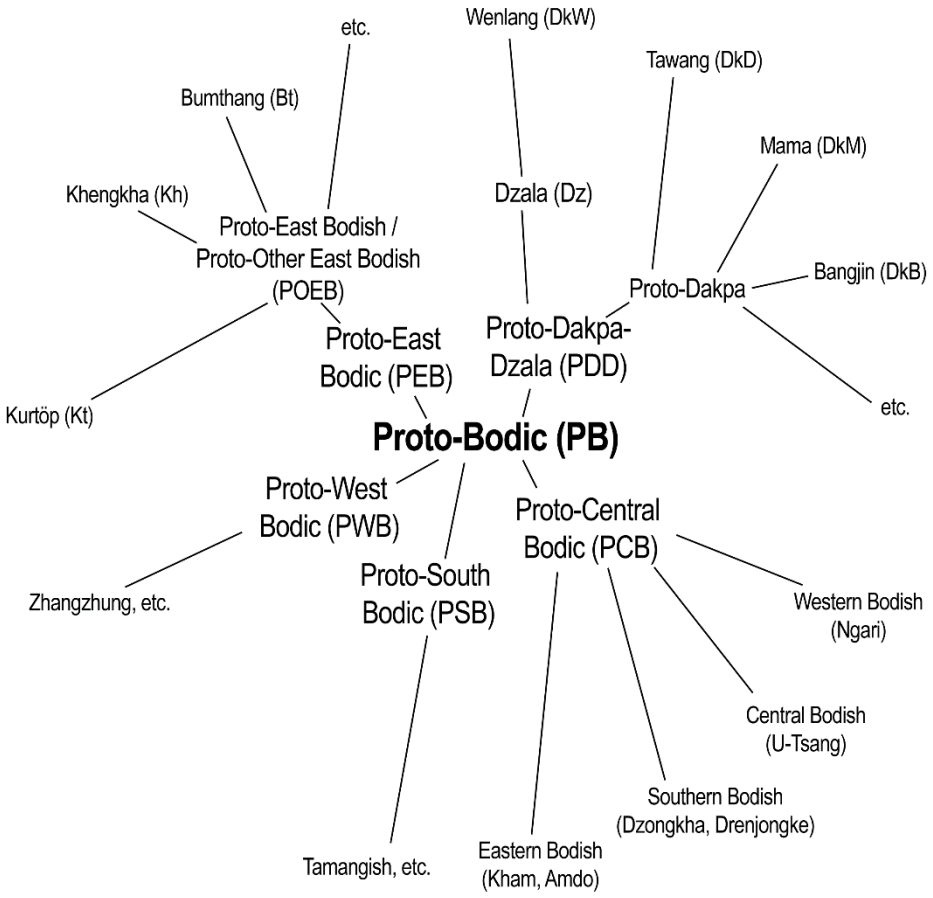

Figure 7. Neighbourhood network with East Bodic versus Dakpa-Dzala versus Central Bodic (Figure courtesy Yeshy Tempa Sotrug).

A final hypothesis is that Dakpa-Dzala and Proto-Bodish both derive from Proto-Central Bodic, but that Dakpa-Dzala split at an earlier moment in time, hence preserving a few Proto-Bodic retentions that were lost in the Bodish languages. This phylogeny, partially implied in the work of Yìxī (1992), is presented in Figure 8.

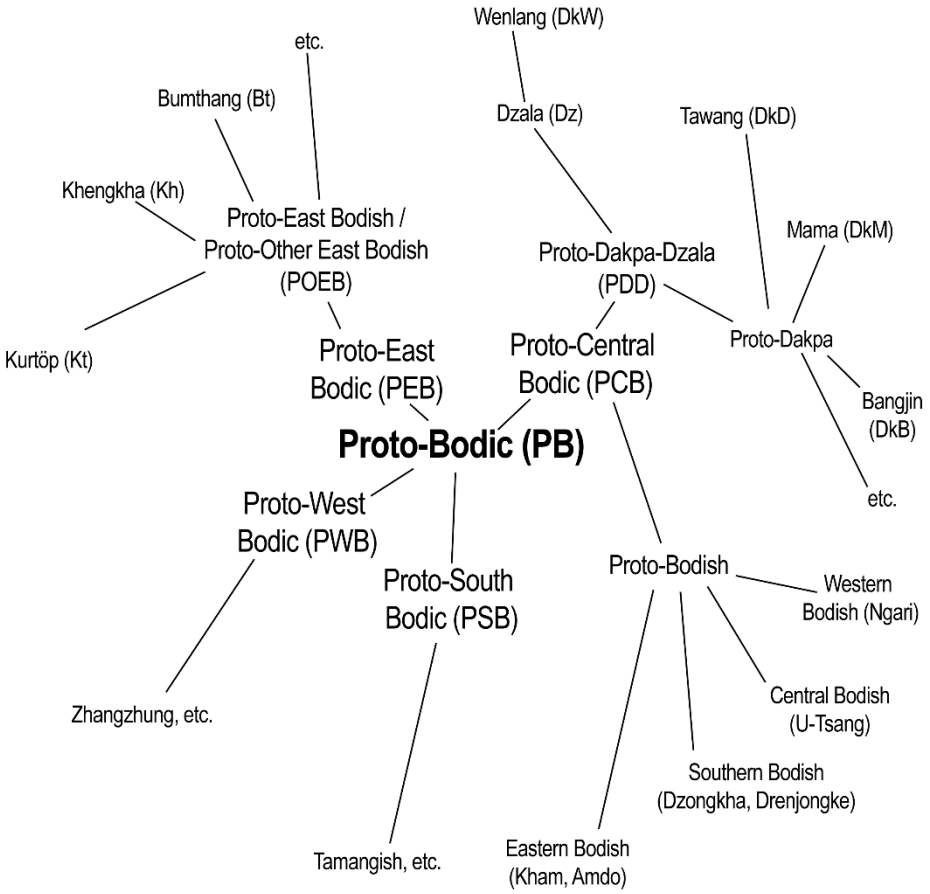

Figure 8. Neighbourhood network with Dakpa and Dzala as Central Bodic languages (Figure courtesy Yeshy Tempa Sotrug).

§1.4. Methodology and data

To determine whether or not there is indeed an 'East Bodish' subgroup whose collective member languages, including 'Dakpa' and 'Dzala', share a common origin that is distinct from, but still related to, Bodish 'proper', I will look at two criteria: 1) shared phonological innovations of *all* the East Bodish languages and 2) shared lexical innovations of *all* the East Bodish languages.[16]

[16] Note that this limited methodology excludes morphological features, which can provide important insights into the genetic relationships between languages, cf. van Driem, who dismisses lexical data as merely 'suggestive' and inadequate for 'systematic comparison to yield decisive evidence' for genetic relationships between languages (1992: 246) and rather argues for the comparison of inflexional morphology to provide

The methodology for 1) presumes that East Bodish is related to Bodish proper at the Proto-Bodic level, and hence compares forms in the East Bodish languages to cognate forms in other Bodish languages, exemplified in most cases by Written Tibetan, and identifies whether *all* the East Bodish languages have innovated phoneme sequences compared to these cognate Bodish forms. The methodology for 2) identifies which lexical items in *all* the East Bodish languages are innovations compared to the lexical forms in the Bodish languages, again exemplified by Written Tibetan.

While examining the shared phonological innovations and retentions of the proposed East Bodish subgroup, I will pay particular attention to the fate of initial onset clusters. Van Driem (2001: 908) already remarked that "Certainly languages of the Bumthang group appear to be archaic in that they preserve initial clusters which do not even occur in Classical Tibetan ...", and indeed, most of the proposed East Bodish languages, including not only the languages of the Bumthang group but also Dzala and the varieties of Dakpa, have characteristic, though rare, initial onset clusters that are not found in other contemporary Bodish varieties, but that we can, at least to some extent, find in Written Tibetan. However, shared retentions are not a useful criterion for the subdivision of languages: The most we can say is that the Bodish varieties have made certain innovations that were not made in the East Bodish languages, but this does not provide evidence for a close genetic relationship of the East Bodish languages to each other.

I base my evidence on a variety of data sources, the abbreviations of which are given in Table 1.[17] Wherever possible, I have used data from 错那门巴 'Cuònà Ménbā', i.e. 'Dakpa', for the 'Dakpa-Dzala' varieties, with as main source the descriptive study by Lù (1986) and the comparative study by Lù (2002). Until present, perhaps unfortunately, these two sources are still the most complete and reliable descriptions[18]

evidence of a 'highly sound and compelling kind' (2003:23). Some observations in this respect for the East Bodish languages were made by DeLancey (2008).

[17] Other abbreviations used in cognate sets in this paper from here onwards are: PEB: Proto-East Bodish/Bodic; PDD: Proto-Dakpa-Dzala; EB: East Bodish/Bodic (Dakpa-Dzala + Other East Bodic); POEB: Proto-Other East Bodish/Bodic; PB: Proto-Bodic; WTib Written Tibetan; OTib: Old Tibetan; PCB: Proto-Central Bodic; TH: Trans-Himalayan; Mon: Monpa (from Hill 2019); PWKB: Proto-Western Kho-Bwa (Bodt forthcoming), rGy: rGyalrong.

[18] As in, having a good representation of concepts and reliable transcriptions in an IPA compatible script. In addition, Lù (2002) provides data on four Dakpa varieties.

of any of the varieties of 'Dakpa-Dzala'. From among the varieties[19] Lù identified, he focused mainly on the variety of 麻玛 *Mámǎ* (Tib *mar-maṅ* or *mag-maṅ*) township under 勒布 Lēibù (Tib *legs-po*) district in 错那 *Cuònà* (Tib *mtsho-sna*) county.[20] This is the main variety described in Lù (1986), data of which are also reflected in Lù (2002). The other varieties described by Lù (2002) are 逮旺 *Dǎiwàng* (i.e. Tawang in Arunachal Pradesh, Tib *rta-dbaṅ*), 文浪 *Wénlàng* (Tib *wan-laṅ*, locally [uŋ-laŋ] among Tshangla speakers or [ŋu-laŋ] among Dakpa speakers) and 帮辛 *Bāngxīn* (Tib *spaṅ-ziṅ*), both in 墨脱 *Mòtuō* (Tib *me-tog*) county (Lù 2002: 33). Lù correctly observed that the varieties of Lēibù and that of Tawang are different, and also that the varieties of Wénlàng and Bāngxīn are different. In addition to Lù's Dakpa data, I used Dzala data, mainly from Dzongkha Development Commission (2017). I have also used additional data on Dakpa and Dzala where the previous sources were insufficient, incomplete, or inconclusive, including from Wangchu (2002) and Yìxī (1992). The main sources for the other East Bodish languages are van Driem (2015) and the Dzongkha Development Commission (2018) for Bumthang, Yangzom and Arkesteijn (1996) and Ikeda (2021b) for Khengkha, Bosch (2016) for Upper Mangdep and the writings by Hyslop (2017) and Hyslop et al. (2016) for Kurtöp. Where these data are incomplete, inconclusive, or insufficient, data have been added from other languages and sources. The Tibetan data are primarily from Zhāng (1985) and Jäschke (1992[1881]). Unless indicated otherwise, comparison with Tibetan, (Old) Burmese and (Old and Middle) Chinese are from Hill (2019). For the references in the cognate sets, I have left data taken from the main sources marked in bold typeface in Table 1 unmarked, whereas the source codes for alternative sources have been provided.

---

[19] For some additional notes on these varieties, cf. the ethnographic notes in §12.2 and §12.3 of this paper.

[20] Now 麻玛门巴民族乡 *Mámǎ Ménbā mínzú xiāng* (Tib *mar-maṅ* or *mag-maṅ mon-pa mi-rigs śaṅ*) "Mámǎ Monpa ethnic minority township" of 错那县 *Cuònà xiàn* (Tib *mtsho-sna rdzoṅ*) "Tshona county", the other four 民族乡 *mínzú xiāng* (Tib *mi-rigs śaṅ*) "ethnic minority townships" for the Monpa people in that county being 贡日 *Gòngrì* (Tib *goṅ-ri*); 勒 *Lēi* (Tib *slad*); 吉巴 *Jíbā* (Tib *skyid-pa*); and 斯木 *Sīmù* (Tib *srin-mo*) (Lǐ and Cáirang 2016). The (old) name Lēibù refers to the old name of the area: *legs-po tsho-bzhi* "four divisions of Lekpo" (Bodt 2014: 209).

Figure 9. Map of the eastern Himalayas (Figure courtesy Yeshy Tempa Sotrug).

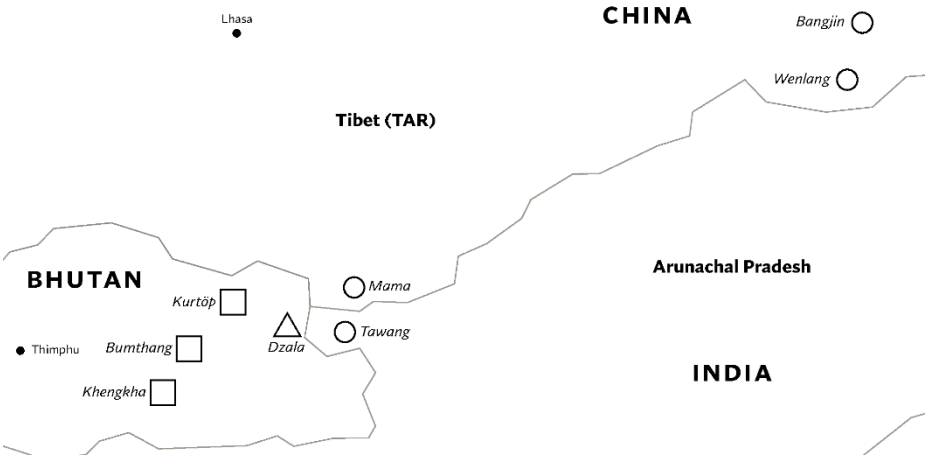

Figure 10. Map with the main linguistic varieties represented in this study (Figure courtesy Yeshy Tempa Sotrug).

Table 1. Glossary of varieties and sources

abbr.	**variety**	**source**	**source (full)**
DD	**Dakpa-Dzala**		
DkW	Dakpa Wénlàng	**Lù02**	Lù 2002
DkM	Dakpa Mámă	**Lù02**	Lù 2002
		Lù86	Lù 1986

abbr.	variety	source	source (full)
DkB	Dakpa Bāngxīn	**Lù02**	Lù 2002
Dz	Dzalakha	**DDC17**	Dzongkha Development Commission 2017
		TAB	own data
		vD07	van Driem 2007b
DkT	Dakpa Tawang	**W02**	Wangchu 2002
		TAB	own data
DkD	Dakpa Dáwàng	**Lù02**	Lù 2002
DkC	Dakpa Cuònà	**Y92**	Yìxī 1992
OEB	**Other East Bodish**		
Kt	Kurtöp	**KD16**	Hyslop et al. 2016
		KG17	Hyslop 2017
		MM94	Michailovsky and Mazaudon 1994
Bt	Bumthang	vD15	van Driem 2015
		MM94	Michailovsky and Mazaudon 1994
		DDC18	Dzongkha Development Commission 2018
		IT21	Ikeda 2021b
BtU	Bumthang Ura	**DDC18**	Dzongkha Development Commission 2018
BtC	Bumthang Chume	**DDC18**	Dzongkha Development Commission 2018
Kh	Khengkha	**YA96**	Yangzom and Arkesteijn 1996
		IT21	Ikeda 2021b
		TAB	own data
Md	(Upper) Mangdep	**B16**	Bosch 2016
	Other languages		
Tib	Tibetan		(various, e.g. Jäschke 1992 [1881]), Zhāng (1985))

abbr.	variety	source	source (full)
Chi	Chinese	BS	Baxter and Sagart 2014
MChi	Middle Chinese	BS	Baxter and Sagart 2014
OChi	Old Chinese	BS	Baxter and Sagart 2014
Tsh	Tshangla	DDC18a	Dzongkha Development Commission 2018a
		TAB	own data
Bur	Burmese		Hill 2019

In particular, I wish to merit the contributions of the Dzongkha Development Commission (DDC) in providing lexicons of several of Bhutan's languages, including Bumthang (DDC 2018), Mangdep (DDC 2018b), Tshangla (DDC 2018a), Dzala (DDC 2017), Brokat (DDC 2016) and Drokey (DDC 2021). These sources are freely available at the DDC's website[21]. Just like the publications by Yìxī (1992) and Lù (1986, 2002), these publications seem to go largely unnoticed in international linguistic circles, either because of lack of exposure or because of limited accessibility, with not everyone being able to access the Chinese (Yìxī 1992 and Lù 1986, 2002) and Dzongkha (DDC 2016, 2018b) sources.

With respect to the transcription in this paper, I have left the transcription in the original sources unaltered, with the exception of the tone marks in Lù (1986).[22] In addition, Lù's (1986 and 2002) Dakpa Mámă /ɔ/ is transcribed like Dakpa Dáwàng /o/ and Dakpa Mámă /ɛ/ is transcribed like Dakpa Dáwàng /e/. In some adjectival forms, the forms of the adjective suffixes were ignored, especially where in the Dakpa-Dzala varieties (particularly Dakpa Bāngxīn) the adjective marker *-po* has allomorph *-ko* when following a velar stop or nasal adjective stem. Similarly, the imperative marker *-ma* was omitted from Dzala verbal

[21] https://www.dzongkha.gov.bt/en/publications, last accessed 05/06/2022.

[22] I have converted Lù's (1986) Chao tone letters to Lù's (2002) superscript numbers and homogenised the tone markings in the two sources and four varieties: ^{55} for high-level ˥ (in DkM and DkW); ^{35} for mid-rising ˧˥ (in DkM and DkW); ^{31} for mid-falling ˧˩ (in DkM); and ^{53} for high-falling ˥˧ (in DkM). This does not mean that Lù (1986, 2002) describes DkM (and DkD) as having four tones, and DkW (and DkB) as having two tones: tones ^{35} and ^{53} combined with unvoiced plosive and affricate onsets in DkM (and DkD) correspond to voiced plosive and affricate onsets in DkW (and DkD). Like the other Dakpa-Dzala varieties, DkM, DkD, DkW and DkB basically have a distinctive high vs. low register tone onset, alternatively a high-level ^{55} or high-falling ^{53} vs. mid-rising ^{35} on monosyllables: all other contour tones are conditioned by phonotactics.

forms from DDC (2017), and the copula *ŋi* was omitted from verbal stems expressing a static state or adjective in Dakpa Wénlàng. When there were internal inconsistencies between the various transcriptions in Lù's (2002) data, such as slight differences in phonemes, tone marks and morphemes, these were ignored when providing a generally similar form for these varieties.

It may be prudent to remark that a majority of sources (DDC17, DDC18, KD16, YA96, vD15) has their own orthography, instead of using IPA. For example, the velar nasal [ŋ] is commonly represented as /ng/, the palatal glide [j] as /y/, the voiced palatal affricate [dʑ] or voiced palatal stop [ɟ] as /j/, the palatal nasal [ɲ] as /ny/ etc. I refer to the original sources for their specific transcription systems.

Table 2 summarises the notational conventions in the cognate sets.

Table 2. Notational conventions in the cognate sets.

single quotation marks (‘ ’)	the concept in English
single apostrophe (’) before a form	high register tone onset (usually in the forms of varieties from Bhutan)
asterisk (*)	reconstructed proto-form
cross (†)	non-attested form
comma (,)	separates cognate forms
tilde (~)	distinction between sets of forms from individual varieties that are cognate, or
	variant forms from the same linguistic variety (either from the same data source or different data sources)
less-than sign (<)	the form to the left derives from the form to the right, either through inheritance (when followed by a reconstructed proto-form) or through borrowing (when followed by a form from an attested language)
more-than sign (>)	the form to the right derives from the form to the left, either through inheritance (when preceded by a reconstructed proto-form) or through borrowing (when preceded by a form from an attested language)

the phrase (… , but …)	forms from related varieties that are not cognate with the forms in the varieties mentioned before
full stop (.)	separates morphemes in attested forms
hyphen (-)	separates syllables in Written and Old Tibetan
letter between brackets ( )	in a reconstructed form: a possible phoneme, usually based on the written Tibetan evidence, although its form or even absence or presence cannot always be confirmed by the attested forms in the East Bodish varieties

I use some cognate sets to illustrate more than one sound correspondence (for example, both an onset and a rhyme correspondence) or use them as evidence, both in the sections on sound correspondences (§2–§8) and in the sections on lexical comparison (§9). In these cases, I have commonly provided the full cognate set in one (usually the first) occurrence, with only the cross-reference to that cognate set in the other occurrence(s).

An important point that needs to be made concerns the treatment of Tibetan loans in the Other East Bodish and Dakpa-Dzala varieties. Because Tibetan and the Other East Bodish and Dakpa-Dzala varieties not only share an inherited vocabulary, but also a long history of close interaction, it is particularly difficult to distinguish between inherited material and later loans. As this paper will show, there is also no uniformity *within* the Other East Bodish and *within* the Dakpa-Dzala varieties. Sometimes, one specific Dakpa-Dzala variety has an inherited form, whereas another Dakpa-Dzala variety has a form that was borrowed from Tibetan but is nonetheless related to the inherited form at the Proto-Bodic level. There would have been both widespread borrowing events (for example, of new concepts like technologies) that introduced borrowed forms in several or even all varieties, as well as multiple independent borrowing events at different moments in time in the individual varieties – or in some cases, even individual respondents.[23] Only through a combination of establishing regular sound correspondences for both the onsets and the rhymes and a dose of logical sense of which lexemes are more likely to be borrowed than others can

[23] Except for the Chinese sources, none of the consulted literature provides the metadata or even some broad specifics regarding the speakers on which the datasets are based. Varying levels of, for example, literacy in spoken, liturgical or written Tibetan or Dzongkha would naturally affect a respondent's speech, but there is no way to verify this for individual secondary sources.

we begin to make a distinction between the inherited and the borrowed part of the vocabulary.

§1.5. The supplement

This paper is accompanied by a supplement made available in open access online (DOI: 10.5281/zenodo.6559623). This supplement contains all the cognate sets in this paper, with the same sequential numbering. This provides for an easy cross-reference between the paper and the supplement. The cognate sets in the supplement contain important additional information to those in the paper itself. The cognate sets in the paper only have a reference to the source code in Table 1 when the source for an individual form is distinct from the main source consulted for each linguistic variety in bold. The cognate sets in the supplement, on the other hand, have a more specific reference to the page numbers as well. This makes it easier for people with no or limited knowledge of the source languages of some of the source materials (i.e. Dzongkha and Chinese) to cross-check the referenced forms in their original sources: This also contributes to greater transparency and accountability regarding the use of secondary sources. Moreover, the cognate sets in the supplement contain more forms in individual linguistic varieties, for example, forms that for some reason (e.g. borrowing, or lexical innovation) are not illustrative for the sound correspondence that the cognate set is deemed to exemplify[24], likely cognate forms in other languages, semantic content of the form in the specific variety if this differs from the semantic content of the concept it is cognate with, and other etymological notes and remarks of interest.

§2. PHONOLOGICAL COMPARISON

This phonological comparison provides an initial comparative outline of the initial consonants of the Tibetan, Other East Bodish and Dakpa-Dzala varieties. In these 'trivial' correspondences all varieties have the same onsets.

§2.1. STOP ONSETS

In general, stop onsets regularly correspond in all varieties. As Hyslop (2015: 280) already remarked, the East Bodish languages have a robust three-way contrast between unvoiced unaspirated, aspirated, and voiced

[24] This is indicated by (but …).

stops; I will here show that indeed that contrast exists in the Dakpa-Dzala and Other East Bodish varieties and Tibetan. Aspiration of stop onsets was not distinctive in Old Tibetan (Hill 2007). Copious evidence for this can also be found in the transcriptions of the Old Tibetan Annals in Dotson (2009), where even in accounts from consecutive years the same toponym or word is variable spelled with the unaspirated and aspirated stop or affricate onset. Hence, while all instances of aspirated stops and affricates derive from unaspirated onsets, unaspirated onsets in the spoken language are represented through prefixation (notably of *s*-) in the orthography. Nonetheless, the data below indicate that aspiration is distinctive in all attested varieties.

§2.1.1. Velar stop onsets

In general, the velar onsets correspond in the Dakpa-Dzala and Other East Bodish varieties and Tibetan.

(001) 'ginger' DkM, DkD, DkW & DkB *ka*^{53}, Dz *ka*, Kh *ka.che.wa* ~ *ka.chek.pa*, Tib *lga* ~ *sga* < PB *ka

(002) 'mouth' DkM, DkD, DKW & DkB *kha*^{53}, Dz *kha*, Bt *kha*, Kt *kha*, Kh *kha*, Tib *kha* < PB *k^{h}a

(003) 'saddle' DkW & DkB *ga*^{35}, Dz *ga*, Bt *gap.cha*, Kt *ga*, Tib *sga* < PB *ga

The example 'ginger' shows that a prefixed Tibetan voiced onset *s-g-* or *l-g-* corresponds to an unvoiced onset *k-* in the Dakpa-Dzala and Other East Bodish varieties, with high register tone in at least the Dakpa varieties, as the example 'door' below also shows. However, in the example of 'saddle', this correspondence does not hold. Comparing 'saddle' with 'door' below, we must presume that 'saddle' is a later loan from Tibetan into Dakpa-Dzala and Other East Bodish.

(004) 'door' DkM, DkD, DkW & DkB *ko*^{53}, Dz *ko*, Kh *ko*, Bt *ko*, Tib *sgo* < PB *ko

Because the plain, unprefixed Tibetan onset *k-* is very rarely attested in the written form (Hill 2007), mostly limited to words derived from Sanskrit and other languages, we could presume that spoken Tibetan *k-* was initially written with a prefix, e.g., as *l-g-*, *s-g-* or *r-k-*, as is also shown in examples like (302) 'dig' and (507) 'hoe'.

Michailovsky and Mazaudon (1994: 548) remarked that in the Other East Bodish languages, a voicing distinction in stops and fricatives is often absent in pronunciation, leaving only a high (unvoiced) versus low (voiced) register tone contrast. In addition, they state that in the Other

East Bodish languages, the reflexes of old prefixed vs. unprefixed voiced stops are voiced with redundant low tone, or, if they are phonetically devoiced, the compensatory low pitch is always present (Michailovsky and Mazaudon 1994: 554–555). In the case of velar onsets, an *s*-prefix and voiced onset in Tibetan is reflected as a voiceless onset with high tone in the Other East Bodish varieties. Their examples, in addition to 'door' above, include 'back' and 'hearthstone'. For both concepts, there is no cognate Dakpa-Dzala evidence.

(005) 'back' DkT *gyab*, Dz *gyab* ~ *jab*, Tib *rgyab* ~ Bt *kai*, Kt *kê*, Kh *kai*^{42} ~ *kɛp*^{44}*p*Λ^{22} (IT21), Tib *sgal* < PB *kal

(006) 'hearthstone' Bt *kit.pa*, Kt *kit.pa*, Tib *sgyed-po* < PB *k^{j}et.pa

§2.1.2. Bilabial stop onsets

In general, the bilabial stop onsets correspond in the Dakpa-Dzala and Other East Bodish varieties and Tibetan.

(007) 'father' DkM & DkD *ʔa*^{55}*.pa*^{53}, DkW & DkB *a*^{55}*.pa*^{53}, Dz *'a.pa*, Kh *a.pa*, Bt *'a.pa* (vD15), Tib *a.pa* < PB *a.pa

(008) 'pig' DkM & DkD *phaʔ*^{53}, DkW & DkB *pha*^{53}, Dz *phag*, Kh *phak*, Bt *phak*, Tib *phag* < PB *p^{h}ak

(009) 'ox, bull' DkM & DkD *pa*$^{\cdot 35}$*.ri*^{53}, DkB *pa*^{35}*.ri*^{53}, Dz *ba*, Kh *ba.ri*, Bt *ba.ri*, Kt *ba.ri* < PEB *ba.ri, Tib *ba* < PB *ba

Michailovsky and Mazaudon (1994: 554–555) observed that an *s*-prefix does not have a devoicing or tone-raising effect on a *b*-initial in the Other East Bodish varieties. In the Dakpa-Dzala varieties from Chinese sources, both cognates with unprefixed ('ox/bull') and prefixed ('frog') Tibetan forms are transcribed with a devoiced onset and a corresponding low-rising tone (i.e. Lù's *pV*^{31} ~ *pV*^{35} = [bV], but notice the aberrant Dakpa Mámă and Dakpa Wénlàng forms for 'frog', which would be predicted to be *pe*$^{\cdot 35}$*.pa*^{53} and *pai*^{35}*.po*^{55}, respectively, perhaps these are transcription errors).

(010) 'frog' DkM *be*$^{\cdot 35}$*.pa*^{53}, DkD *pe*$^{\cdot 35}$*.pa*^{53}, DkW *pai*^{55}*.po*^{55}, DkB *pa*^{35}*.po*^{53}, Dz *pe.po* ~ *pae.po*, BtU *ba.bai*, BtC *bai.fai*, Kh *bae.pa.la*, Kt *bar.phe.la*, Tib *sbal-pa* < PB *sbal

Compare here the forms for 'wool', which lacks the *s*-prefix in Tibetan, and has preserved a voiced onset in all varieties.

(011) 'wool' DkT *bai*, Dz *bä*, Bt *bai*, Kt *be* ~ *bê*, Tib *bal* < PB *bal

§2.1.3. Dental stop onsets

In general, the dental stop onsets correspond in the Dakpa-Dzala and Other East Bodish varieties and Tibetan. Voicing differences in transcription are commonly attributable to the different transcription methods (e.g., Lù's tV^{31}~ tV^{35} = [dV]).

(012) 'horse' DkM, DkD, DkW & DkB *te*^{53}, Dz *te* ~ Tib *rta*, Kh *ta*, Kt *ta* < PB *(r)ta

(013) 'fireplace, hearth' DkM & DkD *tham*^{53}, DkW & DkB *tɕa*^{55}*.thap*^{53}, Dz *thab*, Bt *thap* (vD15), Tib *thab* < PB *t^{h}ap^{25}

(014) 'now' DkM, DkD & DkB *ta*^{31}*.ta*^{53}, DkW *ta*^{35}*.ken*^{55}, Dz *da.ta*, Kh *dae.na*, Bt *da.ra*, Tib *da-lta* (OTib *da*) < PB *da.(l)ta^{26}

The above correspondence also holds in (245) 'look'.

Like with the bilabial onset, but unlike the velar onset, an *s*-prefix in Tibetan does not have a devoicing influence on a voiced stop onset.

(015) 'tie (v)' DkM, DkD & DkB *tam*^{35}, DkW *dam*^{35}, Dz *dam*, Bt *dam*^{23} (IT21), Kh *dam*^{23} (IT21), Kt *dam*, Tib *bsdam-pa* < PB *sdam

§2.1.4. Retroflex stop onsets

The retroflex stop onsets, [ʈ, ʈ^{h}, ɖ] (in Lù02: [tʂ, tʂ^{h}, dʐ]) in the Dakpa-Dzala and Other East Bodish varieties are either in lexemes that were borrowed from Tibetan or represent secondary phonological developments in some varieties (like Kurtöp) under influence of Tibetan and Dzongkha. The only exception may be the unique Bumthang retroflex onsets that possibly derive from underlying Proto-Bodic dental stop and rhotic medial onset clusters (cf. §8.3).

§2.2. Affricate onsets

The affricate onsets generally correspond in the Dakpa-Dzala and Other East Bodish varieties and Tibetan, but attestations of the unvoiced, unaspirated affricates are particularly sparse. Note that at least 'clean', 'salt' and 'green' are also candidates for loans, although both the onset and the rhyme correspondences are regular, see §5.1 for the rhyme.

---

[25] The irregular rhymes for 'fireplace, hearth' are explained in (264) in §2.6.4.

[26] The fact that the Dakpa-Dzala correspondence *-a > *-e* when preceded by coronals (§5.1) does not hold for 'now' indicates that this is a likely later Tibetan loan: The variation between onset *n-* ~ *r-* ~ *t-* in the second morpheme may be attributed to the lateral prefix.

(016) ‘clean’ DkM, DkD, DkW & DkB *tsaŋ[55].ma[53]*, Dz *tsang.tog.to*, Kt *tsang*, Tib *gtsaṅ-bu* < PB *(g)tsaŋ

(017) ‘salt’ DkM *tsha[55]*, Dz *tsha*, Kt *tsha*, Kh *tsa*, Bt *tsha*, Tib *tshwa* < PB *tsʰ(ʷ)a

(018) ‘bite’ DkM & DkD *chaʔ[53]*, DkB *tɕhak[53]*, Tib *ḥchaḥ-ba* < PB *tɕʰa ~ Kt *chu*, Tib *ḥco(s)*, PB *(ḥ)tɕos

(019) ‘green’ DkM & DkD *dzaŋ[35].ku[53]*, DkB *dzaŋ[35].ko[53]*, Dz *jang.kha*, Kt *jang.ku*, Bt *jang.khu*, Tib *ljaṅ-khu* < *ldʲaṅ.kʰu < *ldaṅ.kʰu < *ḥldaṅ.kʰu < *ḥdlaṅ.kʰu < *ḥlaṅ.kʰu

§2.3. Fricative onsets

The fricative onsets *s-*, *ɕ-* and *z-* generally correspond in all varieties. Hill (2014; 2019: 28) contends that all instances of *z-* in the Bodish languages are secondary developments, in particular from *dz- through Schiefner’s Law. The East Bodish forms for the concept (248) ‘leak, drip’ may indicate that this development continued in the East Bodish varieties after the split from Tibetan. The forms for ‘deer’ may be Tibetan loans, or a compound of the form for (431) ‘meat’ (or a mammal-prefix, cf. Bodt 2021: 31) and the form for (009) ‘ox’, with sonorising lenition of stop /b/ to approximant /w/ in intervocalic position. The concept ‘earth, soil’ is also a Tibetan loan, cf. §5.1. For the divergent rhymes for ‘eat’, cf. §10.1.3.

(020) ‘earth, soil’ DkM, DkD, DkW & DkB *sa[53]*, Dz *sa.zhing*, Bt *sa*, Kh *sa*, Kt *sa*, Tib *sa* < PB *sa

(021) ‘eat’ DkM, DkD, DkW & DkB *za[35]*, Dz *za*, Tib *za-ba* < PB *dza ~ Kt *zu*, Kh *zu*, Bt *zu* (vD15) < Tib *zo*

(022) ‘deer’ DkM & DkD *ɕaː[55]*, DkW *ɕa[55]*, DkB *ɕa[55].wa[53]*, Kt *sha.wa*, Bt *sha.wa*, Kt *sha.wa*, Tib *śa-ba* < PB *sʲa

Onset /ʑ/, though not rare in most of the modern Other East Bodish and Dakpa-Dzala varieties, is commonly the result of secondary phonological developments, and not inherited from the proto-language. According to Hill (2019: 28), Bodish *ź-* derives from palatal or palatalised onsets *lʸ, *rʸ, and *ǰ-. Indeed, an Other East Bodish language like Khengkha has only limited attestations of onset /ʑ/, and these are usually in loans[27], with as possible exception ‘liquor’. Bumthang *zhr-*

[27] E.g., Kh *zhung* ‘government’ (in ‘government cattle’) < Tib / Dzo *źuṅ*; *zhan.thek* ‘another, someone else’ < Tib / Dzo *gźan*; *zhu* ‘to receive (hon.)’, Tib / Dzo *źu-ba*. Even

points to an underlying onset *Kl- > *Kʲ- > *zhr*- (§8.2), for the rhyme see §3.3.

(023) ‘liquor’ Kh *zhor*, Bt *zhror* (vD15), Kt *zhor*, Bt *chur.ma* (DDC18, vD15), Kh *chur.ma* (Dorji forthcoming), POEB *kʲur > *klur? ~ Dz *chang*, Tib *chaṅ*

Similarly, the attestations of /ʑ/ in Dzala can generally be shown to be loans, e.g., *zhän.ma* ‘others’ < Tibetan *gźan*; *zhab.kor* ‘tour’ < Tibetan *gźabs-skor*; *zhong* ‘vessel, basin, bowl’ < Tibetan *gźoṅ*; and *zha.tsi* ‘lead (n)’ < Tibetan *źa-rtsi*. Exceptions, where Dakpa-Dzala /ʑ/ is the result of secondary phonological developments, are provided in §3.5.

Like fricative onset /ʑ/, onset /h/ is rare in the modern Other East Bodish and Dakpa-Dzala varieties, and all attestations can be shown to be either in loans, or the result of secondary phonological changes.

§2.4. Nasal onsets

In general, the nasal onsets /ŋ, n, m/ correspond in the Dakpa-Dzala, the Other East Bodish and the Tibetan varieties.

(024) ‘I (1sg)’ DKM, DkD, DkW & DkB *ŋe*^{35}, Dz *nge*, Kh *nga* ~ *ngat*, Bt *ngat* (vD15), Kt *nga*, Tib *ṅa* < PB *ŋas

(025) ‘barley’ DkM & DkD *naʔ*^{35}, Bt *nas*, Kt *nas.phi*, Tib *nas* < PB *nas

(026) ‘mother’ DkM & DkD *ʔa*^{55}*.ma*^{53}, DkW & DkB *a*^{55}*.ma*^{53}, Dz *’a.ma*, Kh *a.ma*, Bt *’a.ma*, Kt *’a.ma*, Tib *a.ma* < PB *a.ma

According to Houghton’s Law (Hill 2019: 25), Tibetan *ɲ*- is thought to derive from a palatalised velar nasal *ŋʲ-, which is supported by the Chinese and Burmese comparative evidence, but also by the widespread occurrence of *ŋa* as form for ‘fish’ in Trans-Himalayan languages.

(027) ‘fish’ DkM, DkD, DkW, DkB *ŋa*^{35}, Dz *nya*, Kh *’nya*, Bt *nya* (vD15, DDC18), Tib *nya* < PB *ŋʲa, Bur *ṅāḥ*, Chi 魚 *ngjo* < *ŋa

For nasal onsets, an *s*-prefix in Tibetan consistently corresponds to a high register tone onset or high falling tone in Other East Bodish and Dakpa-Dzala, as was also observed by Michailovsky and Mazaudon (1994: 554).

---

the modern name of the district itself, Zhemgang (Dzo *gźalm-sgaṅ*) is a loan, the original Khengkha name is Jamjong [ɟamɟoŋ] (van Driem 2001: 910).

(028) ‘nose’ DkM, DkD & DkW *na*^{53}, DkB *n̥a*^{53}, Dz *’na*, Kt *’na*, Bt *’na.phang*, Tib *sna* < PB *sna, Bur *nhā* < *ʔnā

(029) ‘medicine’ DkM & DkW *man*^{53}, DkD *men*^{53}, DkB *m̥en*^{53}, Dz *’man*, Kh *’man*, Kt *’man*, Tib *sman* < PB *sman

(030) ‘pillow’ DkM & DkD *ŋaʔ*^{53}, DkW *ŋ̊a*^{53}, Dz *’nga.ka*, Kt *’ngâ*, BtU *’ngas*, BtC *’ngat*, Tib *sṅas* < PB *sŋas

§2.5. Approximant onsets

The rhotic, liquid, labial and palatal onset correspond in all varieties, but only in certain phonotactic environments, with phonological change affecting the approximant onsets in certain environments in some varieties.

§2.5.1. Rhotic onset

In general, the rhotic onset corresponds in the Dakpa-Dzala, the Other East Bodish, and the Tibetan varieties, but the rhotic onset is relatively rare in all varieties.

(031) ‘self’ DkM, DkD, DkB *raŋ*^{35}, Kh *rang*, Bt *rang* (vD15), Kt *rang*, Tib *raṅ* < PB *raŋ

There is no comparative Tibetan form for ‘come’. However, these East Bodish forms are likely related to Tibetan *ḥgro-ba* ‘go’ < *ḫgrʷa (Laufer’s law, Hill 2019: 20) < *ḫɢʷra (cf. Hill 2019: 33), Chinese 于 *hju* < *ɢʷ(r)a, indicating, as Hill (2019: 21) reported, that the sound change implied by Laufer’s Law only took place *after* East Bodish split from Tibetan.

(032) ‘come’ DkM & DkD *ra*^{35}, Dz *ra*, Bt *ra* (vD15), Kt *ra*, Kh *ra* < PEB *ra

§2.5.2. Liquid onset

When preceding a rhyme with front vowels /i, e/, the lateral approximant /l/ corresponds in all varieties. Distinct correspondences can be observed as a result of Bodman’s / Conrady’s Law (§4.9) and Benedict’s Law (§4.1).

(033) ‘bow’ DkM, DkD, DkW & DkB *li*^{35}, Dz *li*, BtU *li*, BtC *li.mai*, Kt *li.mi* < PEB *li, Tib *gźu* < *glʸu, OTib *gźi* < *glʸi, OBur *liy*, Chi 矢 *syijX* < *l̥ijʔ ‘arrow’

(034) ‘four’ DkM & DkD *pli*^{53}, DkW & DkB *bli*^{35}, Dz *bli*, Kh *ble*, Bt *ble* ~ *blä* (vD15), Tib *bźi* < PB *b-lʲi

(035) ‘good’ DkM, DkD & DkB *li*^{35}*·khu*^{53}, DkW *leu*^{35}, Dz *’li.gu* ~ *’le.gu* ~ *li.gu*, Kt *li.mu*, Kh *le.mo* ~ *le.mong*, Tib *legs-po* < PB *lek

The Other East Bodish innovation *l- > *j-* when preceding back vowels /a, o/ is discussed in §6.6.

§2.5.3. Labial onset

The labial onset /w/ is relatively rare all the Dakpa-Dzala and Other East Bodish varieties. The rare onset ཝ *w* is a Tibetan orthographical form for ཧ, and hence, the result of secondary phonological development from PB semi-vowel ཧ *ɦ* [ɣ] (Hill 2006: 80–83), which is reflected in the Dakpa-Dzala varieties, sometimes in Tibetan and in some Other East Bodish varieties as labial onset *w-* but sometimes elided and resulting in a vocal onset in Other East Bodish and Tibetan. Examples are the postposition ‘under, below’ and the noun ‘fox’. While none of the varieties has followed Laufer’s Law in the forms for ‘fox’ (as also indicated in Hill (2006: 89) that the sound change *-wa* > *-o* does not hold in open syllables), in the Other East Bodish and Tibetan varieties we find that Laufer’s Law was followed in ‘under, below’, perhaps because the syllable is closed. Why the velar coda was not preserved in any variety except Tibetan remains unexplained.

(036) ‘under, below’ DkW & DkB *wa*^{55}, Dz *’wa.ka*, Kh *wo* ~ Kt *o.ko*, Tib *ḥog* < PB *ḥʷa(k)

(037) ‘fox’ DkW & DkB *wa*^{35}*.mo*^{53}, Dz *wam*, Tib *wa.mo* ~ Kt *am*, BtU *au.ya*, Dzo *ḥam* < PB *ḥʷa.mo

The case of the concept ‘bear’ is an interesting one. Superficially, the Dakpa-Dzala and Other East Bodish forms appear cognate, deriving from an underlying root *wam. But except Dzala, the Dakpa varieties have rather diverse onsets, indicating this form was not stable when the Dakpa varieties split from each other. In addition, the Dakpa-Dzala varieties display the influence of Laufer’s Law (Hill 2019: 20–21) which is actually thought to post-date the split of East Bodish and Tibetan. I propose that the Dakpa-Dzala, Other East Bodish and Tibetan forms all derive from an underlying for *s.dʷam.[28] Through loss of the prefix and Laufer’s Law, this would regularly become *dom* in Tibetan. Other East

[28] Forms with a coronal onset are more widespread, cf. Lepcha *să-tum* ‘wild dog, wolf’ (Mainwaring 1898: 397) and Proto-Western Kho-Bwa *sʲa.tʰom ‘bear’ (Bodt 2021).

Bodish and Dzala lost the prefix and the onset *s.d-* completely, leaving *wam*, with the Dakpa Wénlàng form an erroneous transcription (i.e. *wam*^{35} not †*wɔm*^{35}), whereas Dakpa Mámă, Dakpa Dáwàng and Dakpa Bāngxīn had intermediate forms *s.wam > *som, subsequent debuccalisation to *hom ~ xom* with finally loss of the onset to Dakpa Mámă *om* (a pathway also reflected in Tshangla *om.ɕa*).

(038) 'bear' DkM *ɔm*^{35}, DkD *xom*^{35}, DkB *hom*^{35} ~ Dz *wam* (DDC17:70), DkW *wɔm*^{35}, Bt *wam*, Kt *wam* ~ Tib *dom*, but all derive from *s.d^{w}am > Tibetan *s.dom (Laufer's Law), DD *s.wam and EB *wam

Unfortunately, I was unable to find other forms that would support such a path. Two candidates that may attest to this correspondence would be the noun Tibetan *sdoṅ-po* 'tree trunk' and the verb *sdoṅ-ba* 'accompany, join with', which, if it derived from *s.dwaŋ, would be reflected as *waŋ* in Other East Bodish and as *waŋ*, *hoŋ ~ xoŋ* or *oŋ* in Dakpa-Dzala. However, the sparsely available evidence points towards a simple underlying form *doŋ in both cases, e.g., Kurtöp *dong.po* 'tree trunk' (KD16: 110) and Dakpa Tawang *doŋ.sen* 'dowry' (TAB), although these forms may be later Tibetan loans. Another possibility is Tibetan *dwaṅs* 'clear, pure, bright', reflected, for example, in Tshangla *waŋ.ken* 'bright', Dzala, Kurtöp, Bumthang, Dzongkha and Tibetan *li.wang* 'orange' (DDC17: 81, with *li* < 'red', cf. (134)) but as Tibetan / Dzongkha loan *dang* 'brightness' in Kurtöp (KD16: 99).

Hill (2019: 34), on the other hand, compares Tibetan *dom* and the Kurtöp and Mon forms to Chinese 熊 *hjuwng* < *ɢ^{w}əm and the Tangut and Situ rGyalrong forms and indicates that this correspondence is irregular, and we would predict a velar onset instead. However, East Bodish may lend indirect evidence for a labialised uvular onset, resulting in the labial, fricative, and glottal and vocal onsets that we witness in the attested Other East Bodish and Dakpa-Dzala varieties and Tshangla. If these forms indeed go back to a Proto-East Bodic form *ɢ^{w}am, this challenges the assumption that East Bodish shares the change from uvular to velar with Tibetan (cf. Peiros and Starostin's Law, §10.3.3), and hence the validity of Proto-Bodic being the ancestor of both Tibetan and Proto-East Bodic.

§2.5.4. Palatal onset

Palatal onset /j/ only corresponds in all varieties before vowel /a/. Before all other vowels, Tibetan and Dakpa-Dzala palatal onset /j/ corresponds to Other East Bodish lateral onset /w/, cf. §7.7. Either rhymes with vowel

/a/ are only maintained when preceded by the palatal approximant, and not when preceded by palatalised onsets (cf. §6.4), or the forms for 'light' and 'up' are loans, at least in the Other East Bodish varieties.

(039) 'light' DkM *jaŋ^{35}.po^{53}*, DkD *jaŋ^{35}.pa^{53}*, DkW *jaŋ^{35}.bu^{55}*, DkB *jaŋ^{35}.ko^{53}*, Dz *yang.song.song*, Kt *yang.ku*, Tib *yaṅ-po* < PB *jaŋ

(040) 'up' DkM, DkD & DkB *jar^{55}*, Dz *ya.ra*, Kh *'yo*, Kt *yo ~ yau*, Tib *yar* < PB *jar

§3. PHONOLOGICAL INNOVATIONS OF DAKPA-DZALA AND OTHER EAST BODISH

I have identified three correspondences (§3.1, §3.2, §3.3) where both Dakpa-Dzala and Other East Bodish have made a phonological innovation compared to Tibetan, but also compared to Chinese (and Burmese). These correspondences are the strongest evidence for a coherent East Bodic subgroup as illustrated in Figure 6, deriving from a Proto-East Bodic parent language distinct from the parent language of the varieties of Tibetan. There are also two phonological innovations that Dakpa-Dzala, Other East Bodish and spoken varieties of Tibetan (but not Written Tibetan) have all made (§3.4, §3.5).

*§3.1. *C_iiC_f > C_ieC_f if Cf = {k, p, ŋ, n, m}*

There is a regular correspondence between Dakpa-Dzala and Other East Bodish rhymes with vowel /e/ and Tibetan rhymes with vowel /i/. This correspondence only holds for the velar (PB *-ik > Tib *-ig*, OEB *-e(k)*, DD *-e(ʔ)*) and bilabial stop (PB *-ip > Tib *-ib*, (OEB *-ip*), DD *-ep*), and the nasal rhymes (PB *-iŋ, *-in, *-im > Tib *-iŋ*, *-in*, *-im*, OEB and DD *-eŋ*, *-en*, *-em*). The attested individual rhyme correspondences are summarised in Table 3.

Table 3. Rhyme correspondences *C_ii(C_f)

PB	Tib	OEB	DD
*-ik	*-ig*	*-e(k)*	*-e(ʔ)*
*-iŋ	*-iŋ*	*-eŋ*	*-eŋ*
*-ip	*-ib*	*(-ip)*	*-ep*
*-im	*-im*	*-em*	*-em*
*-in	*-in*	*-en*	*-en*
(*-it	*-id*	*-i(ʔ/k/t)*	*-i*)

(*-is	*-is*	*-i(ʔ/t)*	*-i*)
(*-ir	*-ir*	*-ir*	*-ir*)
(*-il	*-il*	*-i*	*-i*)

Because palatalisation of the onset is a secondary Tibetan innovation preceding high vowel /i/ except for the sibilant /s/ where this innovation is shared by Dakpa-Dzala, the reconstructed Proto-Central Bodic forms would have the general format *C_i^{j}iC_f, but the underlying Proto-Bodic forms, from which the Other East Bodish and Dakpa-Dzala forms directly descend, have the general format *C_iiC_f.

(041) ‘louse’ Kh *’se*, Bt *sek*, Kt *se* ~ *sê*, DkM & DkD *ɕeʔ*^{53}, Dz *she* ~ Tib *śig* < PCB *s^{j}ik < PB *sik, Chi 蝨 *srit* < *sri[k]

(042) ‘wood, tree’ DkM & DkD *ɕeŋ*^{55}*.ma*^{53}, DkW *ɕeŋ*^{55}, DkB *ɕeŋ*^{53}, Bt *seng* (vD15), Kh *seng* ~ Tib *śiṅ* < PCB *s^{j}iŋ < PB *siŋ, Chi 薪 *sin* < *si[ŋ]

(043) ‘field’ DkD *leŋ*, Kh *leng*, Kt *sa.leng*, Tib *źiṅ* < PCB *l^{j}iŋ < PB *liŋ, Chi 田 *den* < *l^{ʕ}iŋ

(044) ‘heart’ DkW & DkB *neŋ*^{53}, Dz *’neng*, Bt *neng.ma* (vD15) ~ Tib *sñiṅ* < PCB *sn^{j}iŋ < PB *niŋ, Chi 仁 *nyin* < *niŋ ‘kindness’

(045) ‘house’[29] DkM & DkD *chem*^{53}, DkW & DkB *khem*^{53}, Dz *khem* ~ Tib *khyim* < PCB *k^{hj}im < *q^{y}im < PB *qim, Bur *im* < *Qim, Chi 窨 *‘imH* < *q(r)[ə]m-s ‘subterranean room’

(046) ‘day’[30] Dz *nyen.te*, Kh *nen*, Bt *nyen*, Kt *nen* ~ Tib *ñin* < PCB *n^{j}in < PB *nin

(047) ‘eye’ DkM & DkD *meʔ*^{53}, DkW & DkB *mek*^{55}, Bt *mek* ~ Tib *mig*, OTib *dmyig* < PCB *m^{j}ik < PB *mik

(048) ‘ripe’ Bt *men*^{44}*.na*^{43} (IT21), Kh *men*^{44}*.nʌ*^{22} (IT21), Kt *’men.pa*, DkM *men*^{35} ~ Tib *smin-pa* < PB *(s)min, Bur *mhañ̃ʔ* < *^{ʔ}miŋʔ

In the cognate sets ‘one’ and ‘name’, the Chinese evidence has vowel /e/, not /i/. According to Hill (2019: 13) these sets are evidence that Kurtöp did not participate in the Tibetan innovation of raising and fronting of vowel /e/ to /i/ before velars. It is my current understanding that the underlying Proto-Bodic forms in ‘one’ and ‘name’ also have vowel /i/, with the correspondence between Proto-Bodic vowel /i/ and Chinese

[29] The Other East Bodish evidence is not available due to a lexical innovation.

[30] Palatalisation of the onset in Dzala and Bumthang is likely a contact-induced secondary development.

vowel /e/ holding, but with a subsequent phonological change from /i/ back to /e/ affecting only the Dakpa-Dzala and Other East Bodish varieties.

(049) ‘one’ DkM & DkD *the*ʔ^{53}, Dz *the*, Kh *thek*, Bt *thek*, Kt *thek* ~ Tib *gcig* < PCB *(g)tʲik < PB *tik[31], Chi 隻 *tsyek* < *tek ‘one of a pair’

(050) ‘name’ DkM, DkD, DkW, DKB *meŋ*^{35}, Bt *meng* (vD15), Kh *meng* ~ Tib *miṅ*, OTib *myiṅ* < PCB *mʲiŋ < PB *miŋ, Chi 名 *mjieng* < *C.meŋ

In a considerable number of lexemes, we can find that many varieties, in particular the Dakpa-Dzala varieties, but also the Other East Bodish varieties to various degrees, have followed the Central Bodic innovation of raising and fronting the vowel /e/ to /i/ again due to Tibetan and Dzongkha language contact, affecting non-velar rhymes first. In some cases, such as ‘leopard’, ‘long’, ‘berry’ and ‘last year’, only one variety has preserved the predicted rhyme.

(051) ‘leopard’ Kh *zek* (but Bt *zik*, Kt *zî*, DkM, DkD, DkW & DkD *zik*^{35}, Dz *zik*) ~ Tib *gzig* < PCB *zik < PB *dzik (for the onset, cf. §10.1.2)

(052) ‘year’ Kh *’neng*, Bt *’neng*, Kt *’neng* (but DkM, DkD, DkW, DkB *niŋ*^{53}, Dz *ning*) ~ Tib *niṅ* < PB *niŋ, Chi 年 *nen* < *C.nˤiŋ

(053) ‘long’ BtC *reng.sheng.la* (but Kt *ring.ku*, BtU *ring.shing*, DkM, DkD, DkW & DkB *riŋ*^{35}*.ko*^{53}, Dz *ring.ku*) ~ Tib *riṅ-po* < PB *riŋ

(054) ‘last year’ Kh *na.neng* (but Bt *na.ning*, DkM & DkD *na*^{35}*.niŋ*^{35}, DkW & DkB *ɳi*^{35}*.niŋ*^{53}) ~ Tib *na-niṅ* < PB *na.niŋ

(055) ‘affirmative copula (equational)’ Kh *wen*, Bt *wen* (vD15), Kt *wen* (but DkM & DkD *jin*^{35}, DkW *xin*^{53}, DkB *xin*^{55} (Lù02: 381), Dz *yin* ~ *hin*) ~ Tib *yin* < PB *win

(056) ‘flute’ Bt *zheng*, Kt *zheng* (but DkM, DkD & DkB *tʂhi*^{55}*.liŋ*^{55}, DkT *ke.ling*[32]) ~ Tib *gliṅ-bu* < PCB *glʲiŋ < PB *gliŋ

(057) ‘tasty’ DkW & DkB *lem*^{35}*.mo*^{53}, Kt *lem.to.ka* (but DkM, DkD *lim*^{35}*.po*^{53}, Dz *lim.to.ken*) ~ Tib *śim-po* < *lʸim < PCB *lʲim < PB

[31] Notably, the Proto-Central Bodic form could not have been *(g)tʲek and the Proto-Bodic form could not have been *(g)tek as is partially suggested by Hill (PB *(g)tʰek < *gtʸek, Hill 2019: 12), because this would have resulted in Dakpa-Dzala and Other East Bodish rhyme *-ik* not *-ek*, cf. §3.2.

[32] Cf. Tibetan *rgya-gliṅ ~ kar-gliṅ ~ rkaṅ-gliṅ* ‘trumpet’ and Tshangla *ka.liŋ* ‘trumpet’.

*lim, Nam *ḥldyim* (Thomas 1948: 331), Chi 甜 *dem* < *lˤem 'sweet'[33]

(058) 'negative copula (equational)' DkM, DkD, DkW & DkB *men*^{35} (but Kh *min*, Bt *min* (vD15)) ~ Tib *min* < PB *min

(059) 'berry' Dz *mrep* (but Kt *mrip*, Bt *ma.rip* ~ *mi.rip*) ~ Dzo *sbyi*, Tib †*sbrib* < PB *mrip

The correspondence does not hold for the dentals stop, sibilant and lateral rhymes *-it, *-is, and *-il, and presumably *-ir, where we find rhymes with vowel /i/ in all varieties.

(060) 'cool' DkM & DkD *si*$^{˧55}$, DkW & DkB *si*^{55}, Kt *si* ~ Tib *bsil-po* < PCB *(b)sil

(061) 'dew drop' DkM, DkD & DkW *zi*$^{˧35}$*.pa*^{53}, Kt *zi.pa* ~ *ziu* ~ *zi.wa* ~ *zir.pa*, Tib *zil.pa* < PCB *zil

(062) 'wrap (something, someone)' DkM *kriʔ*^{35}, DkD *griʔ*^{35}, DkB *grit*^{35}, Tib *dkri-pa* ~ *dkris-pa* ~ Kt *thri* < PB *(d)kris[34]

(063) 'lead along' DkM & DkD *khriʔ*^{53}, DkW *khriu*^{55}, DkB *khrik*^{53}, Dz *khri* ~ *khrid*, Kh *khri*, Tib *ḥkhrid-pa* < PCB *(ḥ)kʰrit

In other cases where the vowel remains /i/ in all varieties, we may presume later Central Bodic loans like 'round' or 'cat'; substrate forms, like 'honey, nectar1'; or, in the case of 'drip (v); drop (n)', an onomatopoeic form, as is also indicated by the divergent onsets of 'honey, nectar1' and 'cat' (for the Dakpa-Dzala palatal fricative onsets when preceding vowel /i/, instead of predicted dental fricative onsets, cf. §7.2).

(064) 'drip (v); drop (n)' DkM & DkD *tik*^{55}*.ja*^{35}, DkW & DkB *thik*^{55}, Dz *thig.pa*, Kt *thik.pa*, Tib *thig-pa* < PCB *tʰik

(065) 'honey, nectar1' Dz *zhing* ~ Kt *zing*, DkT *sing.sur* 'bee' < *ziŋ^{35}

(066) 'cat' Dz *zhim.bu* ~ *zhi.bu.la*, Kt *zhim.bu.la*, Kh *zyim.ja*, BtU *zhim.ba.li* (DDC18:70), BtC *zhim.ja* ~ *zhim.nya*, Bt *zhim.nyae* (vD15), DkM & DkD *ʑin*^{35}*.po*^{53}, DkB *ʑin*^{35}*.po*^{53}, Tib *źi.mi* ~ *źim.bu* < PCB *zʲim

[33] As Hill (2019: 15-16) remarked, the Chinese cognate with rhyme *-em* needs some further explanation.

[34] Note, that in addition to the Written Tibetan forms, we can possibly differentiate rhymes *-it and *-is through the Dakpa Bāngxīn reflexes *-ik* (< *-it) versus *-it* (< *-is).

[35] The source language is probably Gongduk *ziŋ*, cf. §11.1. Tibetan has unrelated *braŋ-rtsi*, a compound of 'bee, fly' and 'juice'.

(067) ‘round’ DkM & DkD *chir*^{55}*.mo*^{53}, Dz *khir.khir*, Kt *gir.gir*, Kh *gir*^{44}*.ger*^{42} ~ *k*^{h}*ir*^{22}*.k*^{h}*ir*^{42} (IT21), Tib *ḥkhyir-ba* ‘turn around’ < PCB *(ḥ)k^{hj}ir < PB *(ḥ)k^{h}ir

*§3.2. *C$_i$eC$_f$ > C$_i$iC$_f$ if Cf = {k, t, n, r, s}*

Unlike Tibetan, which has retained vowel /e/, the Other East Bodish and Dakpa-Dzala varieties have raised and fronted the vowel /e/ to /i/ in some closed rhymes, namely rhymes with coda /k, t, n, r, s/, and in open rhymes for Other East Bodish but not for Dakpa-Dzala. The evidence is hitherto absent for rhymes with coda /ŋ, l/, whereas the available evidence for rhymes with coda /p, m/ indicates the rhyme with vowel /e/ is preserved in all varieties. The attested individual rhyme correspondences are summarised in Table 4.

Table 4. Rhyme correspondences *C$_i$eC$_f$

PB	Tib	OEB	DD
*-ek	*-eg*	*-i(k)*	*-i(k)*
*-et	*?*	*-i(t/k)*	*-i*
*-en	*-en*	*-i(m)*	*-i(m)*
*-es[36]	*?*	*-i(s/t)*	*-i(s)*
*-er	*-er*	*-ir*	*-ir*
*-el	*?*	*?*	*?*
*-eŋ	*?*	*?*	*?*
(*-ep	*-ep*	*-ep*	*-ep*)
(*-em	*-em*	*-em*	*-em*)

There are several cognate sets in which at least one variety confirms to this correspondence, while some other varieties may show later loan influence.

(068) ‘support on’ Dz *ti* (< *tik?*), Kt *ti* (< *tik?*) ~ Tib *bteg-pa*[37] < PB *(b)tek

[36] Note that Bialek (2018: 29, fn. 72) mentions that the sound change *-es > -*i* and the loss of final -*s* are characteristic of Proto-Archaic Tibetan and its descendant languages.

[37] Although Hill contends that *all* Tibetan -*eg* changed into -*ig*, that examples of Tibetan -*eg* are only found in the present stem of verbs, and that palatalisation of the onset is not a precondition for this sound change (Hill 2019: 13), this is not the case, for

(069) ‘good’[38] DkM, DkD & DkB *li*^{35}*.khu*^{53} (< *lik.ku*), Dz *’li.gu ~ li.gu* (< *lik.ku*), Kt *li.mu* ~ Tib *legs-po* < PB *lek

(070) ‘nail (finger-)’[39] DkM & DkD *zi*$^{\cdot 35}$*.po*^{53}, DkW *zim*^{35}*.poŋ*^{55}, DkB *zi*^{35}*.puŋ*^{53}, Dz *zim.po ~ zi.pong* ~ Bt *si.ma* (DDC18, vD15), Kh *sim.ba ~ si*^{44}*.ma*^{22} *~ ts*^{h}*i*^{44}*.m*ʌ^{22} (IT21), Kt *tsim.ba* ~ Tib *sen.mo* < PB *sen.mo

(071) ‘yellow’[40] DkM & DkD *si*^{55}*.ru*^{53}, Dz *sir.po*, BtU *sir.ti*, Bt *sir.sir.ma* (vD15), Kt *sir.ti*, Kh *sir.ti* (TAB), Md *sit* ~ Tib *ser-po* < PB *ser

(072) ‘gold’[41] BtU *sir* ~ Tib *gser* < PB *(g)ser

In two cognate sets, the comparative Tibetan evidence is absent (cf. §9.1). The present correspondence indicates that a comparison of Proto-East Bodic *(s)nes ‘seven’ with Tibetan *gñis* is untenable.

(073) ‘seven’ DkM & DkD *nis*^{55}, Dz *’ni*, Kt *nis ~ ’ni*, DkW & DkB *ɳi*^{55}, Kh *nyit*, Bt *’nyit ~ ’nyis* < PEB *(s)nes

(074) ‘stay, live, reside’ Kt *ni ~ nit*, Bt *nyit* (vD15), Kh *nik*, DkW & DkB *ɳi*^{3542} < PEB *net

In rhymes with a bilabial nasal or stop the vowel /e/ is regularly preserved in all varieties.

(075) ‘full (water)’ DkM & DkD *tem*^{35}, DkW & DkB *dem*^{35}, Dz *tem.tem*, Kt *te.ma* (< *tem.ma*), Tib *ltem* < PB *(l)tem

---

example, the present *ḥdegs*, past *btegs*, future *gteg*, and imperative *thegs* ‘lift, raise’ (Hill 2010a: 200) as cognate of ‘support on’.

[38] The coda *-k* of the root was reanalysed as the onset of the adjective suffix in the Dakpa-Dzala varieties. The Dzala forms, alternating between vowel /i/ and /e/, indicate that the change from predicted vowel /i/ to the vowel /e/ is likely contact-induced, under influence from Tibetan *legs-po* and Dzongkha *legs-ź́im* [läz̩im], loan contamination with the latter form would also explain the loss of the coda in the Other East Bodish varieties.

[39] Since the onset of the PB suffix *mo became the coda of the PB root *sen in the Other East Bodish and Dakpa-Dzala varieties, this explains the bilabial coda. A new suffix, *-ba* in Other East Bodish, *-poŋ* in Dakpa-Dzala, was added. The main irregularity is with the onset of the root, *z-* in Dakpa-Dzala, *s-* in Tibetan and Other East Bodish except Kurtöp which has *ts-* and some varieties of Khengkha which have *ts*^{h}*-*. This has yet to be explained.

[40] The rhotic coda of the first morpheme in the Dakpa Mámă and Dakpa Dáwàng forms for ‘yellow’ is reanalysed as the onset of the second morpheme (the adjective marker). Dakpa Wénlàng and Dakpa Bāngxīn ‘yellow’ are later Tibetan loans.

[41] All varieties except Bumthang Ura have later Tibetan loans.

[42] Note that, at least in the Dakpa-Dzala varieties, these forms meaning ‘stay’ are also used as a copula in possessive phrases.

(076) ‘spit’ DkW & DkB *tep*^{53}, Kt *thep*, Tib *(thu-lu) ḥdebs-pa* < PB *(ḥ)deps

(077) ‘press down’ DkM, DkD & DkB *nep*^{53}, Dz *neb*, Kt *nep* ~ Tib †*snems-pa* ~ †*sneps-pa* < PB *(s)nep

In ‘hail’ and ‘nail’, an underlying rhyme with vowel /e/ when preceded by a non-palatalised onset is reflected in all varieties as rhymes with vowel /e/. Either these forms were borrowed in the Dakpa-Dzala and Other East Bodish varieties from Tibetan, replacing phonologically similar inherited forms with vowel /i/, or the Dakpa-Dzala and Other East Bodish proto-languages did not have these concepts, and later borrowed them from Tibetan.

(078) ‘hail’ DkM & DkD *ser*^{55}*.wa*^{53}, DkW *ser*^{55}*.ba*^{55}, DkB *ser*^{55}*.pa*^{53}, Kh *ser.wa*, BtU *ser.wa*, BtC *ser.ba*, Kt *ser.wa*, Tib *ser-ba* < PCB *ser-ba

(079) ‘nail’ DkM, DkD, DkW & DkD *zer*^{35}, Kt *zer*, Kh *chan.zer*, Bt *chan.zer*, Tib *gzer* < PCB *(g)zer

*§3.3. *$C_i uC_f$ > $C_i oC_f$*

I presume that the closed Tibetan rhyme *-uC_f* corresponds to Other East Bodish and Dakpa-Dzala closed rhyme *-oC_f*, with lowering of the back vowel /u/ to /o/. The comparative Chinese evidence indicates that this is an innovation of Other East Bodish and Dakpa-Dzala deriving from *-uC_f. Interestingly, Burmese has made the same innovation as Other East Bodish and Dakpa-Dzala, but only before velars (Maung Wun’s Law, Hill 2019: 60–62). The lowering of the back vowel /u/ > /o/ is also attested in open rhymes for Other East Bodish, but not for Dakpa-Dzala (§6.1). The combination of sound correspondences §3.3 and §6.1 (*$C_i oC_f$ > Other East Bodish *$C_i uC_f$* but Dakpa-Dzala and Tibetan *$C_i oC_f$: *$C_i oC_f$*) implies that in Dakpa-Dzala there has been a merger of closed rhymes *-oC_f* and *-uC_f* to *-oC_f*. While we can find that correspondence §3.3 holds unequivocally in the velar rhymes *-uk and *-uŋ, the picture is mixed for most other rhymes, hence earlier assertions that the correspondence holds for velar rhymes only. However, this may rather indicate that either the sound change is still ongoing and slowly spreading through the lexicon of the individual varieties, or that phonetically very similar later Tibetan and Dzongkha loans replaced the inherited forms in most other rhymes.

The individual rhyme correspondences are summarised in Table 5.

Table 5. Rhyme correspondences *-uC$_f$

PB	Tib	OEB	DD
*-uk	*-ug*	*-o(k)*	*-o(k/ʔ)*
*-uŋ	*-uŋ*	*-oŋ*	*-oŋ*
*-up	*-up*	*-op*	*(-up)*
*-um	*-um*	*-om*	*-om*
*-ut	*-ud*	*-ot*	*(-ut ~ -yt)*
*-un	*-un*	*(-un)*	*-on*
*-us	*-us*	*-os ~ -ot*	*-os*
*-ur	*?*	*-or*	*?*
*-ul	*-ul*	*-ol ~ -oi*	*-ol ~ -oi*

Examples of this correspondence can be found in a large number of concepts. In several cognate sets, some of the varieties have later Tibetan loans, while in other cognate sets, a few idiosyncratic forms indicate that the sound correspondence also holds, and that forms with rhyme *-uC$_f$* in the Other East Bodish and Dakpa-Dzala varieties are later loans.

(080) ‘six’ Bt *grok* (vD15), Kh *gro*, DkM & DkD *kroʔ^{35}*, DkW & DkB *grok^{35}*, Dz *gro* ~ Tib *drug* < PB *kruk, Chi 六 *ljuwk* < *k.ruk, WBur *khrok* < *kruk

(081) ‘poison’ Kt *doo ~ dô*, Dz *do*, DkW *do^{35}* (but DkM, DkD & Dkb *tuk^{35}*) ~ Tib *dug* < PB *duk

(082) ‘thick’ Kt *tok.ti*, Dz *tog.pu* (but DkM, DkD, DkW & DkB *tuk^{55}.po^{53}*) ~ Tib *stug-po* < PB *(s)tuk

(083) ‘pour’ Kt *yo ~ yok*, Kh *yo* (< *yok*), Dz *log*, DkW, DkD, DkB *lok^{35}*, DkW *lo^{35}.gu^{55}* (< *lok^{35}*) ~ Tib *lug-pa* < PB *luk

(084) ‘drink’ DkM & DkD *toŋ^{55}*, DkW & DkB *thoŋ^{55}*, Dz *thong*, Kt *thong*, Bt *thong* (vD15), Kh *thong* ~ Tib *ḥthuṅ-ba* < PB *(ḥ)t^{h}uŋ

(085) ‘be born; sprout’ DkM, DkD, DkW & DkB *khroŋ^{53}*, Kh *krong*, Bt *khrong* (vD15), Tib *ḥkhrung-ba* < PB *(ḥ)k^{h}ruŋ

(086) ‘catch, hold’ DkM, DkD, DkW & DkB *zoŋ^{35}*, Dz *zong*, Kt *zong*, Kh *zong* ~ Tib *bzung-ba* < PB *(b)zuŋ

(087) ‘pile up’ DkD, DkD, DkW, DkB *poŋ^{53}*, Dz *pong*, Kh *pong* ~ Tib *spuṅ-ba* < PB *(s)puŋ

(088) ‘come out’ DkM & DkD *tɕoŋ*^{35}, DkB *tɕhoŋ*^{53}, DkW *ʑoŋ*^{35}, Dz *zhong*, Kt *jong*, Kh *jong*, Md *bʑʱoŋ* (B16) ~ Tib *ḥbyuṅ-ba* < PB *(ḥ)bʲuŋ

(089) ‘shoulder’ DkB *pom*^{55}*.pa*^{53} (but DkM & DkD *pu*^{55}*.pa*^{53}, DkW *pum*^{55}*.pa*^{55}, DkT *pum.pang*, Dz *pung.pa*)[43], Kh *pong.ma*, Bt *pong.ma*, Kt *pong.ma* ~ Tib *dpuṅ-pa* < PB *(d)puŋ

(090) ‘bury’ Kt *yop*, Kh *ɟop* (TAB) (but DkM, DkD & DkB *lup*^{35}, Dz *lub*)[44] ~ Tib *rlubs* < PB *lup

(091) ‘three’ DkW *som*^{55} (but DkM, DkD & DkB *sum*^{53}, Dz *sum*, Kh *sum*, Bt *sum* (vD15, DDC17), Kt *sum*) ~ Tib *gsum* < PB *(g)sum, Chi 三 *sam* < *sr[u]m, Bur *suṃḥ* < *suṃḥ

(092) ‘cheese’ Dz *phrom* (but DkT *pʰrum* (TAB), Kh *phrum*, Bt *phrum*) ~ Tib *phrum* < PB *phrum

(093) ‘elbow’ DkD *krom*^{35}*.tɕoŋ*^{53}, DkB *grom*^{35}*.tɕoŋ*^{53} (but DkM *krum*^{35}*.tɕuŋ*^{53}, DkW *grum*^{35}*.tɕuŋ*^{55}*.la*^{55}, Dz *grum.cung.la* ~ *gum.cung.la*, BtU *gru.mang.ti*, BtC *ru.mang.ti* (DDC17: 76), Kt *dru.ma.ling*) ~ Tib *gru-mo* < PCB *gru.mo < PB *grum, Chi 肘 *trjuwX* < *t.kruʔ

(094) ‘break2’ Bt *throm* (vD15, but Dz *trum*) ~ Tib *dkrum-pa* < PB (d)krum

(095) ‘join, link, connect’ Bt *thot* (vD15), Kh *tʰot* (TAB), Kt *thot* (but DkM & DkD *tut*^{53}, DkW & DkB *thyt*^{53}, Dz *thud*) ~ Tib *mthud-pa* < PB *(m)thut

(096) ‘manure’ Bt *yot*, Kh *yoth*, Kt *yot* (but DkM & DkD *løn*^{55}, DkW *lyn*^{55}, DkB *lon*^{55})[45] ~ Tib *lud* < PB *lut

(097) ‘winter’ DkD *kon*^{55}*.te*^{53} and DkB *gon*^{35}*.te*^{53} (but DkM *kun*^{35}*.ne*^{31}, DkW *gun*^{35}*.tshe*^{55}, Dz *gun*, Kt *gun*, Bt *gun*, Kh *gun*) ~ Tib *dgun* < PB *(d)gun

---

[43] The unexpected Dakpa-Dzala forms in ‘shoulder’ with rhyme *-uN* not *-oŋ* indicate these are later Tibetan loans in the Dakpa-Dzala varieties except in Dakpa Bāngxīn. In Dakpa Mámă and Dakpa Dàwáng, elision of the nasal coda is unexpected. The bilabial nasal coda in Dakpa Wénlàng and Dakpa Bāngxīn is conditioned by the bilabial stop onset of the second morpheme.

[44] These are likely later Tibetan loans.

[45] These are later Tibetan loans.

(098) ‘bone’ DkT *ros.pa* (TAB), Kh *rot.pa*, Bt *rot.pa* (vD15), BtU *ros.pa*, Kt *ros.pa* ~ *rot.pa* ~ Tib *rus-pa* < PB *rus.pa[46]

(099) ‘silver’ Bt *ngoi*, Kt *ngoi*, Dz *ngoe* (sic *ngoi*, but DkM & DkD *ŋy˞[55]*, DkW & DkB *ŋy[55]*, Kh *ngui*) ~ Tib *dṅul* < PB *(d)ŋul ~ < PB *ŋul

Other cognate sets, where all known varieties, including the Other East Bodish varieties, have *-uC$_f$* rhymes indicate that these forms are later Tibetan loans, at least in the Other East Bodish varieties. However, if for a certain concept a form with rhyme *-oCf* can be attested in any of the varieties, this would indicate that the form was inherited in that particular variety (but still borrowed in the other varieties).

(100) ‘wait’ DkM, DkD & DkB *kuk[35].sa[35]*, Kt *guk ni*, Tib *sgug-pa* < PB *(s)guk

(101) ‘strength’ DkM, DkD, DkW & DkB *ɕuk[53]*, Dz *shug*, Kt *shu* ~ *shuk*, Tib *śugs* < PB *sʲuk

(102) ‘thunder (v)’ DkM & DkD *bruʔ[53].koŋ[55]*, DkW *bruk[35].dir[35]*, DkB *bruk[35].koŋ[53]*, Tib *ḥbrug ldir* ~ Kh *druk ding*, Kt *dru dir* < PB *(ḥ)bruk

(103) ‘stick’ DkM & DkD *cuk[55].pa[53]*, BtU *juk.pa*, Kt *juk.pa*, Tib *rgyug-pa* < PB *(r)gʲuk.pa

(104) ‘cut’ DkM, DkD, DkW & DkB *tup[53]*, Dz *tub*, Bt *tup* (vD15), Kt *tup*, Tib *gtub-pa* < PB *(g)tup

(105) ‘help’ DkW & DkB *rup[35].te[53]*, Kt *rup*, Tib *rub-pa*[47] < PB *rup

(106) ‘sheath, cover’ BtC *shup*, BtU *shrup* (vD15), Kt *shup*, Tib *śubs* < PB *sʲup

(107) ‘oil’ DkM & DkD *num[53]*, DkB *num[55]*, Dz *ʼnum*, Kt *ʼnum*, Tib *snum* < PB *(s)num

---

[46] Sagart (2014) compared Tibetan *rus* ‘bone’ to Chinese 律 *lwit* < *[r]ut ‘pitch-pipe (odd-numbered)’, and Hill (2019: 256) suggests, with the additional example Chinese 糲 *lat* < *(mə-)rˤat ‘rice’, Tib *ḥbras* ‘rice’ < *ḫmras, that Tibetan may have merged the dental stop and the dental sibilant rhymes (Hill, p.c. 23/08/2021), also adding the example Lashi *ʔpɔtH* ‘knee’, OTib *spus-mo*, Tib *pus-mo* (Hill 2019: 229). The East Bodish evidence here indicates that this must already have been a feature of Proto-Bodic, with as only exception the Khengkha form *put.mong* in ‘knee’ but see there the Gongduk form *put.muŋ*. However, the fact that the Other East Bodish forms for ‘knee’ (515) do not have rhyme *-os* or *-ot* but rhyme *-us* or *-ut* (or *-un*), indicates that these are likely later Tibetan loans.

[47] In an interesting case of semantic change meaning ‘attack, assault, gang up or join up with evil intent’.

(108) ‘cured cheese’ DkC *thyn*^{53}, DkM *thyn*^{53}, Dz *thud*, Bt *thut*, Kt *thut*, Tib *thud* ~ *ḥthud* < PB *(ḥ)thut

(109) ‘centre, middle’ DkW & DkB *but*^{35}, Dz *bud.ka*, Kt *but*, Tib *dbu* ~ *dbus* < PB *(d)bus

(110) ‘blow’ DkW & DkB *byt*^{35}, Dz *bud*, Kt *but*, Kh *but* (TAB), Tib *ḥbud-pa* < PB *(ḥ)but

(111) ‘bellows’ Dz *bud.pa*, Bt *but.pa*, Kh *but.pa*, Tib *sbud-pa* < PB *(s)but

(112) ‘peel off’ DkM, DkD, DkW *tɕhut*^{53}, DkW *ɕyt*^{55}, Dz *shud*, Tib *bśud-pa* < PB *(b)sʲut

(113) ‘corner’ Dz *zur*, Bt *zur*, Kt *zur*, Tib *zur* < PB *zur

(114) ‘bend (v); bent (adj)’ DkM & DkD *kur*^{35}*.mo*^{53}, DkW & DkB *kur*^{55}*.po*^{53}, Kt *kur*, Tib *sgur-po* < PB *(s)gur

(115) ‘rot’ DkM & DkD *riː*^{35}, DkW & DkB *ry*^{35}, Dz *ri*, Kh *rui*, Kt *rui* ~ Tib *rul-ba* < PB *rul

But in ‘wind’, where Dakpa-Dzala has an innovation, Bumthang *-oŋ* corresponds to Tibetan, Kurtöp and Khengkha *-uŋ*: the Kurtöp and Khengkha forms are likely later Tibetan or Dzongkha loans. The Bumthang forms derive from Tibetan *kloṅ* ‘space, expanse’, the Khengkha and Kurtöp forms likely derive from Tibetan *gźi-kloṅ* ‘basic space’, rather than from Tibetan *rluṅ* ‘wind’, because the Other East Bodish forms do not follow the *l- > *j-* innovation (§6.6).

(116) ‘wind’ Bt *’long* (vD15), BtU *’long*, BtC *zho.long* (but Kh *lung*, Kt *zhi.lung*) ~ Tib *rluṅ* < PB *luŋ

Maybe, the forms for ‘thread’ also derive from a single Proto-Bodic root *krut, with Other East Bodish *-ot* > *-on* because of the nasal onset of the second morpheme.

(117) ‘thread’ BtC *’ron.man*, Kh *krot.man* (TAB), BtU *kron.man*, Kt *’rot.man* < *kron.man < *krut.man ~ DkM, DkD, DkW & DkB *kut*^{55}*.pa*^{53}, Tib *skud-pa* < PB *(s)krut.pa

The Tibetan evidence is absent and ambiguous for Dakpa-Dzala and Other East Bodish in ‘take off’ and ‘swallow’ (we would predict Tibetan †*ñud*).

(118) ‘take off’ Kt *prot*, Kh *plot* ‘untie’ (but Dz *plud*) < PEB *plut?

(119) ‘swallow’ Kt *myot ~ nyot*, Kh *ɲot* (TAB) (but also Kh *myut*, and DkM & DkD *ŋut*^{53}*.thoʔ*^{53}, DkW & DkB *ŋyt*^{35}*.pu*^{53}) ~ Tib *mid-pa* < PEB/PB *mʲut?

There is only one partial cognate set, lacking the cognate Dakpa-Dzala and Tibetan evidence, that would confirm this sound change for the rhyme *-ur*. On the basis of the information in §6.8, we would predict an underlying form *Klur (*glur or *klur > *gʲur or *kʲur > *zhror ~ zhor*): perhaps these forms are related to Tibetan *skyur.ba* 'sour'[48].

(120) 'liquor' Kh *zhor*, Bt *zhror* (vD15), Kt *zhor* < POEB *kʲur > *klur? ~ Dz *chang* ~ Bt *chur.ma* (DDC18, vD15), Kh *chur.ma* (Dorji forthcoming)

In the case of the third person pronoun, there appears to have been semantic change between the third person singular (Dakpa-Dzala) and the third person plural (Other East Bodish), with a Tibetan cognate lacking. Here, it is Tibetan that has innovated with a gender-distinctive third person singular pronoun (masculine *kho*, feminine *mo*) and a third person plural pronoun that may derive from the honorific third person singular (singular *kho* > plural *khoṅ*). Dakpa-Dzala open vowel /e ~ i/ may be unrounding of the vowel of an intermediate form †*bø(ʔ)*. The Dakpa Wénlàng form, with vowel *-i*, is closely reminiscent of Proto-Western Kho-Bwa *bi 'the other' (Bodt 2021: 21), a third person anaphoric pronoun (thought to be cognate with Tibetan *mi* 'person'), and Proto Bodo-Garo *Bi[1] 'he, she' (Joseph and Burling 2006: 129).

(121) '3sg / 3pl' Bt *bot* 'they, 3pl' (vD15), Kh *bot* 'they, 3pl', Kt *bot* 'they, 3pl', DkW & DkD *pe*^{35} 'he/she (3sg)', DkW *bi*^{35} 'he/she (3sg)', DkB *be*^{35} 'he/she (3sg)', Dz *be* 'he/she (3sg)' < PB *but[49] ~ Tib *kho ~ mo* (3sg); Tib *khoṅ* (3sg honorific)

The case of the concepts 'silver' (099) above and 'to buy' (122) here is curious. While the Dzala, Bumthang and Kurtöp forms for 'silver' on rhyme *-oi* represent an older, inherited Bodish layer following the regular correspondence of PB *-uC$_f$ > OEB *-oC$_f$* (*-ul > *-ol > *-oi*), Bumthang and Kurtöp later borrowed the Tibetan form for 'silver', with the likely secondary meaning 'money', which then underwent semantic change to mean 'to buy' (*ŋul > ŋui*). To add to the complexity of these concepts, the Dakpa-Dzala forms for 'to buy' may be derived from the Tibetan form for 'to borrow', *rña-ba*, with the characteristic Dakpa-Dzala change *-a > *-e* (§5.1), whereas the attested Dakpa-Dzala forms for 'to borrow' (Dakpa Mámă, Dakpa Dáwàng, Dakpa Bāngxīn *ŋ̊ar*^{35}, Lù02: 379) are

[48] See also the information about the starter *skyur* used in making yoghurt from raw milk in §12.6: The same name is applied to the live yeast used for starting the fermentation process of alcohol. A distant cognate is probably Sindhupalchowk Thangmi *syor* 'juice of fermented rice' (Turin 2012: 894).

[49] Likely cognate is Basum *po*^{53} (Yìxī 1992: 116).

later Tibetan loans, with reanalysis of the *r*-prefix as the coda. Similarly, Dakpa Wénlàng ‘to borrow’ is cognate with Dzala ‘to buy’.

(122) ‘buy’ DkM & DkD *ŋ̊er*^{35}, DkW *ŋ̊eu*^{35} (< *ŋ̊e*^{35}), DkB *ŋ̊iu*^{35} (< *ŋ̊i*^{35}) ~ Dz *nge*, DkW *ŋeu*^{55} (< *ŋe*^{55} ‘borrow’) ~ Kh *ngi*, Bt *’ngüi* (vD15), Kt *ngui*, Tib *dṅul* ‘silver’ ~ Tib *ño-ba*

The comparison Tibetan *brña* < *brṅ^{y}a, Burmese *ṅhāḥ* ‘borrow’ is one of the examples Hill (2019: 25) cites for Houghton’s Law, but cf. the remarks in §10.1.1.

*§3.4. *-al > -ai*

Tibetan rhyme *-al* is reflected as rising diphthong rhyme *-ai* in Dakpa-Dzala and Other East Bodish, sometimes monophthongised to *-e*: DD *-ai* ~ *-e*, OEB *-ai* ~ Tib *-al*. Three examples are ‘frog’, ‘go’ and ‘wool’. We also find it, for example, in Other East Bodish ‘back’ (005).

(123) ‘frog’ DkM *be˞*^{35}*.pa*^{53}, DkD *pe˞*^{35}*.pa*^{53}, DkW *pai*^{55}*.po*^{55}, Dz *pae.po* (also *pe.po*), BtU *ba.bai*, BtC *bai.fai*, Kh *bae.pa.la* ~ Tib *sbal-pa* < *(s)bal

(124) ‘go’ DkM & DkD *ce?*^{35}, DkW & DkB *gai*^{35}, Bt *gai* (vD15), Kh *gae*, Tib *rgal-ba* ‘cross over, ford’ < PB *(r)gal[50]

(125) ‘wool’ DkT *bai*, Dz *bä*, Bt *bai*, Kt *be* ~ *bê*, Tib *bal* < PB *bal

Diphthongisation of lateral rhymes is common, cf. for example, the outcomes of rhymes *-ul* (*-ui* monophthongised to *-y*, §6.2) and *-ol* (*-oi* monophthongised to *-ø* ~ *-e*, §3.3 and §6.2), with a rising diphthong not possible for rhyme *-il* (hence monophthong *-i*, §3.1).

However, diphthongisation of lateral rhymes is also attested in spoken Tibetan varieties, and hence is not a defining phonological innovation of Other East Bodish and Dakpa-Dzala alone.

*§3.5. *P^{j}- > C- ~ ɕ- if V = {a, o, u}*

The onset clusters of bilabial stops and glide medials in Tibetan are palatalised in the Dakpa-Dzala and Other East Bodish varieties and then result in palatal stops, palatal affricates, or palatal fricatives when preceded by the rhymes {a, u} and probably {o}. The actual reflex outcome depends on the voicing and aspiration of the onset, but also on the following rhyme. Prefixes in Tibetan that reflect Proto-Bodic

[50] That Tibetan ‘to cross over, to ford (a river)’ and Dakpa-Dzala and Other East Bodish general ‘to go’ are cognate is significant, as this indicates that rivers – and the need to cross them – were of importance for the Dakpa-Dzala and Other East Bodish ancestors.

prefixed phonemes or morphemes result in slight variation in the aspiration of the onset. We would predict unvoiced aspirated reflexes *tɕʰ-* or *cʰ-* of onset *pʰʲ- in Other East Bodish, but evidence is lacking.

Table 6. Reflexes of palatalised bilabial onsets

PB	Tib	OEB	DkM & DkD	DkB, DkW & Dz
*pʰʲ-	*phy-*	*(pʰ-)*	*tɕʰ-*	*ɕ-*
*bʲ-	*by-*	*dʑ- ~ ɟ-*	*tɕ-*	*ɕ- ~ ʑ-*

Several cognate sets reflect this correspondence, although all are for the voiced bilabial onset.

(126) ‘bird’ DkM & DkD *tɕa*^{35} (but DkM, DkD, DkW & DkB *ri*^{35}*.ɕa*^{35} ‘pheasant’ indicates < *ɕa*^{35}) ~ DkW & DkB *ɕa*^{35}, DkT *ʑa* (TAB), Dz *zha* ~ Kh *ja*, Bt *jau.ya*, Kt *jaw.ya* ~ *ja* ~ Tib *bya* < PB *bʲa

(127) ‘summer’ DkM *tɕa*^{55}*.re*^{31}, DkD *tɕa*^{55}*.te*^{53} ~ DkW *ɕar*^{35}*.te*^{55}, DkB *ɕa*^{35}*.te*^{53}, Dz *zhar.te* ~ Kt *jar*, Kh *jar*, Bt *ja* ~ Tib *dbyar* < PB *(d)bʲar

(128) ‘come out’ DkM & DkD *tɕoŋ*^{35}, DkB *tɕhoŋ*^{53} ~ DkW *ʑoŋ*^{35}, Dz *zhong* ~ Kt *jong*, Kh *jong*, Md *bʑʱoŋ* ~ Tib *ḥbyuṅ-ba* < PB *(ḥ)bʲuŋ

The only exception can be found in the Other East Bodish forms for ‘broom’ and ‘sweep’, both having the same etymological origin. These lexemes were probably borrowed into Other East Bodish from Tibetan after the palatalisation of the onset had taken place in Tibetan, with subsequent fronting of the vowel to /i/ in Other East Bodish (§6.3). The divergent rhyme reflexes in the Dakpa-Dzala varieties similarly indicate these are later Tibetan loans. As external evidence, the Tshangla form *pʰak* ‘sweep’ confirms that the underlying form was not palatalised.

(129) ‘broom’ DkM, DkD & DkB *tɕhap*^{55}*.tham*^{55}, DkW *mai*^{35}*.ɕak*^{55}*.tam*^{5551}, Dz *shag.tam* ~ *shag.tsam* ~ Kt *phik.sang*, Bt *phik.saŋ* (MM94) ~ Tib *phyags-ma* < PCB *pʰʲak < PB *pʰak

(130) ‘sweep’ DkM & DkD *bu*^{35}*.tɕhaʔ*^{53}, DkB *tɕhat*^{53} ~ DkW *ɕak*^{55}, Dz *me.shâ.ma* ~ Kt *phi* ~ *phik* < PCB *pʰʲak < PB *pʰak

[51] The morpheme *mai*^{55} in the Dakpa Wénlàng form for ‘broom’ and the morpheme *me* in the Dzala form for ‘sweep’ are curious: Could this be a cognate with Other East Bodish forms for ‘house’?

This phonological development can also be observed in spoken Tibetan varieties, and this is therefore not a uniquely Dakpa-Dzala and Other East Bodish innovation.

An important question is whether the palatalisation of the bilabial onsets before vowels other than the high vowels {i, e} (§4.3) in Tibetan is a secondary development, like with the velar onsets (§4.2), or whether palatalised bilabial onsets were a feature of the Proto-Bodic language itself.

§4. PHONOLOGICAL RETENTIONS OF BOTH DAKPA-DZALA AND OTHER EAST BODISH

I have identified nine correspondences, where Dakpa-Dzala and Other East Bodish have the same phonological retention from the ancestral language, whereas Tibetan has made an innovation.

*§4.1. *l- : l- if V = {i}*

In a correspondence called 'Benedict's Law' (Hill 2019: 14–16, after Benedict 1939: 215; also, Michailovsky and Mazaudon 1994: 553), Dakpa-Dzala and Other East Bodish *l-* corresponds to Tibetan palatal fricative onsets *ś- ~ ź-*, in which Dakpa-Dzala and Other East Bodish have retained the simple onset *l- but Proto-Central Bodic and subsequently Tibetan has palatalised this onset before high vowel /i/: PB *l: DD *l-*, OEB *l-* ~ PB *l > PCB *lʲ- >Tib *ź-* ~ *ś-*.

(131) 'field' DkM & DkW *leŋ*^{35} (Lù86), Dz *leng*, Kh *leng*, Kt *sa.leng* ~ Tib *źiṅ* < *lʸiṅ < PCB *lʲiŋ < PB *liŋ, also Chi 田 *den* < *lˢiŋ

(132) 'tasty' DkW & DkB *lem*^{35}*.mo*^{53}, Kt *lem.to.ka*, DkM, DkD *lim*^{35}*.po*^{53}, Dz *lim.to.ken* ~ Tib *śim-po* < *lʸim < PCB *lʲim < PB *lim, Nam *ḥldyim* (Thomas 1948: 331), Chi 甜 *dem* < *lˢem 'sweet'

(133) 'bow' DkM, DkD, DkW & DkB *li*^{35}, Dz *li*, BtU *li*, BtC *li.mai*, Kt *li.mi* ~ OTib *gźi* < *glʸi (but Tib *gźu* < *glʸu) < PCB *(g)lʲi < PB *li, also OBur *liy* and Chi 矢 *syijX* < *l̥ijʔ 'arrow'

However, in one case, the Other East Bodish varieties also have palatal fricative onsets, and only Dakpa-Dzala has the simple onset, with cognate Tibetan evidence absent due to an innovation. This indicates that this lexeme was borrowed in the Other East Bodish varieties after the palatalisation of the onset in Proto-Central Bodic, with Dakpa-Dzala preserving the Proto-Bodic form.

(134) ‘red’ DkM & DkD *leu*^{55}, DkW & DkB *liu*^{35}, Dz *liu* ~ *leu* ~ Bt *shin.di* (vD15) ~ *zhin.di*, Kt *zhin.ti* < PCB **l^{j}in* < PB **lin* ~ Tib *dmar-po* (innovation, predicted †*śin-po*)

This original Proto-Bodic form for ‘red’ may still be reflected in the Tibetan / Dzongkha loan *li-waṅ* ‘orange’, i.e. ‘bright red’, in Bumthang (DDC18: 58), Kurtöp (KD 2016: 209) and Dzala (DDC17: 81).

The correspondence also holds in ‘four’, which indicates that the plosive onset is derived from a prefix, otherwise we would predict the onset reflexes above. The preservation of the lateral medial in ‘four’ was also observed by Shafer (1954: 350).

(135) ‘four’ DkM & DkD *pli*^{53}, DkW & DkB *bli*^{35}, Dz *bli*, Kh *ble*, Bt *ble* ~ *blä* (vD15) ~ Tib *bźi* < **bl^{y}i* < PCB **b-l^{j}i* < PB **b-li*, also OBur *liy*, Chi 四 *sijH* < **s.li[j]-s* (Hill 2019: 14)

*§4.2. *K- : K- if V = {i, e}*

According to Hyslop, “all [East Bodish] languages have palatal stops” (2015: 280). However, I could find consistent evidence for a phonemic distinction between palatal stops (c, c^{h}, marginally ɟ) and palatal affricates (tɕ, tɕ^{h}, dʑ) only in Dakpa Mámă and Dakpa Dáwàng. Hyslop also remarked “... but it is clear with comparative evidence that at least some of those stops are recent innovations from velar or labial plus palatal glide combinations in syllable onset position” (Hyslop 2015: 280). Indeed, the Dakpa-Dzala palatal stops can be shown to correspond to Tibetan velar stop and palatal glide onset clusters when preceding vowels /i, e/. The spoken Tibetan varieties have either palatal stops (like most dBus, gTsang and sTod varieties) or palatal affricates (like Dzongkha) as reflex of these clusters. Dakpa Mámă and Dakpa Dáwàng thus follow spoken Central Tibetan varieties, bearing witness to their longer and closer association with Central Tibetan, and are unique among the Dakpa-Dzala varieties to have adopted this innovation. The Other East Bodish varieties, and also Dakpa Bāngxīn, Dakpa Wénlàng and Dzala, on the other hand, retain a velar stop onset without any subsequent palatalisation. These correspondences are thought to derive from Proto-Bodic simple velar onsets when preceding high vowels {i, e}, with a subsequent Tibetan innovation of secondary palatalisation, i.e. OEB *K*-, Dz, DkW & DkB *K*-, DkM & DkD *C*-, Tib *Ky*- < PB *K- (*K-) if V = {i, e}.

Table 7. Non-palatalisation of velar-palatal onsets

PB	Tib	OEB	DkM & DkD	DkW & DkB	Dz
*k-	*ky-*	*k-*	*c- ~ c^{h}-*	*k-*	*k- ~ k^{h}-*
*k^{h}-	*khy-*	*k^{h}-*	*c^{h}-*	*k^{h}-*	*k^{h}-*
*g-	*gy-*	*g-*	*c-*	*g-*	*g-*
*rg^{j}-	*rgy-*	*tɕ- ~ dʑ-*	*c-*	*tɕ- ~ dʑ-*	*ky- ~ gy-*

In general, the Tibetan onset clusters of a velar plosive and a glide medial *Gy-* are reflected as simple velar onsets in Other East Bodish, Dzala, Dakpa Bāngxīn and Dakpa Wénlàng but as palatal stops in Dakpa Mámă and Dakpa Dáwàng. In the latter varieties, we must either presume that these lexemes were borrowed from Tibetan after the palatalisation of the onset, or a parallel sound change due to contact language influence from spoken Tibetan varieties.

(136) 'like; (be) happy' DkM & DkD *ce^{55}.po^{53}* ~ DkW & DkB *kit^{55}.po^{53}*, Dz *kid.pa*, Kh *khi.to.nga*, Kt *kit.pa* ~ Tib *skyid-po* < PCB *(s)k^{j}it < PB *(s)kit

(137) 'lay egg; sprout; be born' DkM & DkD *ce$^{:55}$* ~ Kh *ke* (but DkW & DkD *ci$^{:55}$*, Kt *ce*)[52] ~ Tib *skyes-pa* < PCB *(s)k^{j}e < PB *(s)ke

(138) 'potato'[53] DkM & DkD *che^{53}* ~ Dz *khe*, Kt *ki*, Bt *ki*, Dzo *ke.wa*, Tib *skyi.ba* < PCB *(s)k^{j}i < PB *(s)ki

(139) 'ice' DkM & DkD *chen^{53}* ~ DkT *khet* (TAB), Dz *kheg*, Kh *khe*, BtC *kit.pa*, Kt *kit.pa* ~ Dzo *ḥkhyeg ~ khyegs* < PCB *(ḥ)k^{hj}et < PB *(ḥ)k^{h}et

(140) 'round' DkM & DkD *chir^{55}.mo^{53}* ~ Dz *khir.khir* (but Kt *gir.gir*) ~ Tib *ḥkhyir-ba* < PCB *(ḥ)k^{hj}ir < PB *(ḥ)k^{h}ir

(141) 'split, crack, burst' DkM & DkD *cer^{35}* ~ DkW & DkB *ger^{35}*, Kt (*jan*) *ge*, Tib *ḥgyes-pa* < PCB *(ḥ)g^{j}es < PB *(ḥ)ges

Non-palatalisation of the onset cluster also holds in 'dog', with the Tibetan form deriving from *k^{hw}i via *k^{hj}i (see §7.1). This indicates that the Tibetan and Dakpa-Dzala innovation *w- > *j-* predates the palatalisation of the onset in Tibetan.

(142) 'dog' DkM & DkD *chi^{53}* ~ DkW & DkB *khi^{55}* (but Kt *khwi*, Bt *khwi* (vD15), Kh *khui* (i.e. *k^{h}wi*)) ~ Tib *khyi* < PCB *k^{hj}i < PB *k^{hw}i

[52] The palatal stop forms indicate that these are later Tibetan loans in these varieties.

[53] The aspiration in the Dakpa-Dzala forms is unexpected.

The correspondence also holds between Dakpa-Dzala and Tibetan in cases where the Other East Bodish evidence is absent.

(143) ‘house’ DkM & DkD *chem*^{53}, DkW & DkB *khem*^{53}, Dz *khem* ~ Tib *khyim* < PCB *k^{hj}im < *q^{y}im < PB *qim, Bur *im* < *Qim, Chi 窨 *ʻimH* < *q(r)[ə]m-s ‘subterranean room’

In the concept ‘cheap’, Dakpa Mámă and Dakpa Dáwàng have palatal stop onsets, but there is no palatal media in Tibetan. The reason why there is no palatalisation in Tibetan is unknown.

(144) ‘cheap’ DkM & DkD *che*^{55}*.po*^{53} ~ DkW *kheu*^{55}, DkB *khe*^{55}*.po*^{53}, Dz *khe.tog.to*, Kt *khe.to.ka*, Tib *khe-po* < PB *k^{h}e

Where all Dakpa-Dzala and Other East Bodish varieties either have a palatal stop or a palatal affricate, instead of simple velar onsets, when preceding vowels other than /i, e/, and Tibetan does not have a *rgy-* onset, we must presume later Tibetan loans, where Other East Bodish and Dakpa-Dzala borrowed a Tibetan form with a palatalised onset, as is also evidenced by the unexpected rhyme reflexes.

(145) ‘save somebody’ DkM & DkD *cop*^{53}, DkB *tɕop*^{53}, DkW & DkB *suŋ*^{53}*.tɕop*^{55}, Kt *sung.cop*, Tib *sruṅ-skyob, skyob-pa*

(146) ‘protect’ DkM & DkD *suŋ*^{53}*.cap*^{53}, DkW & DkB *suŋ*^{53}*.tɕop*^{55}, Kt *cap*, Tib *skyabs-pa, sruṅ-skyob*

(147) ‘poor’ DkM & DkD *coʔ*^{53}*.po*^{53}, DkB *dʑo*^{35}*.po*^{53}, Kt *co.mu*, Tib *skyo-po*

(148) ‘frost’[54] DkW *tɕhak*^{55}, DkB *tɕha*^{53}, BtC *chak.pa*, Kt *chak.pa* ~ *cha.wa* ~ *châ.wa*, Tib *ḥkhyags-pa* < *(ḥ)k^{hj}ak ‘be cold’?

Notably, Dakpa Mámă and Dakpa Dáwàng sometimes have palatal stop onsets when velar onsets precede the vowel /a/ in rhymes with a lateral or rhotic coda (/al, ar/, as the examples ‘go’, ‘dry’ and ‘spin (wool, cotton)’ indicate.

(149) ‘go’ DkM & DkD *ceʔ*^{35} ~ DkW & DkB *gai*^{35}, DkW *ga*^{35}, Bt *gai* (vD15), Kh *gae*, Tib *rgal-ba* ‘cross over, ford’ < PB *(r)gal

(150) ‘white’ DkM & DkD *cher*^{55}*.po*^{53} ~ DkW & DkB *khe*^{55}*.ru*^{53}, Dz *khe.ru*, Bt *khar.ti* (DDC18), Bt *khar.khar.ma* (vD15), Kt *khar.ti* ~ Tib *dkar.po* < PB *(d)k^{h}ar

(151) ‘spin (wool, cotton)’ DkM & DkD *che*^{ː55} ~ DkW *khi*^{55}, DkB *khe*^{55} ~ Tib *ḥkhal-ba* < PB *(ḥ)k^{h}al

[54] The Other East Bodish rhyme reflexes are also unexpected, we would predict rhyme *-ik*, cf. §6.4.

In the example ‘dry’, Tibetan has unexpectedly not palatalised the velar onset in the form *skem*, which is the cognate of the Dakpa-Dzala forms where Dakpa Mámă and Dakpa Dáwàng have the predicted palatal stop onset.

(152) ‘dry’ DkM & DkD *cem*^{55}*.pha*^{53} ~ DkW *kem*^{55}*.ɲi*^{55}, DkB *kem*^{55}*.mo*^{53}, Tib *skem* ~ Kh *kam*, Bt *kam*, Kt *kam*, Tib *skam.po* < PB *(s)kam

In ‘blood’, the Tibetan and Other East Bodish forms evidence a closed rhyme, whereas the Dakpa-Dzala forms indicate an open rhyme. In this case, it may simply be that the forms are not cognate, with distinct roots, Proto-Dakpa-Dzala *ke, Proto-Other East Bodic *kak, Proto-Central Bodic *k^{h}rak. Note that Other East Bodic ‘blood’ cannot derive from Proto-Bodic *k^{h}rak (cf. §4.5). I suspect that Other East Bodish *kak ‘blood’ can be attributed to a Black Mountain Monpa substrate, cf. *kɔk* (Gerber 2020b: 9, although Gerber attributes the Monpa form to an East Bodish substrate).

(153) ‘blood’ DkM & DkD *ce*ʔ^{53}, Dz *ke*, DkW & DkB *ki*^{53} < PDD *ke ~ Bt *kak*, Kt *kâ* < POEB *kak ~ Tib *khrag*

In the likely Central Bodic loan ‘be afraid’ in Dakpa-Dzala, there is an unexpected correspondence between a simple palatal onset in Dakpa-Dzala and a rhotic medial in Tibetan.

(154) ‘be afraid’[55] DkM & DkD *chak*^{53}*.ka*^{35}, DkW & DkB *tɕa*^{53} < PDD *(s)k^{h}ak ~ Tib *skrag-pa* < PCB *(s)krak < PB *(s)krak

There are noted exceptions to the retention of simple velar onsets in Dakpa-Dzala and Other East Bodish, where these varieties have palatalised the onsets as in Tibetan, resulting in palatal stops in Dakpa Mámă and Dakpa Dáwàng, palatal affricates in Dakpa Wénlàng and Dakpa Bāngxīn, palatal stops or affricates in Other East Bodish, and a palatalised velar onset in Dzala. The cognates in Tibetan are written as onset clusters of a velar stop and a palatal medial preceded by a rhotic prefix in Tibetan (sometimes, there is evidence from Dzongkha only).

Based on work by Coblin (1986: 21–22), Gong (2000 [2002]: 171) and Handel (2009: 211–217), Hill (2019: 197–198 ‘Coblin’s conjecture’) proposes that the correspondence of Chinese *Tr with Tibetan *rT-* (*sic*. *Tr-*) has to be reconstructed to *rT in the proto-language and in Old Chinese, with subsequent metathesis to *Tr-* in Middle Chinese while

[55] The Other East Bodish varieties have forms cognate with other Tibetan lexemes meaning ‘be afraid’: Kh *dhe*, Tib *ḥdrog-pa* and Kt *pret*, Tib *bred-pa*.

Tibetan conservatively preserved the *rT*-clusters.[56] Hill (2019: 200–201, 'Pulleyblank's conjecture') continues by proposing on basis of Pulleybank (1965: 206–7) and Gong (2002: 171) that metathesis of a rhotic pre-initial *rC- in Proto-Trans-Himalayan led to a medial rhotic *Cr- in Old Chinese, where Tibetan lost the rhotic pre-initial and Middle Chinese either lost or preserved the medial rhotic.

However, for the examples of 'hundred' and 'eight', Li Fang-kuei (1959: 59) had earlier suggested Tibetan change *ry- > *rgy-*, with Hill (2019: 22–23) providing additional examples and distinguishing Pre-Tibetan *ry- from *r^{y}- (which Hill indicates resulted in Tibetan *ź-*, parallel to *l^{y}- > *ź-*, Benedict's law). Hill (2019: 23–24) furthermore states that this change was relatively recent and probably still operating in Old Tibetan, with Jacques (2021: 145) adding that it may have been more of a phonotactic constraint converting the cluster *rj- to *rg^{j}-* than a single sound change. Both Hill (2019: 23–24) and Jacques (2021: 145) observe that the Kurtöp evidence suggests that this change predates the split of the East Bodish languages from Tibetan, with as alternative possibilities borrowing (Jacques indicates this is less likely)[57] or parallel sound changes.

I am not sure which hypothesis to support. Perhaps the sound change *ry- > *rgy-* took place before the split of Dakpa-Dzala and Other East Bodish from Tibetan. This presumes that the Other East Bodish and Dakpa-Dzala varieties subsequently palatalised the onset *rgy-* to palatal stops or affricates as also happened in spoken Tibetan. This also tacitly implies that while Tibetan palatalised the velar onsets *K- > *Ky-*, perhaps in analogy with the palatalisation of the velar onset *ry- > *rgy-*, the Other East Bodish and Dakpa-Dzala (except Dakpa Mámă and Dakpa Dáwàng) varieties did not make the same analogical change but retained simple velar onsets. Alternatively, all concepts with Tibetan onset *rgy-* where the Other East Bodish and Dakpa-Dzala varieties (including Dakpa Wénlàng, Dakpa Bāngxīn and Dzala) have palatal onsets instead of simple onsets are later borrowings from Tibetan. Because the rhymes of many of the concepts below do not match the prediction for the Other East Bodish varieties (see §6.4, we predict Kurtöp *jik.pa* 'stick',

[56] Cf. also Old Tibetan *rmaŋ* 'horse, steed' vs. Written Burmese *mraŋ* 'horse'.

[57] Jacques' (2020: 145) remark that this is an unlikely loan because '... 'eight' in Kurtöp does not resemble Dzongkha, the main Tibetan language of Bhutan' is based on an incorrect assumption: Kurtöp, like many languages of eastern Bhutan, was in contact with spoken varieties of Tibetan, rather than Dzongkha, until and even after the incorporation into Bhutan in the mid-17th century, both through religion, through trade, and through administration.

Bumthang *jik.pa.la* ‘fat’, Kurtöp *jit* ‘eight’), I tend to favour the second hypothesis. This conclusion is particularly relevant in light of the value attached to reconstructions like ‘sweet buckwheat’ (see §12.5). For the time being, I have reconstructed this correspondence as Proto-Bodish *rgʲ- (i.e. *rgy[58]-), however, I tend to favour the idea that the Dakpa-Dzala and Other East Bodish comparative forms are borrowed, not inherited.

(155) ‘stick’ DkM & DkD *cuk[55].pa[53]* ~ BtU *juk.pa*, Kt *juk.pa* ~ Tib *rgyug-pa* < PB *rgʲuk.pa

(156) ‘sweet buckwheat’ DkM & DkD *caː[55].pre[53]* ~ DkW *tɕa[55].bre[55]*, DkB *dʑa[35].bre[35]* ~ Dz *kya.phre* ~ Tib *rgya-bra* < PB *rgʲa.bra ~ Bt *ca.rai*, Kt *ca.ra*, Dzo *rgya-red* ~ *rgyas-red* < PB *rgʲa.ras

(157) ‘fat’ DkM & DkD *ca[35].kha[53]* ~ DkW & DkB *dʑak[35].pa[53]*, Kh *jak.pa.la*, Bt *jak.pa.la*, Tib *rgyags-pa* < PB *rgʲak.pa

(158) ‘intestines’ DkM & DkD *cu[35].ma[53]* (but DkW *ʑu[35].mo[55]*, Dz *zhu.mo*, DkB *dʑu[35].mo[53]*)[59] ~ Kt *jo.ma*, Kh *jo.ma*, Bt *jo.ma* ~ Tib *rgyu-ma* < PB *rgʲu.ma

(159) ‘back(-wards)’[60] DkM *cam[35]*, DkD *cap[35]* ~ DkW & DkB *dʑap[35]*, Dz *gyab* ~ *jab*, Tib *rgyab* < PB *rgʲap

(160) ‘eight’ DkM & DkD *cen[35]* (but DkW & DkB *get[35]*)[61] ~ Dz *gyad* ~ Kh *jat*, Bt *jat* (vD15, DDC18), Kt *jat* ~ Tib *brgyad* < PB *(b)rgʲat

(161) ‘victory’ DkM & DkD *ceː[35].kha[53]* ~ DkW *dʑe[35].kha[53]*, DkB *dʑe[35].kha[53]* (but Kt *gel.kha*) ~ Tib *rgyal-kha* < PB *rgʲal.kʰa

(162) ‘country’ DkM & DkD *ceː[35].khap[53]* ~ DkW & DkB *dʑa[35].khap[55]* (but Dz *gäl.khab*, Kt *ge.khap* ~ *gel.khap* ~ *je.khap*)[62] ~ Tib *rgyal-khab* < PB *rgʲal.kʰap

---

[58] Li Fang-kuei’s (1959: 59) and Hill’s (2019: 22–23) suggestion that Tibetan *rgy-* derives from *ry- seems plausible. As Dotson (2009: 187) suggests, the clan name *rGya* may similarly derive from older *Rhya* (*rʰya), with aspiration non-distinctive, i.e., *rya. Perhaps there is an orthographic reason behind this, with ཀྱ་ in handwritten script easily mistaken for ཀྲ་.

[59] The Dzala and Dakpa Wénlàng forms with a voiced fricative *ʑ-* are unexpected.

[60] The Other East Bodish varieties have forms cognate with another Tibetan form, Kurtöp *ke.do* < Tib *sgal*.

[61] These are probably Tibetan loans, predicted would be †*dzet*.

[62] These are Dzongkha loans, predicted would be †*dzel*.

*§4.3. *P- : P- if V = {i, e}*

Unlike Tibetan, the Other East Bodish and Dakpa-Dzala varieties did not palatalise the bilabial stops when preceding the vowels {i, e}: Tib *(s)Py-* ~ DD *P-*, OEB *P-* < *P- (if {V = i, e}), as the examples 'give' and 'flour' show for the voiced and the aspirated onsets.

(163) 'give' Dz *bi*, Bt *bi* (vD15), Kh *bi*, Kt *bi* ~ Tib *sbyin-pa ~ byin-pa* < PCB *(s)bʲi < PB *bi

(164) 'flour' Dz *phe*, Kh *phi*, Kt *phi* ~Tib *phye* < PCB *pʰʲe < PB *pʰʷe, Bur *phwai* < *poi 'chaff, bran'

The correspondence also holds between Other East Bodish and Tibetan in 'calf (leg)', where Dakpa-Dzala has a lexical innovation.

(165) 'calf (leg)' Bt *bin.ma* (DDC18, vD15), Kt *bin.ma* ~ Tib *sbyin-ma ~ byin-ma* < PCB *(s)bʲin.ma < PB *bin.ma

Where this correspondence only holds for Other East Bodish (and Dzala), and the Dakpa varieties (in Tibet) have palatal affricates or fricatives as predicted when preceding other rhymes (like in §3.5), we may assume later Tibetan loans in these latter varieties.

(166) 'outside' DkM, DkD *tɕhin*^{55}, DkW *tɕhi*^{55}, DkB *tɕhe*^{55}, Tib *phyi* ~ DkT *pʰit.ka* (TAB), Dz *phid.ka*, Kh *phi.to*, Kt *bi* (~ *chi*) < PCB *pʰʲi(s) < PB *pʰi(s)

(167) 'open (v)' DkM & DkD *ɕiʔ*^{53}, DkW *ɕi*^{53}, DkB *ɕit*^{53}, Tib *phyi* 'outside'? ~ Kt *phi* ~ *phir* ~ *phis* < PB *pʰi(s) (≠ Tib *phye* < *ḥbyed-pa* 'open (v)')

(168) 'sand' DkM, DkD *tɕe*^{35}*.ma*^{53}, DkB *dʑe*^{35}*.ma*^{55}, DkW *dʑe*^{35}*.ma*^{55}, Tib *bye-ma* ~ DkT *be.tsa*, Dz *be.tsa*[63], Kt *be.ma*, BtC *be.ma* (Donohue 2020: 39), BtU *ba.ma* (Donohue 2020: 39) < PCB *bʲe.ma < PB *be.ma

*§4.4. *n- : n- if V = {i, e}*

Unlike Tibetan, the Dakpa-Dzala and Other East Bodish varieties did not palatalise the dental nasal onset *n- before high vowels {e, i}, which is a Tibetan innovation. Where Bumthang and Dakpa-Dzala have a palatal nasal, this may be considered contact language influence.

[63] These two forms are perhaps loans, cf. Tsh. *be.tsa*.

(169) ‘sun’[64] Kt *ne*, BtU *ne* (but BtC *nyi* and DkM, DkD, DkW & DkB *ŋi*^{35})[65], Kh *ne* ~ Tib *ñi-ma* < PCB *nʲi < PB *ni, Chi 日 *nyit* < *C.nik, OBur *niy*

(170) ‘day’ Kh *nen*, Kt *nen* (but Bt *nyen* and Dz *nyen.te*) ~ Tib *ñin* < PCB *nʲin < PB *nin

(171) ‘heart’ DkW & DkB *neŋ*^{53}, Dz *’neng*, Bt *neng.ma* (vD15) ~ Tib *sñiṅ* < PCB *(s)nʲiŋ < PB *(s)niŋ, Chi 㤲 *nyin* < *niŋ ‘kindness’

While in ‘seven’ and ‘stay, live, reside’ Dakpa Mámă, Dakpa Dáwàng, Dzala and Kurtöp have a dental nasal onset, Dakpa Wénlàng, Dakpa Bāngxīn and Bumthang have the palatal nasal onset *ɲ-*, with the Khengkha evidence inconclusive. Presumably, the palatalisation in Dakpa Wénlàng, Dakpa Bāngxīn and Bumthang is secondary, conditioned by the high vowel /i/ that is the regular outcome of rhyme *-eC$_f$ (§3.2) and in analogy with the same sound change in Tibetan (§4.4 and §10.2.6).

(172) ‘seven’ DkM & DkD *nis*^{55}, Dz *’ni*, Kt *nis* ~ *’ni* ~ DkW & DkB *ŋi*^{55}, Kh *nyit*, Bt *’ɲit* ~ *’ɲis* (vD15, DDC18) < *(s)nes

(173) ‘stay, live, reside’ Kt *ni* ~ *nit*, Kh *nik* ~ DkW & DkB *ŋi*^{35} ~ Bt *nyit* (vD15) ~ DkM & DkD *neʔ*^{35} (< Tib *gnas-pa*) < PEB *net

Nonetheless, we can find the attestations of palatal nasal *ɲ-* in the Dakpa-Dzala and Other East Bodish varieties as the result of secondary developments, for example, from *ml- (via *mʲ-, §4.9, §5.3) or *ŋʲ- (§10.1.1).

(174) ‘arrow’ Kt *mya* ~ *nya* (KD16: 159), Bt *nya* (DDC18: 35) ~ DkM, DkD & DkB *bla*^{53} (Lù02: 367), DkW *mla*^{35} (Lù02: 367), Dz *mla* (DDC17: 63) ~ Tib *mdaḥ* < PB *mla(ḥ)

(175) ‘blue’ Kt *nyun.ti* ‘black’, BtU *nyon.di* ‘black’, Kh *ŋoŋ*^{42}*.tɛ*^{22}*.la*^{22} ‘black’ ~ *ŋuŋ*^{22}*ti*^{22} ‘black’ (IT21, but Kh *ŋun*^{24}*.ti*^{44}*.lʌ*^{21} ‘green’ IT21), WBur *ññui* < *ṅyuiw, Lashi *ŋja:uV* ‘green, blue, brown’ < *ŋʲon ~ Tib *sṅo* ~ *sṅon-po* ‘green, blue’, DkM, DkD & DkB *ŋau*^{55}*.po*^{55} ‘blue’, DkW *ŋau*^{55}, Dz *’ngou* ‘blue’ < PB *(s)ŋon

---

[64] The phonological developments in the Other East Bodish varieties are similar to those in Burmese, cf. Old Burmese *niy* vs. modern spoken Burmese ၎ *ne*^{22} (Dài and Huáng 1992).

[65] The Dakpa-Dzala forms mean ‘day’, as the Dakpa-Dzala varieties have a unique innovation for ‘sun’. Both Dakpa-Dzala ‘day’ and Bumthang Chume ‘sun’ are later Tibetan loans, we would predict Dakpa-Dzala *ŋe*^{35}.

(176) ‘few, little’ Kh *nying.wa* (but Kt *nging.ba*) ~ DkM & DkD *ŋ̊uŋ*^{35}*.po*^{53}, DkB *ŋ̊uŋ*^{35}*.ko*^{53}, Tib *ñuṅ-ba* < PB *ŋʲuŋ

We also find the palatal nasal in loans.

(177) ‘share, distribute equally’ Kt *’nyom*, DkM, DkD, DkB *ŋ̊om*^{55}, DkW *ŋ̊o*^{55}*.mu*^{55} (< *ŋ̊om*^{55}), Dz *’nyom*, Tib *snyoms-pa* < PB *(s)nʲom

*§4.5. *Kr- : Kr-*

As was already observed by Michailovsky and Mazaudon (1994: 551-552), both the Other East Bodish and Dakpa-Dzala varieties have retained clusters of a velar plosive onset and a rhotic medial, which is also reflected in the written Tibetan forms: OEB *Kr-*, DD *Kr-*, Tib *Kr-* < PB *Kr-. However, in the modern spoken Tibetan varieties these onset clusters are reflected as retroflex onsets, in general *kr- > *ʈ-* (~ *tʂ-*); *k^{h}r- > *ʈ^{h}-* (~ *tʂ^{h}-*); *gr- > *ɖ-* (~ *dʐ-*). Here, it is Tibetan that has innovated, with Other East Bodish and Dakpa-Dzala conservatively retaining the onset clusters. Although the correspondence is shared by Other East Bodish and Dakpa-Dzala, it not a uniquely identifying correspondence.

In several cognate sets, either the Other East Bodish varieties, the Dakpa-Dzala varieties, or both, have retroflex onsets under Dzongkha or spoken Tibetan contact influence. The fact that especially Dzala sometimes has an onset cluster and sometimes has a retroflex onset may indicate a later Dzongkha influence on Other East Bodish and Dzala, which did not affect the Dakpa-Dzala varieties in Tibet and Arunachal. These are either contact-induced developments, with spoken Tibetan and Dzongkha retroflex onsets in these lexemes replacing the original pronunciation, or the forms themselves were borrowed from spoken Tibetan or Dzongkha, indicating multiple layers of Bodic loans in addition to the inherited Proto-Bodic component. Examples are Kurtöp ‘disperse, spread’, Kurtöp and Bumthang ‘stir, mix, whip’, Kurtöp ‘wrap’, Dzala and Kurtöp ‘hawk’, and Dakpa-Dzala and Kurtöp ‘pattern’. As is more often the case, idiosyncratic attested forms, such as Bumthang Ura and Bumthang Chume ‘(wooden) box’, ‘hawk’ and ‘pattern’ and Dakpa-Dzala ‘counting’, ‘cry out’, ‘square’, ’feather’ and ‘line, row, series’ are the best indications that the Other East Bodish and Dakpa-Dzala varieties preserved the onset cluster, and that any other onsets are the result of later contact-induced changes or loans. Moreover, Kurtöp forms like for ‘wooden box’, ‘cry out’, ‘counting’, ‘line, row, series’, ‘square’ and ‘feather’, where Kurtöp follows Bodic Tibetan and Dzongkha with retroflex onsets, indicate the pitfall of relying on Kurtöp

as the standard comparative Other East Bodish language for historical comparative research. Better would be to use the often more conservative Khengkha or Bumthang varieties or, like here, to use multiple Other East Bodish varieties. That Bodic phonological innovations have been mainly adopted in Kurtöp is not surprising given the ancient and close religious, trade, matrimonial and other links between the Kurtö region and southern Tibet and western Bhutan.

(178) 'disperse, spread' Dz *kram*, DkD *kram* (TAB), Kt *tram* ~ *kha.tram*, Tib *bkram-pa* < PB *(b)kram

(179) 'stir, mix, whip' DkM & DkD *kroʔ^{53}*, DkB *krot^{53}*, Tib *dkrog-pa* 'churn' (cf. also *dkrug-pa* 'mix') ~ Kt *truk* ~ *trû*, Bt *hruk* (also *thruk*) < PB *(d)kruk

(180) 'wrap (something, someone)' DkM *kriʔ^{35}*, DkD *griʔ^{35}*, DkB *grit^{35}* ~ Kt *thri*, Tib *dkri-pa* ~ *dkris-pa* < PB *(d)kris

(181) 'be born, sprout' DkM, DkD, DkW & DkB *kroŋ^{53}*, Kh *krong*, Bt *khrong* (vD15), Tib *ḥkhrung-ba* < PB *(ḥ)k^{h}ruŋ

(182) 'wash (clothes); bathe (body)' DkM, DkD *khruʔ^{53}*, DkW *khrø^{55}*, DkB *khrut^{53}*, Dz *khrui*, Kh *khrog*, Bt *khro* (vD15), Tib *ḥkhrud-pa* ~ *ḥkhrus-pa* < PB *(ḥ)k^{h}rus ~ *(ḥ)k^{h}rut ~ *(ḥ)k^{h}rul

(183) 'lead along' DkM & DkD *khriʔ^{53}*, DkW *khriu^{55}* (< *khri^{55}*), DkB *khrik^{53}*, Dz *khri* ~ *khrid*, Kh *khri*, Tib *ḥkhrid-pa* < PB *(ḥ)k^{h}rit

(184) 'hawk' BtC *hra*[66], BtU *khra*, Tib *khra* ~ Dz *zha.thra*, Kt *thra* < PB *k^{h}ra

(185) 'pattern' BtC *hra*, BtU *khra*, Tib *khra* ~ DkM & DkD *tʂha^{53}.tʂha^{53}*, DkW & DkB *tʂha^{55}.lu^{55}*, Dz *thra*, Kt *thra* < PB *k^{h}ra

(186) 'hair (head)'[67] Dz *khra*, DkM, DkD, DkW & DkB *khra^{53}*, Bt *kra* (vD15), BtU *kra*, BtC *'ra*, Kt *'ra*, Tib *skra* < PB *(s)kra

(187) 'elbow' DkM *krum^{35}.tɕuŋ^{53}*, DkD *krom^{35}.tɕoŋ^{53}*, DkW *grum^{35}.tɕuŋ^{55}.la^{55}*, DkB *grom^{35}.tɕoŋ^{53}*, Dz *grum.cung.la* ~

[66] For the irregular Bumthang Chume forms with an aspirated apical trilled fricative before vowel /a/, cf. §8.4.

[67] From §8.4 we know that Bumthang Chume onset *'r-* derives from Proto-Bodic onset *kr-, and the same may hold for Kurtöp. However, the aspirated onsets in Dakpa-Dzala are unexpected, we would predict forms *kra* for all the Dakpa-Dzala varieties. Perhaps the aspiration can be attributed to the *s*-prefix reflected in the Tibetan evidence: while an s-prefix has a devoicing effect when preceding a voiced velar onset, it may (in the Dakpa-Dzala varieties) have the effect of aspiration on a voiceless velar onset.

gum.cung.la, BtU *gru.mang.ti*, Tib *gru-mo* < PCB *gru.mo < PB *grum

(188) '(wooden) box' BtU *grom*, Tib *sgrom* (but BtC *rom*, Dz *drom*, Kt *drom*) < PB *(s)grom

(189) 'cry out2' Dz (*ket*) *gre* (but Kt *dra*), Tib *sgra* < PB *(s)gra

(190) 'counting' Dz *grang.kha* (but Kt *drang.kha*), Tib *graṅs-ka* < PB *graŋ

(191) 'line, row, series' Dz *gre*, DkT *grai* (TAB, but Kt *dre*), Tib *gral* < PB *gral

(192) 'square' DkM & DkD *krup*^{35}*.zi*^{35} (but Dz *drup.zhi*, Kt *drup.zhi*), Tib *gru-bźi* < PCB *gru.b-lʲi < PB *gru.b-li[68]

(193) 'feather' DkM & DkD *kro*^{35} (but Kt *dro*, Bt *dro*, Dz *dro*), Tib *sgro* < PB *(s)gro

The distinct onset reflexes in 'roll' and Dakpa-Dzala 'ant' (Other East Bodish has a non-related form, likely a lexical innovation including *bruk* 'to dig') indicate that the Tibetan onset cluster *Kr-* in these cases derives from a Proto-Bodic prefix *K-r not an onset cluster *kr-, as is also attested in the Chinese comparative form for 'roll'.

(194) 'ant' DkM *ʂuk*^{55}*.pu*^{53}, DkD *ʂuk*^{55}*.po*^{53}, DkB *ʂru*^{55}*.po*^{53}, DkT *ɻuk.pu* (TAB) ~ Dz *hrog.po* ~ *'rog.po*, DkW *xrok*^{55}*.pu*^{55}, Tib *grog-mo* < PB *g-rok

(195) 'roll' Dz *hri*, DkM *kri*^{55}, DkM *riʔ*^{35}*.la*^{35}, DkD *ʐiʔ*^{35}, DkW & DkB *riu*^{35} (< *ri.u*), BtU *ri*, BtC *hri* ~ Tib *ɦkhri-ba* < PB *k-ri also Chi 糾 *kjiw* < *k-riw 'twist'

In some cases, loans in Dakpa-Dzala mean there is only limited comparative evidence from Other East Bodish and Tibetan, as in 'village' and 'tripe'.

(196) 'village' BtU *krong* (DDC18, vD15), Kh *krong* < PB *(s)groŋ

(197) 'tripe' BtU *kroth.pa*, Tib *grod-pa* < PB *grot

Finally, the Dakpa-Dzala and Other East Bodish forms for 'wheat' cannot be cognate to the Tibetan form. We would have either predicted preservation of the onset cluster *gr-*, or retroflex onsets. Simplification of the onset cluster *gr-* to *g-* has not been attested from the Dakpa-Dzala or Other East Bodish varieties. It also seems unlikely that the Dakpa-Dzala and Other East Bodish forms for 'wheat' (like Khengkha 'buckwheat', which may actually be 'wheat' as well) are related to the

[68] With *gru* 'angle, corner' and *b-li 'four', these are likely all loans.

Dzongkha form for ‘wheat’, *dkar*. Hence, we must conclude that the Other East Bodish and Dakpa-Dzala forms for ‘wheat’ are either a unique, shared lexical innovation, or a common loan with unknown source in all these varieties.

(198) ‘wheat’ DkM & DkD *ko*^{53}, Bt *go*, Kt *go* ~ Tib *gro*

There is one major exception to the correspondence PB *gr- : Tib *gr-*, OEB *gr-*, DD *gr-* above. This is the Tibetan innovation **gr-* > dr-. Shafer (1954: 351) already observed that where Dakpa-Dzala has a velar plus rhotic onset cluster, Tibetan has a dental plus rhotic onset cluster. Michailovksy and Mazaudon (1994: 552) also observed the same correspondence between Other East Bodish and Tibetan. Michailovsky and Mazaudon (1994: 552) and Shafer (1954: 351) attributed this correspondence mainly to a change *dr- > *gr-* in Other East Bodish and Dakpa-Dzala, respectively, but as Hill (2019: 61) remarked on basis of the Chinese and Burmese evidence, it is Tibetan that has innovated here, where Dakpa-Dzala and Other East Bodish have retained the underlying cluster, hence, Dakpa-Dzala *gr-* and Other East Bodish *gr-* ~ Tib *dr-* < PB *gr-. This was earlier also concluded by Dempsey (1995: 235–236), who wrote:

> “(...) *gr-* > *dr-* is quite plausible, since it follows a natural rule of assimilation: velar + apical → apical + apical. This kind of assimilation tends to occur whenever the second letter is "stronger" than the first, which, as we will see, is indeed the case in Tibetan, where the process began centuries ago: Any word spelled *gr-* or *br-* in classical Tibetan is now pronounced *dr-* (phonemic *ḍ-*) in modern Tibetan”.

Some examples of this correspondence are ‘heat’, ‘grime’, ‘mule’, ‘think’, and ‘six’. Sometimes, the Other East Bodish varieties (as mentioned before, particularly Kurtöp) have a retroflex onset, which is due to later Tibetan or Dzongkha loans.

(199) ‘heat’ Dz *grou*, Bt *krot*, Kh *kroth* ~ Tib *drod* < PB *grot

(200) ‘grime’ Dz *greg.pa*, Kh *krek.pa* (but Kt *trek.pa*) ~ Tib *dreg-pa* < PB *grek.pa

(201) ‘mule’ DkM & DkD *kreʔ*^{35} (but DkW and DkB *dʐe*^{35} and Dz *dre*), BtU *griu* (but BtC *riu* and Kt *dre*) ~ Tib *drel* < PB *grel

(202) ‘think’ DkM & DkD *kran*^{35}, Bt *kran* (vD15, but Kt *dran*) ~ Tib *dran-pa* < PB *gran

(203) ‘six’ DkM & DkD *kroʔ*^{35}, DkW & DkB *grok*^{35}, Dz *gro*, Bt *grok* (vD15), BtC *rok*, Kh *gro* ~ Tib *drug* < PB *kruk

In some cases, the Other East Bodish evidence is missing, but the correspondence holds between Dakpa-Dzala and Tibetan, as in ‘filth, dirt’, ‘cut, clip, lob, prune’ and ‘cry out1’.

(204) ‘filth, dirt’ Dz *grima* ~ Tib *dri-ma* < PB *gri.ma

(205) ‘cut, clip, lob, prune’ Dz *gra* ~ Tib *dra-ba* < PB *gra

(206) ‘cry out1’ DkM, DkD & DkW *krek*^{53}, DkB *gret*^{35} ~ Tib *grags-pa* ‘be known as’ < PB *grak

What these latter correspondences indicate to me, is that at the time Tibetan was committed to writing, the retroflexation of the voiced onset cluster *gr- > *ɖ*- was ongoing, while the retroflexation of the unvoiced and aspirated onset clusters had not yet commenced. Hence, while some lexemes, including those with unvoiced and unaspirated onsets, were ‘frozen’ in the old, non-retroflex written form as written Kr- clusters, a few instances of voiced onsets were written by another digraph that could represent a retroflex sound, namely *dr*-. This also explains why we do not find written Tibetan *tr*- and *thr*- to represent retroflex sounds. Dempsey (1995: 237) similarly concluded that dental assimilation affected some words with *gr*- in Tibetan before the language was committed to writing, and thus got spelled as *dr*-, whereas many other words with *gr*- only underwent the change sometime after they had received their *gr*- spelling in the written language.

I leave it up to experts on Tibetan historical phonology to assess this matter further. Important clues can be found in Bialek’s (2018) analysis. She discusses D-epenthesis (*zr- > *[zdr-]) with a subsequent merger between *[zdr-] and *zgr- (*sgr*-) and further reduction to *zɖ*- and *ɖ*- in the Western Archaic Tibetan varieties and to **(C)ɖʐ*- in Archaic Tibetan varieties. As the merger of *[zdr-] and *zgr- commenced in the Western Archaic Tibetan varieties and then spread eastward, this change may be dated following the Tibetan conquest of Źaṅ-źuṅ, i.e. after 630~644 CE (Bialek 2018: 15–17, 34–35). More and more attestations of *gr*- were realised as *dr*- in the spoken language in a ‘pull chain’ with an analogous sound change affecting two different onsets. While this is around the time that Tibetan was first committed to writing, most Old Tibetan documents date from much later, and this is why we find a mixture of *gr*- and *dr*- onsets in Written Tibetan. The fact that in many inherited concepts the Other East Bodish and Dakpa-Dzala varieties still have the *gr*- onset cluster in the attested forms indicates that the split of Other East Bodish and Dakpa-Dzala from Tibetan most certainly predates 630 CE.

*§4.6. *Pr- : Pr- if V = {a, o, u, e}*

As was already observed by Michailovsky and Mazaudon (1994: 551), before rhymes with vowels /a, o, u, e/, the Dakpa-Dzala and Other East Bodish varieties have retained the onset cluster of a bilabial stop onset and a rhotic medial, which is also reflected in the written Tibetan varieties but generally realised as a retroflex onset in spoken Tibetan varieties: DD *Pr-*, OEB *Pr-* and Tib *Pr-* < PB *(s)Pr- if V = {a, o, u, e}.[69] In Dzongkha, the rhotic medial is regularly replaced by a palatal medial (e.g., *spya* 'monkey', *byag* 'cliff').[70]

While attestations of onset clusters *pr-* and *pʰr-* are rare, those with onset cluster *br-* are numerous.

(207) 'monkey (macaque)' Dz *pra*, DkM *pra*^{53}, Bt *pra*, Tib *spra* < PB *(s)pra

(208) 'snatch away, seize' DkW, DkB *phrok*^{53}, Dz *phrog*, Kt *phruk*, Tib *ḥphrog-pa* < PB *(ḥ)pʰrok

(209) 'cheese' Dz *phrom*, DkT *pʰrum* (TAB), Kh *phrum*, Bt *phrum* ~ Tib *phrum* < PB *pʰrum[71]

(210) 'chest' DkM *praŋ*^{35}, DkW *braŋ*^{55}*to*^{55}, Kt *brang.to*, Tib *braṅ-khog* < PB *braŋ

(211) 'hut, temporary dwelling; animal pen' DkM, DkD *braŋ*^{53}, DkW & DkB *braŋ*^{35}, Dz *brang*, Kt *brang.sa*, Tib *braṅ* < PB *braŋ

(212) 'bitter buckwheat' BtU *bras.ma*, BtC *bran.ma* (< *brat.ma*?), Kt *bra.ma* 'Job's tears' (< *brâ.ma*?) < *bras.ma ~ DkM & DkD

---

[69] We can tentatively date the sound change from *Pr- to retroflex onsets in Central Tibetan varieties to somewhere in the second half of the 18th century. In one of the few maps by the Dutch explorer Samuel van de Putte (1690-1745) that was copied and hence preserved, and which probably dated to the 1730s, the area now known as Sikkim was called *Bra-ma-scjon* (Tib *ḥbras-ma-ljoṅ*) and the area now known as Bhutan as *Broukpa* (Tib *ḥbrug-pa*) (Gandolfo 2004: 109). In 1777, the English merchant John Stewart related George Bogle's account that the country of *Boutan* is called *Doc-po* (Tib *ḥbrug-pa*) by its inhabitants (Gandolfo 2004: 120), with a dental, i.e., retroflex onset, rather than the onset cluster. Similarly, to date, the Tshangla speakers of Dirang in Arunachal Pradesh, who got politically and partially culturally and linguistically separated from their brethren in eastern Bhutan in the late 17th century, continue to call these people Brukpa, not Drukpa like their Bhutanese counterparts now do.

[70] Note that varieties of Central Tibetan spoken in the ancient Kongpo region, as well as the highly divergent Basum language, simplify these onset clusters, e.g., Written Tibetan *brag-gsum* 'three cliffs' [baː.sum], *brag-yib* 'cliff shelter' [baː.ʾjiʔ], *sprel-ri* 'monkey mountain' [piː.ri].

[71] Interesting is the possible connection to Old Tibetan *prum* 'white' (Nathan Hill, p.c. 23/08/2021), cf. also perhaps Tshangla *pʰrom* 'snow'.

pre:^{35}, DkW & DkB *bre*^{35}*.mo*^{55}, Dz *bre.mo* < DD *bra.mo, Tib *bra-bo*, Dzo *byḥo ~ byow* < PB *bra.bo

(213) 'fly (n)' DkM *pra:*^{55}, Dz *prang*, Kt *brang*, Tib *sbraṅ-bu* < PB *(s)braŋ

(214) 'cliff' Dz *bra*, Kt *bra*, Tib *brag* < PB *brak

(215) 'seed' DkM & DkD *bru*^{53}, Dz *bru.na*, Kt *bro*, Tib *ḥbru* < PB *(ḥ)bru

(216) 'big grain measure' DkM & DkD *pre*^{35}, DKW & DkB *bre*^{35}, Dz *bre*, Kt *bre*, Bt *bre*, Tib *bre* < PB *bre

In addition, there are five concepts where Dakpa-Dzala has retained the *Pr-* onset also reflected in Tibetan, but the Other East Bodish evidence is either missing or inconclusive due to later Tibetan or Dzongkha loans.

(217) 'thin, fine, slender' DkM, DkD *phra*^{55}*.mo*^{53}, Tib *phra-ba* ~ Kt *prat.mi*

(218) 'meet' DkM, DkD, DkW, DkB *phret*^{55}, Kt *jel.thret* (cf. Dzo *mjal-phrad*), Tib *phrad-pa*

(219) 'plait, braid (hair, cane)' DkM, DkD, DkW, DkB *khra*^{53}*.phre*^{53}, Tib *lan.phran* 'braid of hair', *dbuḥ-ḥbreṅ* 'head braids' (Hill 2021: 91)

(220) 'thunder (v)' DkM & DkD *bruʔ*^{53}*.koŋ*^{55}, DkW *bruk*^{35}*.dir*^{35}, DkB *bruk*^{35}*.koŋ*^{53}, Tib *ḥbrug ldir* ~ Kh *druk ding*, Kt *dru dir* < PB *(ḥ)bruk

(221) 'write' DkM & DkD *pri*^{35}, DkW & DkB *bri*^{35}, Tib *ḥbri-ba*[72] ~ Kh *di*, Bt *dri* (vD15), Kt *dri*, Tib *ḥdri-ba* < PB *(ḥ)bri-ba

*§4.7. *mr- : mr-*

The regular reflexes of a Proto-Bodic onset cluster *mr- appear to be the Dakpa-Dzala onset cluster *mr-* and the Other East Bodish onset cluster *mr-*, but, following Simon's Law (Hill 2019: 28–29), Tibetan has onset cluster *br-*: DD *mr-*, OEB *mr-* ~ Tib *br-*. In the Bumthang forms, the vowel in the first syllable is probably epenthetic (see also Dakpa Wénlàng 'snake' below). The Dzongkha form for Dzala *dag.'mreb*, *sbyi*,

[72] As Hill (p.c., 23-08-2021) points out, both the Other East Bodish and the Dakpa-Dzala forms are Tibetan loans. While the Other East Bodish forms are based on the Old Tibetan present tense stem with onset *dr-* and retroflex onsets, the Dakpa-Dzala forms reflect the Old Tibetan the past tense stem with onset *br-* without the retroflex onset. These loans postdate the invention of the Tibetan script in 648 CE, as they are both based on the verb *ri 'to cut (e.g., letters in wood)' (Bialek 2018: 22).

suggests a Tibetan form *sbri ~ sbrib*, although this form has not been attested.

(222) 'berry' Dz *mrep*, Kt *mrip*, Bt *ma.rip ~ mi.rip*, Dzo *sbyi*, Tib †*sbrib* < PB *mrip

Other attestations of onset cluster *mr-* in individual Dakpa-Dzala and Other East Bodish varieties are unfortunately without the full comparative evidence. In the case of 'snake', the Other East Bodish varieties forms have forms with a distinct etymology.

(223) 'snake' DkW *mu^{35}.ri^{55}*, Dz *mre*, DkD *mrui* ~ Tib *sbrul* < *smrul, OBur *mruy*, Chi 虺 *xjwɨjX* < *[m̥r]ujʔ

In the case of 'dream', Dakpa Wénlàng, Dakpa Bāngxīn and Dakpa Tawang onset cluster *mr-* seems to derive from Tibetan *rmi*. The Other East Bodish forms have reflexes of the same Tibetan *rmi* and a more widely attested Trans-Himalayan root for 'dream'.

(224) 'dream' DkW & DkB *mre^{35}.phre^{55}*, DkT *mri^{35}.brim^{35}* (TAB) ~ Dz *mi.phred ~ mi.brid*, DkM *mi^{31}.pren^{55}*, DkD *mi^{35}.pren^{55}* < PDD *rmi.(ḥ)brit 'dream-delude' ~ Tib *rmi* ~ Kh *mi.mang*, Kt *mi.mang*

The Other East Bodish (Bumthang Ura, Kurtöp) forms for 'paddy, rice' show a retention of the *m*-prefix that is also attested from Chinese, whereas Tibetan again follows Simon's Law (*mr- > *br-*). Both Khengkha and Bumthang Chume and Dakpa-Dzala have forms with a distinct etymology.

(225) 'paddy, rice' BtU *mras*, Bt *mrat* (vD15), Kt *mra ~ mrâ*, Tib *ḥbras* < *ḫmras, Chi 糲 *lat* < *(mə-)rˁat ~ Kh *i.pa*, BtC *'i.ba*, Kt *'i.pa* ~ DkM & DkD *dem^{35}*, DkW & DkB *dep^{35}*, Dz *dep*

From the combined evidence of 'snake' for Dakpa-Dzala and 'paddy, rice' for Other East Bodish we may conclude that Simon's Law for Tibetan does not hold for Dakpa-Dzala and Other East Bodish, and that these varieties retain the older onset cluster *mr-*.

As Hill (p.c. 23/08/2021) indicates, this is partially confirmed by the forms for 'scratch2', where some Bumthang varieties (and some varieties of Tshangla) have retained the inherited form with onset cluster *mr-*, while other Bumthang varieties and Kurtöp have borrowed the Tibetan forms with onset *br-* before this became a retroflex onset in spoken Tibetan itself.

(226) 'scratch2' Bt *brat ~ mrat* (vD15), Kt *brat*, Tib *ḥbrad-pa* < PB *(ḥ)mrat, Bur *prat*, Chi 別 *bjet* < *N-pret 'divide, separate'

There are some additional forms in which the Other East Bodish varieties and (especially) Tshangla have preserved the onset cluster *mr-*, not affected by Simon's Law, including 'to soil with something sticky, syrupy or slimy' and 'pimple' but also in Tshangla *mraŋ* 'grumble', Tibetan *smraṅ-ba ~ smreṅ-ba* 'recite, (ritually) say' and Tshangla *mrok* 'open grazing patch in the forest', Tibetan *ḥbrog* 'nomad' < *ɓmrok (Hill 2019: 29), Chinese 牧 *mjuwk* < *mək 'herdsman'. Comparative Tibetan evidence is lacking in 'pimple'.

(227) 'pimple' Bt *'mran* (vD15), Kh *'mran*, Tsh *mras* (TAB)

(228) 'to soil with something sticky, syrupy or slimy' Bt *mlak* (vD15), Tsh *mrek* (TAB), Kt *mak.mrak ~ mak.mak*, Tib *smreg*

*§4.8. *T- : T- if V = {e}*

A dental stop preceding the vowels /e/ is preserved as a dental stop in Other East Bodish and Dakpa-Dzala but became a dental affricate in Tibetan. The correspondence between Dakpa-Dzala dental stops and Tibetan dental affricates was first observed by Shafer (1954: 350).

(229) 'one' DkM & DkD *theʔ*^{53}, DkW & DkB *thi*^{53}, Dz *the*, Kh *thek*, Bt *thek* (vD15, DDC17), Kt *thek* ~ Tib *gcig* < PCB *(g)tʲik < PB *tik, Chi 隻 *tsyek* < *tek

In the case of 'big', the correspondence does not hold for the Other East Bodish varieties, where we would predict †*t*^{h}*en.pu*. Perhaps these Other East Bodish forms are later Tibetan or Dzongkha loans.

(230) 'big (space, surface)' DkM & DkD *then*$^{55\cdot}$*po*^{53}, DkW *than*^{55}*.bu*^{55}, DkB *than*^{55}*.po*^{53}, Dz *then.bu* ~ Kt *chen*, Bt *chet.pu* (vD15), Kh *chet.po*, Tib *chen-po*, OTib *chet-po* (Hill p.c. 23/08/2021) < PB *tʰen.po

When preceding high vowel /i/, the Dakpa-Dzala and Other East Bodish varieties have palatal affricate onsets, as the example 'ten' shows, although the Tibetan form is not cognate, we would predict PB *ti > PCB *tʲi > Tib *ci*.

(231) 'ten' Kh *che*, Bt *che* (vD15, DDC17), Kt *che* ~ DkM, DkD, DkW & DkB *tɕi*^{53}, Dz *ci* < PEB *ti ~ Tib *bcu*

In the case of 'liver', Dakpa Wénlàng is the only variety that has preserved the predicted reflex. Whereas the Dakpa-Dzala have a dental affricate onset, perhaps conditioned by the *m*-prefix, the Other East Bodish varieties have a palatal affricate like Tibetan, which are later Tibetan or Dzongkha loans.

(232) ‘liver’ DkW *tin*^{55}*.po*^{55} (but DkM & DKD *tsi*^{55}*.mo*^{53}, DkB *tsin*^{55}*.po*^{53}, Dz *tsin.po* ~ Bt *chin.pa*, Kt *chin.pa*) ~ Tib *mchin-pa*[73]

When preceding vowel /o/, the Dakpa-Dzala varieties have a palatal glide onset, whereas the Other East Bodish varieties have palatalised onsets. Although Hyslop (2015: 285) writes “We confidently reconstruct ‘milk’ as *gju. The initial consonant is lost in Dakpa and Dzala and the vowel is lowered. Again, both these sound changes are seen elsewhere in the language though further data are needed to understand the precise conditioning environment”, I was unable to confirm either of these sound changes or their conditioning environment. The onset *g^{j}- would result in the reflexes of §4.2 and the rhyme correspondence is regular and suggests an underlying rhyme *-o* (§6.2). The historical evidence[74] seems to suggest an underlying POEB onset *t^{j}- or *d^{j}-, in turn perhaps derived from *t-l- (cf. Japhug rGyalrong *tɤ-lu* ‘milk’ in vD15: 57), but, at the moment, there is no supporting evidence that this onset would be simplified to *j-* and not *t-* or *d-* in Dakpa-Dzala. Instead, all the Other East Bodish and Dakpa-Dzala forms have a direct cognate in Tibetan *ḥjo-ba* ‘to milk’, not in Tibetan *ḥo-ma* ‘milk’ or Tibetan *źo* ‘yoghurt’ (vD15).

(233) ‘breast; milk’ Kh *ju*, Bt *ju*, Bt *ju* (vD15), Kt *ju* ~ DkM, DkD, DkW & DkB *jo*^{35}, Dz *yo*, Tib *ḥjo-ba* ‘to milk’ < PB *t^{j}o

*§4.9. *ml- : ml-; *m-l- > l-; *ḥl- > l-*

Tibetan has two onset clusters *lc-* and *lǰ-* that regularly correspond to Dakpa-Dzala and Other East Bodish simple lateral onset with high register tone *’l-* : DD *l-*, OEB *l-* ~ Tib *lc-* ~ *lǰ-*. This was also observed by Michailovsky and Mazaudon (1994: 553), and they proposed it could be due to a voiceless prefix, like *s-*. However, Hill (2019: 18), building

[73] Following an observation by Shafer (1951: 1021), Gong (2002 [1995]: 91, no. 82) proposed that an *m-* prefix induced an excrescent dental, i.e. Tib *mchin-pa* < *m-śin-pa ‘liver’ in light of Written Burmese *asaññḥ* ‘liver’ and Chinese 辛 *sin* < *sin ‘pungent; painful’ (Hill 2019: 17–18). While all Dakpa-Dzala varieties lost the nasal prefix, the epenthetic dental replaced the sibilant in Dakpa Wénlàng (*m-s- > *m-t-s- > *t-*) while it was retained in the other Dakpa-Dzala varieties (*m-s- > *m-t-s > *ts-*). If this is correct, this may be another example of Conrady’s Law shared between Tibetan and the East Bodish varieties, cf. §10.2.3. Because here the Dakpa-Dzala varieties have not palatalised the onset *s- > *s^{j}* before a high vowel, the intrusion of the epenthetic dental must precede the palatalisation of the sibilant onset (§7.2).

[74] Relevant here is J.C. White’s (1909) transcription of the Bumthang form *tyu*. Whether this was his transcription of [dʑu], or whether at that time Bumthang ‘milk’ was realised as [t^{j}u] is unknown.

on the work by Bodman (1980: 170), provides evidence that this derives from an underlying nasal initial *m-* or an initial *ḥ-*, both resulting in fortition of the lateral onset from *l- to *d-* in Tibetan. This correspondence cannot derive from an underlying palatalised onset *lʲ-, because, as §4.1 shows, the written Tibetan reflex of this onset are palatal fricatives when preceding vowel /i/. Although the Chinese comparative evidence confirms an *m*-initial for 'tongue', this evidence is absent for 'iron' and 'arrow'. The onset cluster *ml- is either retained in Dakpa-Dzala (in Dakpa Wénlàng and Dzala) or the onset is denasalised to *bl-* (Dakpa Mámă, Dakpa Dáwàng and Dakpa Bāngxīn). However, in the Other East Bodish varieties we observe that the characteristic change *l- > Other East Bodish *j-* also holds for the medial in the cluster *ml-, with reflex *mj-* which, in a secondary development, became palatal nasal *ɲ-* (see also §10.2.4, §6.6, §5.3).

However, in Tibetan, rather than Bodman and Hill's idea of fortition of the onset *ml-, I suggest that the forms for 'arrow' are also the result of dental excrescence (Conrady's Law) in onset cluster *ml-: *ml- > *mtl-, voicing of the dental due to the voiced initial *mtl- > *mdl-, followed by metathesis *mdl- > *mld-, and then simplification of the cluster *mld- > *md-* (cf. Hill 2019: 17) and palatalisation before vowel /e/ (§4.8). This results in the correspondence DD *ml- ~ bl-* ~ OEB *mj- ~ ɲ-* ~ Tib *md-* < PB *ml-. Because Conrady's Law does not affect East Bodish, this can be considered a retention.

(234) 'penis' Dz *m.le*, DkT *m.le* (TAB), Bt *mi.liŋ* (vD15), Kt *mi.li* ~ Tib *mǰe* < *mdʲe < *mde < *mlde < *mdle < *mtle < PB *mle[75], WBur *līḥ*

(235) 'arrow' DkM, DkD & DkB *bla[53]* (Lù02: 367), DkW *mla[35]* (Lù02: 367), Dz *mla* (DDC17: 63) ~ Kt *mya ~ nya* (KD16:159), Bt *nya* (DDC18: 35) ~ Tib *mdaḥ* < *mldaḥ < *mdlaḥ < *mtlaḥ < PB *mlaḥ, OBur *mlāḥ*, Chi 射 *zyek* < *Cə.lak < *Cə.lakə[76]

'Penis' above and 'tongue' below form a near-minimal pair. While in 'tongue' the East Bodish varieties have lost the nasal initial, they have preserved it in 'penis'. We must presume that this is because in 'tongue', the initial *m-* was a prefix (as is attested by the Chinese reconstruction),

[75] The Burmese comparative evidence favours rhyme *-i, but then we would have rather predicted Other East Bodish rhyme *-e* and Tibetan and Dakpa-Dzala rhyme *-i* (§6.3). A reconstructed rhyme *-e has not been attested, but may result in the correspondence PB *-e > Tib *-e*, DD *-e*, OEB *-i*.

[76] For the relation between Bodic and Chinese forms, see (Hill 2019: 40, PB *mlaḥ < *mlakə).

i.e. *m-l-, whereas in ‘penis’ the initial *m-* was actually part of the syllable, i.e. an onset cluster *ml-. This would also explain why in ‘penis’ the Tibetan root initial is voiced, with the voicing of the nasal onset resulting in the excrescence of a voiced dental stop (or the voicing of an excrescent unvoiced dental stop), but in ‘tongue’ it is unvoiced.

In other words, in Tibetan ‘tongue’ and ‘iron’ we observe the results of Conrady’s law with dental excrescence *ml- > *m.tl-, followed by metathesis *m.tl- > *m.lt-, and then the cluster is simplified following Coblin’s Law *m.lt- > *lt-* (cf. Hill 2019: 17), which is then palatalised *lt- > *lc-* (§4.8). In East Bodish, the Proto-Bodic cluster is simplified to a simple lateral onset with high register *m.l- > *l̋-*. The Other East Bodish disyllable is likely the result of an epenthetic echo vowel being added to the initial *m-* (*mli > *mi.li*) because the onset cluster *ml-* is not permitted.

(236) ‘tongue’ DkM, DkD, DkW & DkB *le*^{53}, Kt *’li*, Bt *’li*, Kh *’li* ~ Tib *lce* < *lt^{j}e < *lte < *m.lte < *m.tle < PB *m.le, Chi 舌 *zyet* < *mə.lat

(237) ‘iron’ DkM *lek*^{53} (Lù86), Kt *’laa*, Kh *lak* ~ Tib *lcags* < *lt^{j}aks < *m.lt^{j}aks < *m.ltaks < *m.tlaks < PB *m.laks, Chi 鐵 *thet* < *l̥^{ʂ}ik

The forms for ‘whip’, which are all a compound containing reflexes of the Tibetan form for ‘horse’ *rta*, are clearly later Tibetan loans in the East Bodish varieties, because the onset *lc-* is realised as an affricate, and not as the predicted lateral approximant. Bumthang Ura *-sha* and Kurtöp *-cha*, not predicted *-ca*, and the unexpected rhymes in Bumthang Ura and Kurtöp are additional indications of the borrowed status of this lexeme.

(238) ‘whip’, DkM & DkD *te*^{55}*.tɕa*^{53}, DkW & DKB *te*^{55}*.tɕa*^{55}, BtU *tai.sha*, Dz *tä.cag*, Kt *te.cha* ~ Tib *rta-lcag* < *rta- lt^{j}ak < *rta-s-m.lt^{j}ak < *rta-m.ltak < *rta-m.tlak < PB *rta-m.lak

In ‘flea’ and ‘flat’, Hill (2019: 17–18, 215: Conrady’s Law), suggests an initial *ḥ-*, not an initial *m-*. Still, I presume there was excrescence of a dental, not fortition to a dental. The same may hold for ‘flat’. While in ‘flea’ and ‘flat’ Other East Bodish follows the regular correspondence, in ‘heavy’, Other East Bodish has followed the spoken Tibetan palatalisation of the onset, indicating these are later Tibetan or Dzongkha loans.

(239) ‘heavy’ DkM, DkD & DkB *li*^{55}*.po*^{53}, DkW *lin*^{53} ~ BtC *ɻüt* (MM94), Kt *jin ~ ɻit* (KD16, MM94), Tib *ljid-po* < *lt^{j}it < *ltit < *ḥltit < *ḥtlit < PB *ḥlit[77], Bur *leḥ* < *liyḥ

[77] Or Hill (2019: 215) < *ḫl^{y}id < *ḫlit.

(240) ‘flea’ DD *liu*^{55} (Lù86), Dz *’liu*, Kt *’li.ya* ~ *’li.wa*, Bt *’li.wa* ~ Tib *ljǐ-ba* < *ldʲi-ba < *ldi-ba < *ḥldi-ba < *ḥdli-ba < *ḥli-ba[78], WBur *lheḥ* < *lhiyḥ < *ʔliyḥ

(241) ‘flat’ Dz *lep.tang.tang*, Kt *lep.tang*, BtU *lap.le.ba*, BtC *lap.lep* ~ Tib *ljǎb* < *ldʲap < *ldap < *ḥldap < *ḥdlap < *ḥlap[79]

The forms for ‘green’ are clearly later loans in all Other East Bodish and Dakpa-Dzala varieties, as we would predict lateral onset *l*- in all these varieties.

(242) ‘green’ DkM & DkD *dzaŋ*^{35}*.ku*^{53}, DkB *dzaŋ*^{35}*.ko*^{53}, Dz *jang.kha*, Kt *jang.ku*, Bt *jang.khu*, Tib *ljǎṅ-khu* < *ldʲaṅ-khu < *ldaṅ-khu < *ḥldaṅ-khu < *ḥdlaṅ-khu < *ḥlaṅ-khu

Basically, I propose here that it was not Bodman’s Law (Hill 2019: 18), but Conrady’s Law (Hill 2019:17) that affected all Tibetan forms which had a Proto-Bodic onset cluster *ml- or * ḥl- or a prefix *m*- followed by a syllable with a lateral onset *m-l-, but not the East Bodish forms.

§5. PHONOLOGICAL INNOVATIONS OF DAKPA-DZALA

There are three correspondences where the Dakpa-Dzala varieties have made a phonological innovation compared to Tibetan, whereas Other East Bodish languages have retained the Tibetan phoneme.

*§5.1. *-aC$_f$ > -eC$_f$ if C$_i$- or -C$_f$ {coronal}*

The characteristic sound change affecting vowels in Dakpa-Dzala is the raising of the open back vowel /a/ to a close-mid front vowel /e/ in certain phonotactic environments. This correspondence was earlier noted by Shafer (1954), but here I am able to add more detail on the phonotactic conditions under which this correspondence holds. The change from vowel /a/ to /e/ in the Dakpa-Dzala varieties is most prominent – almost universal – when preceded by coronal onsets, such as the alveolar stops /t, tʰ, d/, the alveolar nasal /n/, the alveolar sibilants /s, z/ and the lateral alveolar approximant /l/. The correspondence does not regularly hold following non-coronal onsets, such as in ‘clean’ (016) and ‘salt’ (017). The fact that the correspondence holds for concepts such as ‘leak, drip’ (248) and ‘copper’ (252) indicates that the change PB *dz- > PDD *z-

[78] Or Hill (2019: 17) *ḫlʲi-ba > *ḫdlʲi-ba > *ḫldʲi-ba > *ljǐ-ba*.

[79] Related forms are Tibetan *ḥdap-ma* ‘leaf’ and Tibetan *leb* ‘flat’. The Dakpa-Dzala forms seem to be cognate with Tibetan *leb*, whereas the expressive Other East Bodish forms seem to be combine both PB *ḫlap and Tibetan *leb* (PB *lep).

precedes the change *-aC$_f$ > -*eC$_f$*. The correspondence also does not hold for the coronal rhotic onset *r-, as 'self' (031) and 'come' (032) indicate, but it does seem to hold for onset cluster *Cr-, as in 'cry out' (249). Other exceptions are the rhymes *-at* (with raising of the vowel irrespective of the onset), *-al* (§3.4, with diphthongisation in most varieties) and *-as* (§5.2, preserved in Other East Bodish, and with divergent reflexes in Dakpa-Dzala). The individual rhyme correspondences are summarised in Table 8.

Table 8. Rhyme correspondences *-aC$_f$

PB	Tib	OEB	DD
*-a	*-a*	*-a*	*-e*
*-ak	*-ag*	*-a(k)*	*-e(k/ʔ/t)*
*-aŋ	*-aŋ*	*-aŋ*	*-eŋ*
*-ap	*-ap*	*-ap*	*-ep*
*-am	*-am*	*-am*	*-em*
*-at	*-ad*	*-at*	*-e(t/n)*
*-an	*-an*	*-an*	*-en*
*-ar	*-ar*	*-ar*	*-er*

This correspondence is pervasive and has been attested in numerous cognate sets.

(243) 'horse' DkM, DkD, DkW & DkB *te*^{53}, Dz *te* ~ Tib *rta*, Kh *ta*, Kt *ta* < PB *(r)ta

(244) 'be sick, ill' DkM, DkD, DkW *ne*^{35}, DkM, DkD *ne*^{35}*.se*^{53}, DkW & DkB *ne*^{35}*.tsa*^{53} ~ Kh *na*, Kt *na*, Tib *na-ba* 'ill' ~ *na-tsha* < PB *na

(245) 'look' DkM, DkD, DkW & DkD *te*^{55}, Dz *te* ~ Kh *ta*, Kt *ta*, Tib *lta-ba* < PB *(l)ta

(246) 'five' DkM & DkD *le*^{35}*.ŋe*^{53}[80], DkW & DkB *le*^{35}*.ŋa*^{53} (but Dz *la.nga*)[81] ~ Bt *ya.nga* (vD15), Kt *ya.nga*, Kh *ya.nga*, Tib *lṅa* < PB *la.ṅa

[80] *ŋa* > *ŋe* in analogy with the development *la* > *le*.

[81] This is unexpected and may indicate that the change /a/ > /e/ spread to rhymes preceded by the lateral approximant /l/ in the Dakpa varieties only *after* the split between Dzala and the Dakpa varieties.

(247) ‘rope’ DkM, DkD, DkW & DkB *thek*^{55}*.pa*^{53} ~ Kt *thak.pa*, Bt *thak.pa*, Tib *thag-pa* < *PB *t^{h}ak

(248) ‘leak, drip’ DkM & DkD *ze?*^{35}, DkW *ze*^{35}*.do*^{35}, DkB *zet*^{35} ~ Kt *zak*, Tib *ḥdzag-pa* < PB *(ḥ)dzak

(249) ‘cry out1’[82] DkM, DkD & DkW *krek*^{53}, DkB *gret*^{35}, Dz *greg* ~ Kt *drak* ~ *drâ* ‘excel, be praiseworthy’ and *drak* ‘pronunciation’, Tib *grags-pa* < PB *grak

(250) ‘mucus’ DkM, DkD, DkW & DkB *nep*^{53}, Dz *’nep* ~ Kt *’nap*, Bt *’nap*, Tib *snabs* < PB *(s)nap

(251) ‘inside’ DkM *neŋ*^{55}, DkW *neŋ*^{35}*.ŋo*^{35} ~ Bt *naŋ* (vD15), Kh *nang.o*, Tib *naṅ* < PB *naṅ

(252) ‘copper’ Dz *zeng* ~ Bt *zang*, Kt *zang*, Tib *zaṅs* < PB *dzaṅ

(253) ‘surely’ DkM & DkD *nen*^{55}*.ten*^{55}, DkW & DkB *ten*^{55}*.ten*^{55} ~ Kt *tan*, Tib *gtan-gtan* < PB *(g)tan

(254) ‘answer’ DkM, DkD & DkB *len*^{55}, Dz *län* ~ Tib *lan* < PB *lan

(255) ‘path, road’ DKM, DkD & DkB *lem*^{35}*.taŋ*^{53}, DkW *lem*^{35}*.daŋ*^{55}, Dz *lem* ~ Bt *yam* (vD15), Kh *yam*, Kt *yam*, Tib *lam* and < PB *lam

(256) ‘smell’ DkW *nem*^{35} (but DkM, DkD & DkB *num*^{35}) ~ Kh *nam*, Kt *nam*, Tib *mnam-pa* < PB *(m)nam

(257) ‘new’[83] DkM, DkD & DkB *se*^{55}*.ro*^{53}, DkW *se*^{55}*.ru*^{55}, Dz *se.ru* ~ Kh *sar.pa*, Kt *sar.wa*, BtC *sar*, Tib *gsar-pa* < PB *(g)sar

In coronal stop rhymes, including rhymes *-at* and *-ar*, Dakpa-Dzala have raised the vowel from /a/ to /e/ irrespective of the onset. Perhaps, this is conditioned by the coronal coda, similar to how the coronal onset conditions the change. In Dzala, Dakpa Wénlàng and Dakpa Bāngxīn

[82] The alveolar rhotic medial triggers the raising of the vowel in ‘cry out’.

[83] In the Dakpa-Dzala forms for ‘new’ we can find a reanalysis of the coda of the first morpheme as the onset of the second morpheme (the adjective suffix) which we also observe in Dakpa-Dzala ‘yellow’ (071) and ‘white’ (150). Dakpa-Dzala forms have an underlying final -r: *sar-pa > *ser.p(u/o) > *ser.r(u/o) > *se.r(u/o)*. A similar degemination of the coda *-r* can be observed in the Dakpa Wénlàng, Dakpa Bāngxīn and Dzala forms for ‘white’. Note how homophony between Dakpa-Dzala ‘new’ and ‘yellow’ is avoided due to two phonological innovations, one specific to the Dakpa-Dzala varieties: *-ar > *-er* and one common to the Dakpa-Dzala and the Other East Bodish varieties: *-er > *-ir*. This is consistent: The Dakpa-Dzala and Other East Bodish change *-er > *-ir* preceded the change *-ar > *-ir*, which preceded the split between Other East Bodish and Dakpa-Dzala, so that the change *-er > *-ir* did not affect those lexemes where Dakpa-Dzala later changed *-ar > *-er*.

'white', a similar reanalysis of the coda of the root to the onset of the suffix can be observed as in 'new'.

(258) 'sound' DkW & DkB *ket*^{53}, Dz *ked* ~ Bt *kat* (vD15, but Kt *phel.ket*), Tib *skad* < PB *(s)kat

(259) 'work (n)' DkM & DkD *pleʔ*^{35}, DkW & DkB *ble*^{35}, Dz *ble*, Tib †*blat*, OTib *blas* ~ Bt *yat* (vD15) < PB *blat[84]

(260) 'white' DkM & DkD *cher*^{55}*.po*^{53}, DkW & DkB *khe*^{55}*.ru*^{53}, Dz *khe.ru* ~ Bt *khar.ti*, Bt *khar.khar.ma* (vD15), Kt *khar.ti* ~ Tib *dkar.po* < PB *(d)k^{h}ar

(261) 'eight' DkW & DkB *get*^{35} (but Dz *gyad* and DkM & DkD *cen*^{35})[85] ~ Kh *jat*, Bt *jat* (vD15, DDC17), Kt *jat*[86], Tib *brgyad* < PB *(b)rg^{j}at

In cases where the correspondence does not hold when following a coronal onset or preceding a coronal coda, we may presume later Tibetan loans.

(262) 'tiger' DkM & DkD *taʔ*^{53}, DkW & DkD *ta*^{53}, Bt *tak*, Kh *tak*, Tib *stag* < PB *(s)tak

(263) 'disease' Dz *nad.pa* ~ Kh *nat*, Bt *nat*, Kt *nat*, Tib *nad* < PB *nat

(264) 'fireplace, hearth'[87] DkM & DkD *tham*^{53}, DkW & DkB *tɕa*^{55}*.thap*^{53}, Dz *thab*, Bt *thap* (vD15), Tib *thab* < PB *t^{h}ap

(265) 'clear, clean (water)' DkM & DkD *taŋ*^{35}*.pho*^{53}, DkB *taŋ*^{35}*.ko*^{53}, Kt *dang*, Tib *dwaṅs-pa*[88] < PB *daŋs

(266) 'yesterday' DkM, DkD, DkW & DkB *daŋ*^{35}, Dz *dang*, Kh *dang.la*, BtC *dang.ma* (vD15, DDC18), Tib *mdaṅ* < PB *(m)daŋ

(267) 'tie (v)' DkM, DkD & DkB *tam*^{35}, DkW *dam*^{35}, Dz *dam*, Bt *dam*^{23}

---

[84] The underlying form appears to be *blas, cf. Old Tibetan. *rje.blas* 'Frondienst' and *myi.blas* (e.g., Takeuchi 1995: 266–267). However, rhyme *-as has distinct outcomes in Dakpa-Dzala and Other East Bodish, cf. §5.2.

[85] The nasalisation of the Dakpa Mámă and Dakpa Dáwàng coda is unexpected, as is the Dzala vowel /a/, not /e/.

[86] As we would predict Other East Bodish rhyme *-it* when following a palatalised onset (cf. §6.4), we may consider that the numeral 'eight' is a later Tibetan loan in most Other East Bodish and Dakpa-Dzala varieties.

[87] Because we would predict Dakpa-Dzala rhyme *-ep* when preceded by the coronal onset *t^{h}-*, we may conclude that 'fireplace, hearth' is a Tibetan loan, at least in the Dakpa-Dzala varieties, which would also explain the unexpected Dakpa Mámă and Dakpa Dáwàng rhyme *-am*, not *-ap*.

[88] The Tibetan subscript *wa-zur* is an orthographic convention to distinguish དངས་ *daṅs* from དདས་ *dṅas* (Hill 2006: 89).

(IT21), Kh *dam²³* (IT21), Kt *dam*, Tib *bsdam-pa* < PB *(bs)dam

(268) ‘steep’ DkM & DkD *zar³⁵.pho⁵³*, DkW *zar³⁵.pu⁵⁵*, DkB *zar³⁵.pa⁵³*, Kt *zar.mu*, Tib *gzar-po* < PB *(g)zar

(269) ‘shine; bloom, blossom’ DkM, DkD, DkW & DkB *ɕar⁵⁵*, Dz *shar*, Kt *shar*, Tib *śar-ba* < PB *sʲar

(270) ‘light (candle)’ DkM & DkD *par³⁵*, DkW *ba³⁵.ru⁵⁵* (< *bar*), DkW *bar³⁵*, Kt *bar*, Tib *ḥbar-ba* < PB *(ḥ)bar

(271) ‘brain’ Dz *glad.pa ~ lad.pa*, Kt *rat.pa ~ trat.pa ~ klat.pa* (MM94), BtU *klat.pa*, BtC *lat.pa*, Tib *klad-pa* < PB *klat.pa

(272) ‘old (man)’ DkM & DkD *kat³⁵.po⁵³*, DkW & DkB *gat³⁵.pu⁵³*, Bt *gat.po*, Kh *gat*, Kt *gat.pu ~ gat.po*, Tib *rgad-po* < PB *(r)gat

(273) ‘limit’ Dz *tshad*, Bt *tshat*, Kt *tshat*, Tib *tshad* < PB *tsʰat

(274) ‘leech’ Dz *pad.pa*, Kt *pat*, Bt *pat* (vD15), Kh *pat*, Tib *pad-pa* < PB *pat

Other examples of likely loans are (020) ‘earth, soil’, (031) ‘self’, (032) ‘come’ and (022) ‘deer’.

One anomaly are the Dakpa-Dzala forms for ‘nose’. Either these are later Tibetan loans, or an underlying voiceless or pre-glottalised nasal onset, as is evidenced by Burmese and reflected by the *s*-prefix in Tibetan, could have prohibited the change *-a to *-e* in Dakpa-Dzala, in addition to triggering a high tone onset.

(275) ‘nose’ DkM, DkD & DkW *na⁵³*, DkB *ŋa⁵³*, Dz *’na*, Kt *’na*, Bt *’na.phang*, Tib *sna* < PB *sna, Bur *nhā* < *ʔnā

The vowel /e/ in the Dakpa-Dzala forms for ‘dry’ in absence of a coronal onset or coronal coda can be explained through later borrowing from a Tibetan verbal form *skem*, not *skam*.

(276) ‘dry’ DkM & DkD *cem⁵⁵.pha⁵³*, DkW *kem⁵⁵.ŋi⁵⁵*, DkB *kem⁵⁵.mo⁵³*, Tib *skem* ~ Kh *kam*, Bt *kam*, Kt *kam*, Tib *skam.po* < PB *(s)kam

Where the vowel /a/ is preceded by a non-coronal onset and followed by a non-coronal coda, the Dakpa-Dzala have vowel /a/ as reflex, just like the Other East Bodish varieties and Tibetan. Again, examples are numerous.

(277) ‘fish’[89] DkM, DkD, DkW, DkB *ŋa³⁵*, Dz *nya*, Kh *’nya*, Bt *nya* (vD15, DDC18), Tib *ña* < PB *ŋʲa

[89] The fact that the correspondence *-a > -e does not hold in ‘fish’ indicates that the underlying onset is a velar nasal /ŋ/ and not an alveolar nasal /n/.

(278) ‘arrow’ DkM, DkD & DkB *bla*^{53}, DkW *mla*^{35}, Dz *mla* ~ Kt *mya* ~ *nya*, Bt *nya* ~ Tib *mdaḥ* < PB *mla

(279) ‘nerve, vein’ DkM, DkD, DkW & DkB *tsa*^{53}, Dz *tsa*, Kt *tsa*, Kh *tsa*, Bt *tsa*, Tib *rtsa* < PB *(r)tsa

(280) ‘pig’ DkM & DkD *phaʔ*^{53}, DkW & DkB *pha*^{53}, Dz *phag*, Kh *phak*, Bt *phak*, Tib *phag* < PB *pʰak

(281) ‘son-in-law’ DkM & DkD *mak*^{35}*.pu*^{53}, DkW & DkB *mak*^{35}*.po*^{53}, Bt *mak.pa* (vD15), Kh *mak.pa*, Tib *mag-pa* < PB *mak.pa

(282) ‘tell’ DkM, DkD, DkW & DkB *ɕat*^{53}, Dz *shad*, Tib *bśad-pa* < PB *sʲat ~ Kh *lap*, Kt *lap*, Bt *lap* (vD15), Tib *lab-pa* < PB *lap

(283) ‘needle’[90] DkM *khom*^{53}, DkD, DkW & DkB *khop*^{53}, Dz *khab* ~ Bt *khap*, Kt *khap*, Tib *khab* < PB *kʰap < *kəp < *qəp, Bur *ap*, Chi 箴 鍼 *tsyim* < *t.qəm

(284) ‘many’ DkM & DkD *maŋ*^{35}*.po*^{53}, DkB *maŋ*^{35}*.ko*^{53}, Kt *mang.ku*, Tib *maṅ-po* < PB *maŋ

(285) ‘soft’ DkM, DkD & DkB *dʑam*^{35}*.mo*^{53}, DkW *dʑam*^{35}*.bu*^{55}, Dz *jam.zi.zi*, Kt *jam.bu*, Kh *jam.bu*, Tib *ḥjam.po* < PB *(ḥ)dʑam

(286) ‘boil1’ DkM, DkD & DkB *khlaː*, Dz *khla ~ khlak* ~ Kt *shâ* ~ *shak* < PB *kʰlak

Other examples where we find this regular correspondence following non-coronals include (002) ‘mouth’, (007) ‘father’, (009) ‘ox, bull’, (017) ‘salt’, (026) ‘mother’, (016) ‘clean’, and (019) ‘green’.

We can also observe this same correspondence in (029) ‘medicine’, although there was contamination with old spoken Tibetan forms [’man] and more recent spoken Tibetan forms [’mɛn], resulting in forms with *-an* and forms with *-en* occurring in all varieties of Dakpa-Dzala, Other East Bodish and spoken Tibetan.

*§5.2. *-as > -a ~ -aʔ*

Where Written Tibetan has a rhyme *-as*, the Dakpa-Dzala varieties have simplified this rhyme to *-a(ʔ)*. On the other hand, this rhyme is preserved in Bumthang Ura, has become rhyme *-at* or *-an* in Bumthang Chume, with only Kurtöp having the secondary development to long open vowel

[90] The unexpected Dakpa Mámă, Dakpa Wénlàng and Dakpa Bāngxīn rhyme *-op* in ‘needle’ may be transcription error, predicted is regular *kʰap* (and Dakpa Mámă *kʰam*). The comparative Chinese evidence for ‘needle’, with a coda *-m*, may indicate that this is a typical *Wanderwort*.

rhyme *-â*, and rhyme *-aː* or *-aʔ* in Dzala, Dakpa Mámă and Dakpa Dáwàng: OEB *-as* (~ *-at* ~ *-â*), Tib *-as* ~ DD *-a(ː/ʔ)* < PB *-as. I consider that this is an innovation of Dakpa-Dzala, with Other East Bodish having retained the original rhyme (as exemplified by Bumthang Ura), with the rhymes of Bumthang Chume (an independent innovation) and Kurtöp (Dzongkha or Tibetan contact language influence) later changes. This correspondence is exemplified by the example 'pillow'.

(287) 'pillow' BtU *'ngas*, BtC *'ngat*, Tib *sṅas* ~ DkM & DkD *ŋaʔ*^{53}, DkW *ŋ̊a*^{53}, Dz *'nga.ka* < PB *(s)ŋas

Where Dakpa Wénlàng and Dakpa Bāngxīn have unexpected rhyme *-e*, such as in 'barley' (025) and in 'cloth' (288), this can be attributed to later Tibetan loans, with spoken Tibetan varieties also having a vowel *-e* as reflex of rhyme *-as.

(288) 'cloth' BtU *ras*, BtC *rat*, Tib *ras* ~ DkM & DkD *raː*^{35} (but DkW & DkB *re*^{35} < Tib) < PB *ras

A peculiar case is the first person singular pronoun. On basis of the Tibetan evidence, we would predict a simple Proto-Bodic form *ŋa. But the Dakpa-Dzala change *-a > *-e* is not predicted when preceded by non-coronal consonants. Similarly, the Bumthang and Khengkha rhymes *-at* are unexpected. What I postulate is, that this form derives regularly from an underlying Proto-Bodic form *ŋas, i.e. Tibetan *ṅas*, an alternative form of the agentive Tibetan form *ṅa-yis* ('by me'). The Kurtöp and alternative Khengkha forms *ŋa* are then later Tibetan or Dzongkha loans that replaced the predicted form †*ŋas*. Because the rhyme reflex *-at* is otherwise only from Bumthang Chume (with †*ŋas* predicted in Bumthang Ura), either van Driem's (2015) form is a Bumthang Chume form, or the Bumthang varieties have all adopted this Bumthang Chume form in this particular lexeme.

(289) 'I (1sg)' DkM, DkD, DkW & DkB *ŋe*^{35}, Dz *nge* ~ Kh *ngat ~nga*, Bt *ngat* (vD15), Tib *ṅa* < PB *ŋas

The fact that in 'forget' Dakpa-Dzala has rhyme *-at*, not predicted rhyme *-aː ~ -aʔ*, indicates this is a later Tibetan loan.

(290) 'forget' DkM, DkD, DkW & DkB *ŋat*^{35}, Dz *ngad*, Tib *brjed-ṅas*

Similarly, the Dakpa-Dzala rhyme *-en*, not *-aː ~ -aʔ* indicates this is a later loan in Dakpa Wénlàng & Dakpa Bāngxīn, likely replacing the inherited form reflected in Dakpa Mámă and Dakpa Dáwàng.

(291) 'stairs, ladder' DkW & DkB *gen*^{35}*.dʑe*^{55} (< Tib *skas-ḥdzeg*), BtU *kas*, Kt *ka ~ kâ*, Tib *skas*

The attested forms of the concept ‘bitter buckwheat’ have two important implications. Firstly, the Dzala, Dakpa Mámă and Dakpa Dáwàng rhyme *-e(ː)*, in addition to the Dakpa Wénlàng and Dakpa Bāngxīn rhyme *-e*, indicates that the Dakpa-Dzala forms do not derive from an underlying rhyme *-as, but from an underlying rhyme *-a, following the regular Dakpa-Dzala innovation of §5.1 (DD *-e* ~ Tib *-a*, OEB *-a* < PB *-a). Secondly, if the transcription of the Kurtöp rhyme is rather *-â* (perhaps with shortening of the vowel because of the following syllable), and the Bumthang Chume rhyme *-an*, not predicted *-at* can similarly be explained through the nasalisation of the dental stop coda because of the nasal onset of the subsequent morpheme, the underlying Other East Bodish root is *bras.ma. Whereas the underlying Dakpa-Dzala form *bra.mo is cognate with Tibetan *bra-bo*, the underlying Other East Bodish is cognate with the archaic Tshangla form for ‘bitter buckwheat’ *brai.ma*, preserved in some varieties, but replaced by the descriptive innovation *kʰa.la* (< *kʰa.lu* ‘bitter’) in other varieties. In turn, this Tshangla-Other East Bodish root *bras.ma has a possible cognate in Tibetan *ḥbras* ‘paddy rice’.

(292) ‘bitter buckwheat’ BtU *bras.ma*, BtC *bran.ma* (< *brat.ma*?), Kt *bra.ma* ‘Job’s tears’ (< *brâ.ma*?) < *bras.ma (~ DkM & DkD *preː*[35], DkW & DkB *bre*[35]*.mo*[55], Dz *bre.mo* < DD *bra.mo, Tib *bra-bo*, Dzo *byḥo ~ byow* < PB *bra.bo)

In any case, in contrast to what was reported in Hyslop and d’Alpoim-Guedes (2020), ‘bitter buckwheat’ cannot be reconstructed for Proto-East Bodish.

*§5.3. *mʲ- > ɲ-*

In the Dakpa-Dzala varieties, the onset cluster *mʲ-* became a palatal nasal, whereas the Other East Bodish varieties retained the onset: DD *ɲ-* ~ OEB *mj-* < PB *mʲ-. I could find only a single example. The Tibetan form for ‘swallow’ may not be cognate, as we would predict the form †*ñud*. However, in this example, Dakpa-Dzala and Other East Bodish have palatalised the bilabial nasal onset.

(293) ‘swallow’ DkM & DkD *ŋut*[53]*.thoʔ*[53], DkW & DkB *ŋyt*[35]*.pu*[53] ~ Kt *myot ~ nyot*, Kh *myut* ~ Tib *mid-pa* < PB *mʲut

§6. PHONOLOGICAL INNOVATIONS OF OTHER EAST BODISH

I have identified eight correspondences, where Other East Bodish has made a phonological innovation compared to Tibetan, whereas Dakpa-Dzala have largely retained the Tibetan phoneme.

*§6.1. *C_iu > C_io*

Open Tibetan and Dakpa-Dzala rhymes with a close back vowel /u/ regularly correspond to Other East Bodish rhymes with a mid-close back vowel /o/: OEB *-o* ~ Tib *-u* and DD *-u*. As the comparative evidence shows, this lowering of the back vowel /u/ to /o/ is an Other East Bodish innovation, with Tibetan and Dakpa-Dzala preserving the original vowel. This correspondence was first noted for Other East Bodish by Michailovsky and Mazaudon (1994: 549). Exceptions identified by the authors I presume to be the result of later language contact. I am not sure whether we should consider the Dakpa-Dzala varieties of having had the sound change **-u(C_f) > -o(C_f)* (§3.3) in all environments, including open syllables, with later reversion to *-u* in open syllables due to language contact, or whether this change simply did not happen in the open rhymes. The correspondence is exemplified by various examples.

(294) 'intestines' Kt *jo.ma*, Kh *jo.ma*, Bt *jo.ma* ~ Dz *zhu.mo*, DkM & DkD *cu^{35}.ma^{53}*, DkW *ʑu^{35}.mo^{55}*, DkB *dʑu^{35}.mo^{53}*, Tib *rgyu-ma* < PB *(r)gʲu

(295) 'body hair' Kh *po*, Bt *po* (vD15), Kt *po* ~ Dz *ngan.pu* ~ *ba.pu*, Tib *spu* < PB *(s)pu

(296) 'insect' Kt *po*, Bt *po*[91] ~ DkM & DkD *kun^{35}.pu^{53}*, DkB *gun^{35}.pu^{53}*, Tib *ḥbu* < PB *(ḥ)bu

(297) 'nine' Kh *dho.go*, Bt *do.go* (vD15, DDC17), Kt *do.go* ~ DkM & DkD *tu^{31}.ku^{53}*, DkW & DkB *du^{35}.gu^{55}*, Dz *du.gu*, Tib *dgu* < PB *d.gu, Chi 九 *kjuwX* < *[k]uʔ

(298) 'cry' Kh *ngo*, Kt *ngo* ~ *ngos* ~ DkM & DkD *ŋu^{35}*, DkW & DkB *ŋru^{3592}*, Dz *ngu*, Tib *ṅu-ba* 'cry' < PB *ŋu, Chi 嗥 *haw* < *gˤu 'roar, wail'

The correspondence also holds between Other East Bodish and Tibetan when the Dakpa-Dzala evidence is absent.

---

[91] These Other East Bodish forms mean 'snake'.

[92] The Dakpa Wénlàng and Dakpa Bāngxīn onset cluster *ŋr-* is unexpected and may derive from an underlying Proto-Bodic onset*rŋ-.

(299) ‘younger brother’ Kh *no*, Bt *no* (vD15, DDC18), Kt *no* ~ Tib *nu-bo* < PB *nu

The unexpected Bumthang Ura reflex in ‘horn’ can be attributed to the underlying PB form *r^{w}a, not *ru, as is reflected in the Tibetan form.

(300) ‘horn’ DkM & DkD *ru$^{˧˥35}$*, DkW & DkB *ru^{35}.wa^{53}*, BtU *ru* ~ Kt *ro.wa*, *rô*, BtC *ro* ~ Tib *rwa* < PB *r^{w}a

Where this correspondence does not hold, and Other East Bodish has retained rhyme *-u*, this is a likely later Tibetan loan, at least in Other East Bodish.

(301) ‘harvest (v)’ Dz *du*, Kt *du*, Kh *du*, Tib *bsdu-ba*

*§6.2. *C$_i$o(C$_f$) > C$_i$u(C$_f$)*

In a reversal of correspondence §3.3, Tibetan and Dakpa-Dzala open and closed rhymes with close-mid back vowel /o/ correspond to Other East Bodish open and closed rhymes with close back vowel /u/: OEB *-u(C$_f$)* ~ Tib *-o(C$_f$)* and DD *-o(C$_f$)*. The individual rhyme correspondences are summarised in Table 9.

Table 9. Rhyme correspondences *C$_i$o(C$_f$)

PB	Tib	OEB	DD
*o	*-o*	*-u*	*-o*
*-ok	*-og*	*-u(k)*	*-o(k/ʔ/t)*
*-oŋ	*-oŋ*	*-uŋ*	*-oŋ*
*-op	*-op*	*-up*	*-op*
*-om	*(-om)*	*(-om)*	*(-om)*
*-ot	*-od*	*-ot*	*-ot ~ øt ~ øʔ*
*-on	*-on?*	*-un*	*-øn*
*-os	*?*	*?*	*?*
*-or	*-or*	*-ur*	*-or*
*-ol	*-ol*	*-ui ~ -y*	*-e(t)*

The correspondence is attested in most rhymes. In several lexemes, individual varieties have not followed the correspondence, which may be attributed to later language contact and borrowing.

(302) ‘dig’ Kt *ku*, Kh *ku* ~ DkM & DkD *koʔ^{53}*, DkW & DkB *ko^{55}.pu^{55}*, Dz *ko*, Tib *rko-ba* < PB *ko

(303) ‘fry’ Kh *ngu*, Kt *ngu* ~ DkM & DkD *ŋo*^{35}, DkW *ŋøu*^{35}, DkB *ŋ̊o*^{35}, Tib *rṅo* < PB *(r)ŋo

(304) ‘breast; milk’ Kh *ju*, Bt *ju*, Bt *ju* (vD15), Kt *ju* ~ DkM, DkD, DkW & DkB *jo*^{35}, Dz *yo*, Tib *ḥjo-ba* ‘to milk’ < PB *tʲo

(305) ‘shift, move’ Kt *pu* ~ Dz *po*, Tib *spo-ba* < PB *(s)po

(306) ‘lungs’ BtU *zhru.wa* (but BtC *zhi.wa*, Kt *zho.wa*, Kh *lo.wa*) ~ DkM & DkD *lo*ː^{55}, DkW & DkB *lo*^{55}*.wa*^{55}, Dz *’lo.go* ~ *’lou*, Tib *glo-ba* < PB *glo.ba

(307) ‘snatch away, seize’ Kt *phruk* ~ DkW, DkB *phrok*^{53}, Dz *phrog*, Tib *ḥphrog-pa* < PB *(n)pʰrok

(308) ‘hemp, flax, jute; hay, straw; stem’ Kt *suk*, Kh *suk* ~ DkM, DkD, DkW & DkB *sok*^{53}, Tib *sog-ma* < PB *sok.ma

(309) ‘stir, mix, whip’ Kt *truk* ~ *trû*, Bt *hruk*[93]~ DkM & DkD *kroʔ*^{53}, DkB *krot*^{53}, Tib *dkrog-pa* ‘churn’ < PB *(d)krok

(310) ‘remove, extract, uproot’ Kt *phuk* ~ DkM & DkD *poʔ*^{53}, Dz *pog*, Tib *spog-pa* < PB *(s)pok

(311) ‘see’ Kh *thung*, Bt *thung* (vD15) ~ DkM & DkD *thoŋ*^{53}, DkW & DkB *toŋ*^{55}, Dz *tong*, Tib *mthoṅ-ba* < PB *(m)tʰoŋ

(312) ‘kill’ Kt *sut*, Bt *sut* (vD15) ~ DkM, DkD, DkW, DkB *sot*^{53}, Dz *sod*, Tib *gsod-pa* < PB *(g)sot

(313) ‘night’[94] Kh *sut.la*, BtC *sun.la*, Kt *sut.la* ~Tib *srod*[95] < PB *srot

(314) ‘use’ Kt *cut* ~ DkM & DkD *pe*^{35}*.tɕøʔ*^{53} (*ja*^{35}) (< Tib *bed spyod-pa*), DkW & DkB *tɕhø*^{53}, Tib *spyod-pa* < PB *(s)pʲot

(315) ‘dye (v)’ Kt *tshut*, Bt *tshut* ~ DkM & DkD *tshøʔ*^{53}, DkB *tshøt*^{53}, Tib *ḥtshod-pa* < PB *(ḥ)tsʰot

(316) ‘learn, teach’ Kh *’lup*, Kt *’lup* ~ DkM, DkD, DkW & DkB *lop*^{53}, Tib *slob-pa* < PB *(s)lop, Tib √slab (pres. *slob*) < *sləp, Chi 習 *zip* < *s-ləp ‘practice, exercise’

---

[93] Or perhaps, these Other East Bodish forms may rather be cognate with Tibetan *dkrug-pa* ‘mix’.

[94] Here, Dakpa-Dzala has an innovation: Dzala *sen*, Dakpa Tawang *senth* (< *sen.tʰi*, W02).

[95] Note that, in contrast, Bosch (2016: 31) proposes the underlying Proto-East Bodish form *srun.la with as Tibetan cognate *srun* ‘calm’, offering complex paths of phonological change to explain the reflexes. On basis of the regular sound correspondences in the present paper, we would have predicted Dakpa-Dzala forms †*sot.la* and Other East Bodish forms †*sun.ja* as reflexes of *srun.la.

(317) ‘search for’ Bt *tshü* (vD15), Kt *tshui*[96] ~ DkM & DkD *tshe*ʔ[53], DkW *tsheu*[55] (< *tshe*[55]), DkB *tshet*[53], Dz *tshe*[97], Tib *ḥtshol-ba* < *(ḥ)ts^{h}ol

(318) ‘grind; sharpen’ Kt *dur* ~ DkM & DkD *tor*[35], DkW & DkB *dor*[35], Dz *dor*, Tib *rdor* < PB *(r)dor

There are three cognate sets, where *both* Dakpa-Dzala and Other East Bodish rhymes *-uC$_f$* appear to correspond to Tibetan rhyme *-oC$_f$*, although the Tibetan or Other East Bodish comparative evidence is not available in every case. These sets seem to indicate that a preceding *Kr- cluster would trigger the raising of the vowel /o/ to /u/ in *both* the Dakpa-Dzala and Other East Bodish varieties.

(319) ‘spinach, dry curry’ Kh *ruk.se*, BtU *’ngun ruk*, DkW *ʂu*[55], DkB *ʂru*[55]*.ma*[53], *ʂu*[53], Dz *’ru ~ hru* < PEB *krok

(320) ‘nit’ Kt *’riu*, DkM, DkD, DkW & DkB *ʂu*[53] ~ Tib *sro-ma* < PB *kro

(321) ‘ant’ DkM *ʂuk*[55]*.pu*[53], DkD *ʂuk*[55]*.po*[53], DkB *ʂru*[55]*.po*[53], DkT *ɻuk.pu* (TAB, but Dz *hrog.po ~ ’rog.po*, DkW *xrok*[55]*.pu*[55])[98] ~ Tib *grog-mo* < PB *g-rok

This correspondence may also include several concepts for which the Tibetan evidence is lacking, but which likely derive from an underlying Proto-Bodic form with rhyme with rhyme *-oC$_f$

(322) ‘basket’ Bt *rung*, Kt *rung* ~ DkM & DkD *ɕoŋ*[35] (but DkW *ba*[35]*.ruŋ*[55], DkB *ɕuŋ*[35]) < PEB *roŋ

(323) ‘rhododendron’ Kt *u.dung* ~ DkT *u.doŋ ’men.to* (TAB, but Dz *wu.dung ’men.to*) < PEB *wu.doŋ

(324) ‘burn’ Kh *tut* ‘roast’, Kt *tut* ~ Dz *tod* < PEB *tot ~ Tib *sreg-pa*

(325) ‘put into’ Kt *put*, Kh *put* ~ Dz *pod* < PEB *pot ~ Tib *tshud-pa*

(326) ‘boil (n)’ Bt *thrun* ~ DkW & DkB *tɕhøn*[53], Dz *chon*, PEB *t^{h}ron, Tib *khron* ‘well, spring’ < PB *k^{h}ron?

Where this correspondence does not hold, we must presume language contact and borrowing in all the Other East Bodish varieties. This could

---

[96] First the rhyme changed from *-ol* > *-ul* before diphthongisation to *-ui* or rounding to *-y*.

[97] The rhyme is commonly rounded in the Dakpa-Dzala varieties, sometimes with an epenthetic stop coda – similar to their realisation in spoken Tibetan varieties: OEB *-ui ~ y* ~ DD *-ø* ~ *-øt* ~ *-øʔ* ~ Tib *-ol* < PB *-ol.

[98] Likely under Tibetan contact influence.

be reconsidered if we were to find attested Other East Bodish forms with rhymes with vowel /u/.

(327) ‘wheat’ Bt *go*, Kt *go*, DkM & DkD *ko*^{53} ~ Tib *gro*

(328) ‘read’ Kt *’lok*, Kh *lok*, DkM, DkD & DkB *khlok*^{53}, Dz *khlo* (< *khlok*), Tib *klog-pa* < PB *klok

(329) ‘donkey’ Kh *bong.bu* (but Bt *bang.gu*), Dz *bong.bu* (but DkM & DkD *puŋ*^{35}*.pu*^{53}, DkW & DkB *buŋ*^{35}*.pu*^{53}), Tib *boṅ-bu* < PB *boŋ.bu

(330) ‘guess’ Kt *pho.tshot ta*, DkB *tshot*^{53}, Dz *pho.tshod te*, Tib *pho-tshod* < PB *ts^{h}ot

(331) ‘vulture’ BtU *got.pa*, Kh *got.po*, Kt *got*, Dz *gö*, Tib *rgod* < PB *(r)got

(332) ‘bring’ Kt *’ot*, Kh *oth*, Dz *rod*, DkW & DkD *ɣot*^{35}, Tib *sprod-pa* < PB *(s)prot

(333) ‘weed’ Bt *’ngon* (vD15), Kt *’ngon*, DkM & DkD *ŋøn*^{55}, DkW & DkB *ŋon*^{55}, Dz *’ngon*, Tib *sṅon-po* ‘green (of plants)’ < PB *(s)ŋon

(334) ‘king, ruler’ Kh *pon*, BtU *pon*, Kt *pon*, DkM *pøn*^{55}, DkD, DkW & DkB *pon*^{55}, Tib *dpon* < PB *(d)pon

(335) ‘alive’ Kt *son.po*, DkM & DkD *søn*^{55}*.po*^{53}, DkW & DkB *son*^{55}*.po*^{53}, Tib *gson-po* < PB *(g)son.po

(336) ‘save somebody’ Kt *sung.cop*, DkM & DkD *cop*^{53}, DkB *tɕop*^{53}, DkW & DkB *suŋ*^{53}*.tɕop*^{55}, Tib *skyob-pa*

(337) ‘wooden pail, barrel’ Bt *zom*, DkM, DkD, DkW & DkD *zom*^{35}, Dz *zom*, Tib *zom* < PB *dzom

(338) ‘share, distribute equally’ Kt *’nyom*, DkM, DkD, DkB *ɲom*^{55}, DkW *ɲo*^{55}*.mu*^{55} (< *ɲom*^{55}), Dz *’nyom*, Tib *snyoms-pa* < PB *(s)n^{j}om

(339) ‘boil2’ Kt *koi*, DkM & DkD *køʔ*^{53}, DkB *køt*^{53}, Dz *kö* ~ Tib *skol-ba* < PB *(s)kol

(340) ‘lose’ Kt *shor*, DkM, DkD, DkW & DkB *ɕor*^{55}, Dz *shor*, Tib *śor-ba* < PB *s^{j}or

(341) ‘heat’ Bt *krot*, Kh. *kroth*, Dz *grou*^{99}, Tib *drod* < PB *grot

[99] The unexpected Dzala rhyme is likely the result of agglutination of a second morpheme *-pu* to the predicted rhyme *-ø* (†*grot.pu* > *grou*).

The divergent rhymes of the concept ‘mortar’ indicate that this is a typical *Wanderwort*. We would predict the Other East Bodish, not the Dakpa-Dzala varieties, to have rhyme *-um*.

(342) ‘mortar’ DkW & DkB *tshom*^{53}, Bt *tshom*, Kt *tshom* ~ DkM & DkD *tshum*^{53}, Dz *tshum* ~ Tib *tshon-kho*

Finally, there is a small number of cognate sets – all verbs – where Dakpa-Dzala did not make the change *-a* to Dakpa-Dzala *-e* (§5.1), even when following coronal onsets. Instead, we find the innovative reflex *-u* in Other East Bodish: DD *-a(ʔ)*, OEB *-u*, Tib *-aḥ*. This was also observed by Michailovsky and Mazaudon (1999: 550). To this, Hill (2015: 171 and 2019: 26) remarked:

> “The Kurtöp cognates bù ‘do’, ɲù ‘borrow’, zù ‘eat’, chú ‘devour’, the generalized past forms cognate to Tibetan *byos (replaced by བྱས་ byas), *rños (replaced by བརྙས་ brñas), ཟོས་ zos, and ལྕོས་ ḻchos, show that the change *as > -os occurred prior to the split of Tibetan and the East Bodish languages.”

Indeed, the evidence seems to indicate that where the Dakpa-Dzala varieties have forms cognate with the Tibetan present stems *za* ‘eat’ and *ḥchaḥ* ‘bite’, the Other East Bodish varieties are cognate with the Tibetan imperative stems *zo* ‘eat’ and *ḥcho(s)* ‘bite’, with the characteristic correspondence Tibetan *-o* to Other East Bodish *-u* (§6.1).

(343) ‘eat’ DkM, DkD, DkW, DkB *za*^{35}, Dz *za*, Tib *za-ba* ~ Kt *zu* (also *za* < Dzo), Kh *zu*, Bt *zu* (vD15) < Tib *zo*

(344) ‘bite’ DkM & DkD *chaʔ*^{53}, DkB *tɕhak*^{53}, Tib *ḥchaḥ-ba* ~ Kt *chu*, Tib *ḥco(s)*

In the case of ‘borrow’, the Dakpa-Dzala forms cognate to the Tibetan present stem *rña* ‘borrow’ mean ‘buy’, which do, in fact, display the characteristic change *-a > *-e*. The Other East Bodish form is cognate with the Tibetan imperative stem *rños* ‘borrow’, indicating that in rhyme *-os* Other East Bodish also raised back vowel /o/ to /u/ (§6.2), or that the coda *-s* was elided before the change *-o* > *-u*.

(345) ‘borrow’ DkM & DkD *ŋer*^{35}, DkW *ŋeu*^{35} (< *ŋe*^{35}), DkB *ŋiu*^{35} (< *ŋi*^{35}), Tib *rña-ba* ~ Kt *nyu* ‘borrow’, Kh *ŋu*^{23} ‘buy’ (IT21), Bt ŋʏ^{23} ‘buy’ (IT21), Tib *rños* ‘buy’

The same correspondence can also be observed with the closed rhyme Tibetan *-ag*, Dakpa-Dzala *-ak*, Other East Bodish *-uk* in ‘weave’, where the Dakpa-Dzala and Other East Bodish forms reflect the Tibetan imperative stem *thogs*, with characteristic correspondence Tibetan *-ok* to

Other East Bodish *-uk* (§6.2), but in this case retention of the rhyme *-ok* in Dakpa-Dzala.

(346) 'weave; grind' DkT *tog* 'grind', Dz *to* (< *tok*, in *phe.to* 'flour-grind'), Tib *ḥthag-pa* ~ Kt *thuk*, Kh *thuk*, Tib *thogs*

Due to the problematic distinction between the transitive and intransitive forms of the verb 'to smell' (i.e. 'to smell something' or 'to emit a smell') in the secondary literature and later loan contamination, the situation is more complex in the verb 'smell'. Dakpa Wénlàng has a form cognate with the Tibetan present stem *mnam*, showing the characteristic correspondence Tibetan *-a* to Dakpa-Dzala *-e* following a coronal (§5.1). Bumthang has a form cognate with the Tibetan imperative stems *snoms* or *noms*. The fact that Dakpa Mámă, Dakpa Dáwàng and Dakpa Bāngxīn also have this reflex provides evidence that the change from *-om* to *-um* occurred in Other East Bodish *and* in Dakpa-Dzala (§6.2). The Khengkha and Kurtöp forms are most probably later Tibetan or Dzongkha loans that have replaced the predicted reflex *num*.

(347) 'smell' DkW *nem*^{35}, Tib *mnam-pa* ~ DkM, DkD & DkB *num*^{35} (Lù02: 373), Bt *num* (vD15), Tib *(s)noms* ~ Kh *nam*, Kt *nam* < Tib *mnam-pa*

The Other East Bodish and Dakpa-Dzala evidence indicates that in some verbs, the Other East Bodish varieties relied on the imperative stem of Tibetan verbs for the formation of the regular verb root, while the Dakpa-Dzala varieties relied on the present *or* imperative stem of the Tibetan verbs, and that these Tibetan verbal forms, ending on *-o(C$_f$)(s)*, followed the regular pattern of change from *-o* to *-u* in the Other East Bodish varieties.

In other words, there was no change *-a > *-u* in the Other East Bodish varieties. The solution proposed here is distinct from the earlier proposals by Hill (a change *-as > *-os* in the common ancestor of Tibetan, Other East Bodish and Dakpa-Dzala, Hill 2019: 26) and Jacques (the generalisation of the third person object past stem, Jacques 2013: 296, fn. 9 and Jacques 2021: 146-148).

*§6.3. *C$_i$i > C$_i$e*

In open rhymes, Tibetan and Dakpa-Dzala vowel /i/ corresponds to Other East Bodish rhyme /e/, which, like §3.1, is thought to derive from PB *-i > Tib *-i*, OEB *-e*, DD *-i*.

(348) 'sun'[100] Kt *ne*, BtU *ne* (but BtC *nyi*), Kh *ne* (but DkM, DkD, DkW, DkB *ŋi*^{35})[101] ~ Tib *ñi-ma* < PCB *nʲi < PB *ni, Chi 日 *nyit* < *C.nik, OBur *niy*

(349) 'four' Kh *ble*, Bt *ble* ~ *blä* (vD15) ~ DkM & DkD *pli*^{53}, DkW & DkB *bli*^{35}, Dz *bli*, Tib *bźi* < PCB *b-lʲi < PB *b-li

(350) 'die' Kh *se*, Bt *se* (vD15), Kt *se* ~ DkM & DkD *ɕi*^{55}, DkW & DkB *ɕiu*^{55} (< *ɕi*^{55}), Dz *shi*, Tib *śi* < PCB *sʲi < PB *si, OBur *siy* < *śi

(351) 'ten' Kh *che*, Bt *che* (vD15, DDC17), Kt *che* ~ DkM, DkD, DkW & DkB *tɕi*^{53}, Dz *ci* ~ Tib *bcu*

There are two noted exceptions, where all varieties have open rhyme *-i*. Perhaps, this can be attributed to an underlying palatal rhyme *-ij in the case of 'bow' (as is reflected in the Old Burmese and Chinese forms), with this rhyme (and rhymes *-it, *-is, *-il, see below) not reflecting this particular correspondence, and to the labialised onset in the case of 'dog'.

(352) 'bow' DkM, DkD, DkW & DkB *li*^{35}, Dz *li*, BtU *li*, BtC *li.mai*, Kt *li.mi* ~ OTib *gźi* < *glʸi (but Tib *gźu* < *glʸu) < PCB *(g)lʲi < PB *li, also OBur *liy* and Chi 矢 *syijX* < *l̥ijʔ 'arrow'

(353) 'dog' DkM & DkD *chi*^{53} ~ DkW & DkB *khi*^{55} (but Kt *khwi*, Bt *khwi* (vD15), Kh *khui* (i.e. *kʰwi*)) ~ Tib *khyi* < PB *kʰʷi

In other cases where the vowel remains /i/ in all varieties, we may presume later Central Bodic loans.

(354) 'smell (n)' DkM, DkD, DkB *ɻi*^{53} ~ Kh *bri*, Kt *bri*, Bt *bri* (vD15) ~ Tib *dri* < PCB *bri

*§6.4. *$C^{j}VC_{f}$ > $C_{i}iC_{f}$*

Any Tibetan and Dakpa-Dzala vowel preceded by a palatal or palatalised onset corresponds to a high front vowel /i/ in Other East Bodish: /V/ > /i/ if C_{i}- = C^{j}-. This correspondence, an Other East Bodish innovation, was earlier noted by Michailovsky and Mazaudon (1994: 550).[102] This

[100] Bumthang Chume 'sun' is a later Tibetan loan. The phonological developments in the Other East Bodish varieties are similar to those in Burmese, cf. Old Burmese *niy* vs. modern spoken Burmese ၎ *ne*^{22} (Dài and Huáng 1992).

[101] The Dakpa-Dzala forms mean 'day', as the Dakpa-Dzala varieties have a unique innovation for 'sun'.

[102] Note, that Michailovsky and Mazaudon's set for 'turn' (1994: 550) does not hold: Dz *gir* (DDC17: 19), Kh *gir* (YA96: 41), Kt *kwir ~ kir* (KD16: 5, 9), Dzo *ḥgyir-ba*, Tib *ḥkyir-ba* 'spin, rotate, turn round', not Tib *sgyur-pa* [sic *sgyur-ba*?] 'change, turn into'.

correspondence does not hold when the vowel following the palatalised onset is the high vowel /i/ itself (see §3.1).

(355) ‘wear cloth’ Kh *gin*, Kt *gin* ~ DkM & DkD *cen*^{35}, DkW & DkB *ge*^{35} ~ Tib *gyon-pa* < PB *gʲon

(356) ‘cold, be cold’ Kh *khik* ~ *khî*, Kt *khik* ~ DkM & DkD *chek*^{53}*.pa*^{53} ~ Tib *ḥkhyag-pa* < PCB *(ḥ)kʰʲak

(357) ‘broom’ Kt *phik.sang*, Bt *phik.saŋ* (MM94) ~ DkM, DkD & DkB *tɕhap*^{55}*.tham*^{55}, DkW *mai*^{35}*.ɕak*^{55}*.tam*^{55}[103], Dz *shag.tam* ~ *shag.tsam*, Tib *phyags-ma* < PCB *pʰʲak < PB *pʰak

(358) ‘few, little’ DkM & DkD *ŋ̊uŋ*^{35}*.po*^{53}, DkB *ŋ̊uŋ*^{35}*.ko*^{53}, Tib *ñuṅ-ba* ~ Kh *nying.wa*, Kt *nging.ba* < PB *ŋʲuŋ

(359) ‘flour’ Kh *phi*, Kt *phi* ~ Dz *phe*, Tib *phye* < PB *pʰʲe < *pʰʷe, Bur *phwai* < *poi ‘chaff, bran’

(360) ‘fire’ Kh *ga.mi*, Kt *ga.mi*, Bt *ga.mi* (vD15) < POEB *ga.mi ~ DkM, DkD, DkW & DkB *me*^{35}, Dz. *me*, Tib *me*, OTib *mye* < PB *mʲe, Chi 焫 *xjw+jX* < *m̥əjʔ ‘burn’

(361) ‘wet’ Kt *shir.wa*, BtC *shir.phan* ~ DkM & DkD *ɕer*^{55}*.pa*^{53}, Dz *sher.pa*, Tib *gśer-ba* < PB *(g)sʲer

(362) ‘hearthstone’ Bt *kit.pa*, Kt *kit.pa*, Tib *sgyed-po* < PB *kʲet.pa

In the case of ‘hang up’, the Tibetan evidence is missing, we would predict a form like †*yeg*.

(363) ‘hang up’ DkM, DkD, DkW & DkB *jek*^{53} ~ Kt *’ik* < PEB *jek

In the case of ‘you’, the Dakpa-Dzala evidence is missing due to innovation of ‘he/she (3sg)’, and I postulate semantic change from Proto-Bodic ‘you (2sg)’ to Other East Bodish ‘he/she (3sg)’.

(364) ‘you (2sg)’ Kh *khit* ‘he/she (3sg) coll.’, Bt *khit* ‘he/she (3sg)’ (vD15), Kt *khit* ‘he/she (3sg)’ ~ Tib *khyod* ‘you (2sg)’ < PB *kʰʲot

In ‘short’, the predicted Other East Bodish forms would have a vowel /o/ (cf. §3.3), like Dakpa Wénlàng and Dakpa Bāngxīn, with Dzala and Dakpa Mámă and Dakpa Dáwàng having Tibetan loans. The Other East Bodish high vowel /i/ can only be explained through a palatalised onset, although this palatalised onset is no longer reflected in the written Tibetan form. Proto-Bodic *tʰʲuŋ ‘short’ may also have resulted in Tibetan *chuṅ-ba* small, particularly as reflected in Dzo *chuṅ-ku*.

[103] The morpheme *mai*^{55} in the Dakpa Wénlàng form is curious: Could this be a cognate with Other East Bodish forms for ‘house’?

(365) ‘short’ DkW & DkB *thoŋ^{55}.ko^{55}* (but Dz *thung.ku*, DkM & DkD *thuŋ^{55}.po^{53}* < Tib *thuṅ-ba*) ~ Tib *thuṅ-ba* ~ Kh *thin.ko.la*, Bt *thin.ko.la*, Kt *thing.ku* < PB *t^{hj}uŋ

*§6.5. *ɬ- > ɕ-*

The lateral fricative *ɬ-* is preserved in Dakpa-Dzala and Tibetan but palatalised to a palatal fricative *ɕ-* in the Other East Bodish varieties, as the example ‘shoe, boot’ indicates: OEB *ɕ-* ~ DD *ɬ-*, Tib *ɬ-* < PB *ɬ-.

(366) ‘shoe, boot’ Kh *sham*, BtC *sham*, BtU *shram*[104], Kt *sham* ~ DkT *lham*, DkW *phiu^{55}.ɬam^{55}*, Dz *lham*, Tib *lham*

Whenever this correspondence does not hold, we must presume later Tibetan loans, in which case the Other East Bodish varieties also have the lateral fricative /ɬ/, except for Khengkha. Because a concept like ‘deity, god’ is not affected by the l-vocalisation (*l- > *j-* before /a/) characteristic of the Other East Bodish languages (§6.6), we must conclude that *ɬ- > *l-* is a sound change affecting only Khengkha, with Khengkha speakers (like Tshangla speakers) often unable to realise the alveolar lateral fricative /ɬ/ even when speaking in Dzongkha or Tibetan.

(367) ‘south’ Kh *’lo* ~ DkM, DkD, DkW & DkB *ɬo^{53}*, Dz *lho*, Bt *lho*, Kt *lho*, Tib *lho*

(368) ‘deity, god’ Kh *la* ~ DkM, DkD, DkW & DkB *ɬa^{53}*, Dz *lha*, Bt *lha*, Kt *lhá*, Tib *lha*

The occurrence of the voiceless alveolar lateral fricative /ɬ/ in Khengkha ‘Tuesday’ indicates that this lexeme is a much later Dzongkha loan.[105]

(369) ‘Tuesday’ Kh *za lhakpa* ~ Tib *gzaḥ lhak-pa* ‘Wednesday’, Dzo *gzaḥ lhak-pa* ‘Tuesday’

*§6.6. *l- > j- if V = {a, o, u}*

Before back vowels {a, o, u}, Other East Bodish varieties palatalise the lateral approximant: OEB *j-* ~ Tib *l-* and DD *l-* < PB *l- if {V = /a, o, u/}. Note, that there are no attestations of Proto-Bodic rhyme *-e preceded by a simple lateral onset *l-, all attestations are with a prefix or onset cluster (i.e. ‘penis’ (234) and ‘tongue’ (236)).

[104] For the Bumthang Ura voiceless apical trilled fricative [r̥], see §8.4.

[105] And not a Tibetan loan, note the one-day difference in the names of the weekdays between Tibetan and Dzongkha.

(370) ‘arm’ Kt *yâ*, Bt *yak* ~ Tib *lag-pa*, DkM & DkD *la˧˥*, DkW & DkB *la*^{55}, Dz *’la* < PB *lak, Bur *lak*

(371) ‘path, road’ Bt *yam* (vD15), Kh *yam*, Kt *yam* ~ Tib *lam*, DKM, DkD & DkB *lem*^{35}*.taŋ*^{53}, DkW *lem*^{35}*.daŋ*^{55}, Dz *lem* < PB *lam[106], Bur *lamḥ*

(372) ‘hill, pass’ Bt *ya* (but Kt *la*) ~ Dz *la*, Tib *la* < PB *la

(373) ‘five’ DkM & DkD *le*^{35}*.ŋe*^{53}, DkW & DkB *le*^{35}*.ŋa*^{53}, Dz *la.nga* ~ Bt *ya.nga* (vD15), Kt *ya.nga*, Kh *ya.nga*, Tib *lṅa* < PB *la.ṅa

(374) ‘stand’ Bt *yang* (vD15), Kt *yang* ~ DkM, DkD, DkW, DkB *laŋ*^{35}, Dz *lang*, Tib *laṅ-ba* < PB *laŋ, Bur *laṅʔ* ‘platform, scaffold, watchtower’, Chi 揚 *yang* < *laŋ ‘raise’

(375) ‘pour’ Kt *yo* ~ *yok*, Kh *yo* (< *yok*) ~ Dz *log*, DkW, DkD, DkB *lok*^{35}, DkW *lo*^{35} ~ Tib *lug-pa* < PB *luk

(376) ‘bury’ Kt *yop*, Kh *ẏop* (TAB) ~ DkM, DkD & DkB *lup*^{35}, Dz *lub*, Tib *rlubs* < PB *lup

The fact that the correspondence also holds in the Other East Bodish forms of ‘manure’ may indicate this is an inherited form in the Other East Bodish varieties, whereas it has a distinct form or a later Tibetan loan in the Dakpa-Dzala varieties.

(377) ‘manure’ Bt *yot*, Kh *yoth*, Kt *yot* ~ Tib *lud*, DkM & DkD *løn*^{55}, DkW *lyn*^{55} (Lù02:369), DkB *lon*^{55} < PB *lut

In the concept ‘question particle’ the Tibetan evidence is absent, but a cognate form can be found in Dzongkha.

(378) ‘question particle (with interrog.)’ Kh *yo*, Bt *yo* (vD15), Kt *yo* ~ DkT *lo* (TAB), Dz *lo*, Dzo *lo* < PEB *lo

This correspondence also holds when the lateral is a medial, as in ‘arrow’.

(379) ‘arrow’ DkM, DkD & DkB *bla*^{53}, DkW *mla*^{35}, Dz *mla* ~ Kt *mya* ~ *nya*, Bt *nya* ~ Tib *mdaḥ* < *mldaḥ < *mdlaḥ < *mtlaḥ < PB *mlaḥ, OBur *mlāḥ*

And the fact that the correspondence does not hold in the concept ‘answer’ indicates this is a later Tibetan loan, at least in the Other East Bodish varieties.

(380) ‘answer’ DkM, DkD & DkB *len*^{55}, Dz *län*, Kt *len*, Tib *lan* < PB *lan

[106] Michailovsky and Mazaudon (1994: 553) suggest an underlying form *g-lam based on the Tamangic evidence also found in lexemes such as ‘sheep’ and ‘work’.

There are indications that a sibilant prefix or onset cluster conditions the retention of the lateral onset *l-* even in the Other East Bodish varieties, as shown in 'moon' and 'learn, teach'.

(381) 'learn, teach' DkM, DkD, DkW & DkB *lop*^{53}, Tib *slob-pa* ~ Kh *'lup* (YA96:27), Kt *'lup* < PB *(s)lop

(382) 'moon' DKM *lɛː*^{55}*.thøn*^{55}, DkD *le*^{35}, DkW *le*^{55}, Kt *'la.dar* ~ *'la.dat* ~ *'la.la*, Tib *zla.ba* < PB *zla

Otherwise, this correspondence does not hold when preceding front vowels /e/ and /i/, cf. §2.5.2.

*§6.7. *kl- > k-*

The Other East Bodish varieties have simplified the onset cluster of a voiceless velar stop and lateral medial that is retained in Dakpa-Dzala and written Tibetan as *kl-* and derives from a Proto-Bodic onset cluster *kl-: DD *kl-*, Tib *kl-*, OEB *l-* < PB *kl-. Other East Bodish herein follows spoken Tibetan. The influence of the underlying k- is still evidenced by the high register tone of the lateral onset in the Other East Bodish varieties.

(383) 'musk deer' DkM, DkD *klau*^{35}, Tib *gla-ba* ~ Kt *lar.tse* (< Tib *gla-rtsi* 'musk deer pod') < PB *kla.ba

(384) 'peach; pear' DkM & DkD *kle*^{35}, DkW & DkB *gle*^{35}, Dz *gle*, Tib *gli* (also *sli*) ~ Kt *li*, Bt *'lik* < PB *kli

(385) 'testicle; clitoris' Dz *'lik.pa* ~ *klik.pa* ~ BtU *'lik.pa*, Kt *'lik.pa* < PEB *klik.pa[107]

(386) 'read' DkM, DkD & DkB *khlok*^{53}, Dz *khlo* (< *khlok*), Tib *klog-pa* ~ Kt *'lok*, Kh *lok* < PB *klok

Only in 'brain' do Bumthang Ura and Michailovsky and Mazaudon's (1994: 553) data for Kurtöp also have the onset cluster *kl-*. Why the Other East Bodish varieties, and even Dzala, display this variation in this lexeme is unknown.

(387) 'brain' Dz *glad.pa* ~ *lad.pa*, Tib *klad-pa*, Kt *klat.pa* (MM94), BtU *klat.pa* ~ Kt *rat.pa* ~ *trat.pa* ~ BtC *lat.pa* < PB *klat.pa

There is, however, an exception to this correspondence, where Tibetan has a rhotic, not a lateral medial. Kurtöp has a later Tibetan or Dzongkha loan.

[107] But cf. Tibetan *rlig-pa*. This form would explain the Other East Bodish and Dzala high register onsets but would not explain the Dzala form with onset cluster *kl-*.

(388) ‘bile, gall’ *kli*^{53}, Dz *kli* ~ *kle* ~ Tib *mkhris-pa*, Kt *thri.pa* < PB *(m)klis.pa

*§6.8. *Kl- > ʑ-*

As Michailovsky and Mazaudon (1994: 553) observed, there may be a regular correspondence between Tibetan and Dakpa-Dzala onset clusters of a voiced or aspirated velar onset and lateral medial *Kl- and Other East Bodish palatal fricative onset *ʑ-* or *ɕ-*, thought to derive from underlying onset cluster *Kl- or palatalised *Klʲ-. This only concerns the aspirated and voiced onset clusters *kʰl- and *gl- and would exclude the unvoiced onset cluster *kl- (see §6.7). However, I was unable to find additional evidence to the two examples of ‘flute’ and ‘lungs’ already presented by Michailovsky and Mazaudon with the exception of ‘boil1’, for which the Tibetan evidence is absent.

(389) ‘flute’ DkM, DkD & DkB *tʂhi*^{55}*.liŋ*^{55}, DkT *ke.ling*, Tib *gliṅ-bu* ~ Bt *zheng*, Kt *zheng* < < PCB *glʲiŋ < PB *gliŋ

(390) ‘lungs’ DkM & DkD *lo*$^{ː 55}$, DkW & DkB *lo*^{55}*.wa*^{55}, Dz *’lo.go* ~ *’lou*, Tib *glo-ba* ~ Kt *zho.wa*, BtU *zhru.wa*, BtC *zhi.wa* < PB *glo.ba

(391) ‘boil1’ DkM, DkD & DkB *khlaː*, Dz *khla* ~ *khlak* ~ Kt *shâ* ~ *shak* < PEB *kʰlak

*§6.9. *pl- > dʑ- if V = {a, e, ai}, ɕ- if V = {u}, pl- if V = {o, i}*

There is very limited evidence for a Proto-Bodic onset cluster of an unvoiced, unaspirated bilabial stop onset and a lateral medial *pl-. This onset has been attested in the Bumthang, Dzala, the Dakpa varieties and Khengkha, but there is no concept with attestations from all these varieties. Moreover, possible Tibetan cognates of these forms, where available, have simple bilabial onsets or onset clusters of a bilabial stop and a rhotic medial. The latter onset cluster is also reflected in some of the Dakpa-Dzala and Other East Bodish reflexes.

When preceding vowels /e, a/ and the diphthong /ai/, there is a correspondence between Dakpa-Dzala onset clusters of a bilabial stop and a lateral medial *pl-* and Other East Bodish palatal affricate onsets: DD *pl-* ~ OEB *dʑ-* (if V = {a, e, ai}). The Other East Bodish onsets had an intermediary onset of a bilabial stop and a palatal medial, reflecting correspondence §3.5, i.e. *pl- > *pʲ- > *dʑ-*, as is still reflected in ‘slip’.

Unfortunately, I was unable to find Tibetan evidence for the cognate sets that supports this sound correspondence. Hence, these forms cannot

be reconstructed to Proto-Bodic, but just to hypothetical Proto-East Bodic.

(392) ‘exchange’ DkM & DKD *ple?*^{53}, DKW & DKB *ple*^{53} ~ Kt *jek* < PEB *plek[108]

In ‘slip’, the alternation between Kurtöp *pjak* ~ *pcak* still attests to the Other East Bodish change of medial /l/ to medial /j/ (§6.6) before becoming an affricate /c {pc}/, similar to what is observed in ‘dust, dirt, ashes’.

(393) ‘slip’ DkM, DkD & DkB *plek*^{53}, Dz *bleg* ~ Kt *pcak* ~ *pyak* < PEB *plak

When preceding vowel /u/, Other East Bodish may have a palatal fricative onset, as in the example ‘pull out weeds’. Again, there were intermediate Other East Bodish forms with palatalisation of *l- to *j-* (§6.6) *pluk < *pʲuk and lowering of *uCf to *-oCf* (§3.3) *pʲuk < *pʲok

(394) ‘pull out weeds’ DkW *plo*^{55}*.gu*^{55} (< *plok*), Dz *plog* ~ Kt *shok* < PEB *pluk

When preceding vowels /i, o/, the reflexes are more mixed, with even Other East Bodish varieties having preserved the *pl-* onset cluster.

(395) ‘remove a cover’ Dz *shig* ~ Bt *plik* (vD15), Kt *plik*, Dzo *sbyig*, Tib *sbrig-pa* < PEB *(s)plik?

(396) ‘take off’ Dz *plud* ~ Kt *prot*, Kh *plot* ‘untie’ < PEB *plut

(397) ‘pry, make a hole’ DkM, DkD & DkB *pluk*^{53} (but Dz *brud* < Tib *ʾbrud*) ~ Kt *pat* < PEB *plut?

*§6.10. *bl- > (b)dz-*

The Other East Bodish varieties follow the correspondence of §6.6, with medial /l/ becoming medial /j/ before vowel /a/ (and diphthong /ai/), with the outcome palatal affricates: Proto-Bodic *bl- > *bj- > *dz-*, as the examples ‘dust, dirt, ashes’ and in ‘on, above’ show. Dakpa-Dzala, like Tibetan, has preserved the onset cluster.

[108] Jacques (2004a: 4–5) suggests a sound change *rlʸ- > *rǰ-* (= *rdʸ*) while Bodman (1980: 127) suggests *rlʸ > *rź- > *rǰ-*, both comparing Tibetan *rǰe* < *rlʸe ‘exchange’ to these East Bodish forms. Hill (2019: 29, fn. 39) states that while some lexicographical sources agree with the conjunction that the East Bodish evidence suggests √brǰe rather than √rǰe, this is not the majority opinion. I am not sure whether to consider the Other East Bodish and Dakpa-Dzala forms cognate with this Tibetan evidence, because the rhyme does not match and there is no trace of a bilabial onset in the Tibetan evidence.

(398) ‘dust, dirt, ashes’ DkW *pla*^{53}, Dz. *bla* ~ Kt *bja* ~ *bya*, BtU *thau ja* (Tib *thal* + PEB *bla) ~ Tib *thal* < PEB *bla

(399) ‘on, above’ Dz *blai.wa*, Tib *bla* ~ Kt *je*, Bt *jai* (vD15), Kh *dzai* (TAB) < PEB *blai

There are two exceptions to this correspondence. In ‘leaf’, the Dakpa-Dzala varieties have an onset cluster *bl-*, while the Other East Bodish varieties have a simple onset *l-* with high register onset, and the Tibetan evidence is reminiscent of the developments in §4.9: DD *bl-* ~ OEB *l-*, Tib *ḥd-* > PB *bl-. Like with the distinction between the onset cluster *ml- and the prefixed onset *m-l- in §4.9, the distinct outcomes in the case of ‘leaf’ versus ‘dust, dirt, ashes’ and ‘on, above’ could perhaps be attributed to a prefixed lateral onset *b-l- in ‘leaf’, which, through dental excrescence, may also have resulted in the Tibetan form. The Other East Bodish varieties (Khengkha, Bumthang Chume and Kurtöp) show metathesis of the coda of the root and the onset of the suffix *b-lap.ma > *lap.ma > *lam.ba*. Simplification of the onset cluster *b-l-* seems to precede the *l-* > *j-* vocalism before vowel /a/ in the Other East Bodish varieties (§6.6).

(400) ‘leaf’ DkW *bla*^{35}*.ma*^{55}, Dz *blab.ma* ~ Kt *’lam.pan* ~ *’lap.men*, Kh *lam.pa*, BtC *’lam.ba* ~ Tib *ḥdab-ma* < PB *b-lap

In ‘work’, we have Old Tibetan evidence to support the onset *bl-*: OTib *blas* ‘work’, cf. e.g., Schuessler (1998). However, while Dakpa-Dzala has preserved the original onset, Tibetan has simplified this onset to *l-*. While the Bumthang form is a later loan from Tibetan *lad*, all the other Other East Bodish forms are later Dzongkha loans.

(401) ‘work (n)’ DkM & DkD *ple*^{35}, DkW & DkB *ble*^{35}, Dz *ble*, OTib *blas* ~ Bt *yat* (vD15), Tib *las-ka* ~ *lad-ka* < PB *blat

§7. PHONOLOGICAL RETENTIONS OF OTHER EAST BODISH

I observed two sound correspondences, where both Dakpa-Dzala and Tibetan appear to have innovated, while Other East Bodish has retained a more conservative phoneme.

*§7.1. *w- : w-*

A Dakpa-Dzala and Tibetan palatal glide onset /j/ regularly corresponds with an Other East Bodish labial approximant onset /w/ if preceding a vowel in the close and close-mid range, i.e. /i, e, u, o/, but not preceding open vowel /a/ : DD *j-*, Tib *y-* ~ OEB *w-* if {V = /i, e, o, u/}. This was also reported in Michailovsky and Mazaudon (1994: 552) and according

to Hill (2019: 19–20) suggests an innovation *w- > *y*- in Tibetan resulting in a merger of *y- and *w-.

(402) ‘affirmative copula (equational)’ Kh *wen*, Bt *wen* (vD15), Kt *wen* ~ DkM & DkD *jin*^{35}, DkW *xin*^{53}, DkB *xin*^{55} (Lù02:381), Dz *yin* ~ *hin*, Tib *yin* < PB *win

(403) ‘parched grains’ Bt *wis* ~ Dz *ye*, DkT *jes* (TAB), Tib *yos* < PB *wos

This correspondence also seems to hold when the Dakpa-Dzala evidence is absent.

(404) ‘weed (v)’ Kh *wer*, Kt *wer* ~ Tib *(yur-ma) yur-ba* < PB *wur

(405) ‘weed (n)’ Kh *wer.za*, Kt *wer.za* ~ Tib *yur-ma* < PB *wur

This correspondence also holds where the palatal glide occurs as a medial, which is one of the sources of the *C*$_i$*w*- onset clusters in the Other East Bodish languages (the other being the onset cluster *sw-, cf. §8.1). When a Tibetan onset cluster of a consonant and a palatal glide *C*$_i$*j*- (in all cases the initial consonant is a velar stop) precedes a close vowel /i, u/, the palatal medial is replaced by a labial medial in Other East Bodish. As ‘weed (v, n)’ above shows that Tibetan /u/ becomes Other East Bodish /e/ after *C*$_i$*w*-, the Tibetan and Other East Bodish forms for ‘water’ are likely cognate, and perhaps the Dakpa-Dzala forms, too.

(406) ‘water’ Kt *khwe*, Bt *khwe* (vD15, DDC18), Kh *kui* ~ *khui* ~ DkM, DkD, DkW & DkB *tshi*^{53}, Dz *tshi* ~ Tib *chu* < PCB *k^{hj}u < PB *k^{hw}e

(407) ‘dog’ Kt *khwi*, Bt *khwi* (vD15), Kh *khui* ~ DkM & DkD *chi*^{53}, DkW & DkB *khi*^{55}, Tib *khyi* < PCB *k^{hj}i < PB *k^{hw}i

(408) ‘ring-shaped pot mat’ Bt *kwi* (DDC18, vD15), Kt *kwi* ~ DkT *ki.li* (TAB) ~ Tib? < PCB *k^{j}i < PB *k^{w}i

This correspondence also appears to hold when Dakpa-Dzala and Other East Bodish evidence, except data from the best-described Other East Bodish variety Kurtöp, are absent.

(409) ‘rope used to tie a cow's legs together while milking’ Kt *kwi.tha*, Tib *sgyid-thag* ‘knee rope’ < PCB *k^{j}it.t^{h}ak < PB *k^{w}it.t^{h}ak

(410) ‘turn’ Kt *kwir*, Tib *ḥkyir-ba* < PCB *(ḥ)k^{j}ir < PB *(ḥ)k^{w}ir

(411) ‘cramp’ Kt *kwir*, Dzo *rtsa sgril* ‘nerves-roll’, perhaps < PCB *k^{j}ir? < PB *k^{w}ir

And this correspondence may hold between Tibetan *khyed* ‘you (2pl)’ and Khengkha *gwe(h)* ‘they (3pl)’ (Dorji forthcoming).

*§7.2. *S- : S- if V = {i}*

Before high fronted vowels {i, e}, Other East Bodish retains the simple fricative onsets, whereas both Dakpa-Dzala and Tibetan palatalise them: OEB *s-* ~ Tib *ś-* and DD *ɕ-* < PB *s- if V = {*i*}. This is one of the examples of Hill's (2019: 16 – 17) secondary palatalisation of onsets, but unlike the other examples (§4.1, §4.2, §4.3, §4.4), Dakpa-Dzala has participated in this innovation, whereas Other East Bodish has not. Whether this indicates a closer genetic relation of Dakpa-Dzala with Tibetan, a longer shared history, or later language contact is an interesting question.

(412) 'wood, tree' Bt *seng* (vD15), Kh *seng* ~ DkM & DkD *ɕeŋ*^{55}*.ma*^{53}, DkW *ɕeŋ*^{55}, DkB *ɕeŋ*^{53}, Tib *śiṅ* < PCB *sʲiŋ < PB *siŋ, Chi 薪 *sin* < *si[ŋ]

(413) 'louse' Kh *'se*, Bt *sek*, Kt *se* ~ *sê* ~ DkM & DkD *ɕeʔ*^{53}, Dz *she*, DkW & DkB *ɕi*^{53}, Tib *śig* < PCB *sʲik < PB *sik, Chi 蝨 *srit* < *sri[k]

(414) 'die' Kh *se*, Bt *se* (vD15), Kt *se* ~ DkM & DkD *ɕi*^{55}, DkW & DkB *ɕiu*^{55} (< *ɕi*^{55}), Dz *shi*, Tib *śi* < PCB *sʲi < PB *si, OBur *siy* < *śi

(415) 'honey, nectar1' Kt *zing*, Dz *zhing* (but DkT *sing.sur* 'bee') < PEB *ziŋ[109]

The fact that the above correspondence does not hold in the following lexeme indicates that this is a later Bodic loan in all varieties:

(416) 'cat' Dz *zhim.bu* ~ *zhi.bu.la*, Kt *zhim.bu.la*, Kh *zyim.ja*, BtU *zhim.ba.li*, BtC *zhim.ja* ~ *zhim.nya*, Bt *zhim.nyae* (vD15), DkM & DkD *ʑin*^{35}*.po*^{53}, DkB *ʑin*^{35}*.po*^{53}, Tib *źi.mi* ~ *źim.bu* < PCB *zʲim

§8. OTHER PHONOLOGICAL CORRESPONDENCES

I observed a few concepts where the forms in the various Dakpa-Dzala, Other East Bodish and Tibetan varieties appear cognate, but do not readily fit in with any of the correspondences mentioned above. These have probably undergone complex changes, or the evidence is obscured due to subsequent borrowing. There are also a few phonological

[109] The source language is probably Gongduk, cf. §12.1. Tibetan has unrelated *braṅ-rtsi*, a compound of 'bee, fly' and 'juice'.

correspondences that are specific to only a single language or variety. I list these correspondences here, with some possible explanations, pending further evidence.

§8.1. Other East Bodish kw-

There is a rare correspondence which is only attested before rhymes with vowels /a/ or /e/ but is significant because it is a likely source of the rare Other East Bodish onset *kw-*. The underlying Proto-Bodic onset *sw- has a vocal reflex in Dakpa-Dzala when preceding closed rhymes or a labial reflex when preceding open rhymes and the characteristic reflex *kw-* in Bumthang, Kurtöp and Khengkha (with Bumthang *kwer > *kør*). In Tibetan, on the other hand, the reflex is a sibilant fricative /s/. The correspondence *sw- > DD *w-*, Tib *s-* was already observed from Dakpa-Dzala by Shafer (1954: 350). Dakpa-Dzala, Tibetan and Other East Bodish have all innovated here. 'Tooth' is a rare example of Laufer's Law apparently applying to an open syllable (cf. §2.5.3, cf. also Hill 2006: 90). Michailovsky and Mazaudon (1994: 551), on the other hand, suggest, on the basis of comparative evidence, that these forms derive from underlying labialised velars *K^{w}-.

(417) 'tooth' DkM, DkD, DkW & DkB *wa*^{53}, Dz *'wa* ~ Kh *kua*, Bt *kwa*, Kt *kwa* ~ Tib *so* < PB *swa

(418) 'charcoal' Dz *'e.kar* ~ Kurtöp *kwê* ~ Tib *sol-ba* ~ *rdo-sol* < PB *swal

(419) 'blood pheasant (*Ithaginis cruentus*)' DkT *'er* (TAB) ~ Kurtöp *kwer ja*, BtU *kör shai*, BtC *kör ja*, Tib *zer-mo* (†*ser.mo*) < PB *swer

§8.2. Tibetan sr-

There are several cognate sets where the Tibetan onset cluster *sr-* corresponds to Other East Bodish and Dakpa-Dzala onset cluster [kr], retroflex fricative [ʂ], retroflex dental [tʂ ~ ʈ] or voiceless [ɽ̊] or fricative / raised trill [ɻ] onsets.

(420) 'nit' DkM, DkD, DkW, DkB *ʂu*^{53}, Kt *'riu* ~ Tib *sro-ma* < PB *sro.ma?

(421) 'weight (measure), scale' DkM & DkD *saŋ*^{55}, DkW & DkB *xraŋ*^{55} ~ Tib *sraṅ* < PB *sraŋ?

(422) 'hard' DkM, DkD, DkB *ʂa*^{55}*.po*^{53}, DkW *ʂau*^{55}, Dz *'rau* ~ Kt *trau.trau* ~ Tib *sra-po* < PB *sra.po?

(423) ‘otter’ DkM, DkD & DkB *tʂam*[53], DkW *tsam*[55][110], Kt *’ram* ~ Kh *kram* ~ Tib *sram* < PB *sram?

There are two incomplete cognate sets that have the same Tibetan *sr-* onset, but where the Other East Bodish and Dakpa-Dzala evidence has a Kr- onset cluster.

(424) ‘bask in the sun’ Dz (*plang*) *gro* ~ Tib (*ṅi-ma*) *sro-ba* < PB *sro?

(425) ‘unripe ear of grain’ BtU *krus* ~ BtC *’rut* ~ Tib *srus* < PB *srus?

These cognate sets likely do not derive from an underlying onset *kr-* (which is preserved in the Other East Bodish and Dakpa-Dzala varieties, cf. 4.5)[111], but I could not assign a satisfactory proto-phoneme here, though Proto-Bodic *sr- is the most likely candidate.

There is one concept with the correspondence DD *kl-* ~ OEB *kr-* ~ *zhr-* and Tibetan *lc-*. These onsets likely derive from an underlying form *kraŋ, which was preserved in Bumthang or became an apical trilled fricative (§8.2), the rhotic medial became a lateral medial in Proto-Dakpa-Dzala *klaŋ[112], and the lateral medial was palatalised to *kʲaŋ, with spoken Tibetan *tɕaŋ* reflected as written Tibetan *lcaŋ*.[113] This lexeme clearly does not have an underlying Proto-Bodic form with onset *lc-*, as we would predict Dakpa-Dzala and Other East Bodish forms with onset *l-* (§4.9): The Tibetan spelling with *lc-* is a later innovation.

(426) ‘willow’ DkM & DkD *klaŋ*[35]*.ɕeŋ*[55] ~ Bt *krang.mai* ~ BtU *zhrang.mai* (DDC18:71), BtC *zhang.mai* ~ Tib *lcaṅ-ma*, Kh *chang.ma*, Kt *cang.ma* < PB *kraŋ

§8.3. Bumthang t(ʰ)r-

Bumthang is the only variety that has an onset cluster of a dental stop and a rhotic medial where the remaining Other East Bodish and (in one case) the Dakpa-Dzala varieties have a palatal affricate onset: Bt *thr-*, OEB *tɕʰ-*, DD *tɕʰ-*. The lexical concepts ‘boil (n)’, ‘sour’, ‘cooked dough’ and ‘husked rice’ all lack Tibetan cognates. Only for ‘boil (n)’ do we

---

[110] This transcription is perhaps erroneous, i.e. *tʂam*[55].

[111] This assumption is challenged by evidence presented in Dotson (2009: 181), which indicates that the place name called and written in Tibetan as *kri* is alternatively written as *sri*. If this is correct, Khengkha *kram*, for example, is the original pronunciation of Tibetan *sram* ‘otter’.

[112] Hill (2019: 216) compares Tibetan *glaṅ-ma* and Tibetan *lcaṅ-ma* ‘willow’ to Chinese 楊 *yang* < *laŋ ‘poplar’.

[113] I suspect a more or less similar phonological development may link Tib *lcibs* ‘pot-holder’ and Bt *kwi* (DDC18: 10), Kt *kwi* (KD16: 5) through *kʷips > *kʲips (cf. §3.5) > spoken Tib *cips* spelled as *lcibs* and *kʷips > Bt and Kt *kwi*.

have Dakpa-Dzala comparative forms, for the other concepts Dakpa-Dzala has forms that are not cognate.

(427) ‘boil (n)’ Bt *thrun* ~ Kt *chun*, DkW & DkB *tɕhøn*^{53}, Dz *chon* < PEB *t^{h}ron, Tib *khron* ‘well, spring’ < PB *k^{h}ron?

(428) ‘sour’ Bt *thrun.ma* ~ Kh *chun.ba.la*, Kt *chun.ma* < PEB *t^{h}ron

(429) ‘cooked dough’ BtC *thro.tan*, BtU *thro.dran* ~ Kt *cho.can* < PEB *t^{h}ru.tran?

(430) ‘husked rice’ Bt *thrung* (vD15, DDC18) ~ Kh *chung*, Kt *chung* < PEB *t^{h}roŋ

§8.4. Bumthang Ura ɾ̥-, Bumthang Ura ɾ-, Bumthang Chume and Bumthang Ura ɾ̥^{h}-

According to van Driem (2015), the two Bumthang varieties Bumthang Ura and Bumthang Chume are characterised by three apical trilled fricatives. This section describes some synchronic and diachronic features of these fricatives.

In Bumthang Ura, we find a rare voiceless apical trilled fricative [r̥] (vD15: 22), transcribed in van Driem (2015: 22) and DDC (2018: 4) as /shr/, in a limited number of lexemes, such as ‘meat’.

(431) ‘meat’ DkM, DkD, DkW & DkB *ɕa*^{53}, Dz *sha*, Kt *sha*, BtC *sha*, BtU *shra* (DDC18, vD15)

In both van Driem (2015) and DDC (2018), /shr/ occurs exclusively before rhymes with back vowels /a, o, u/ and diphthong /ai/. There are possible (near-)minimal pairs with the voiceless apical trilled fricative /zhr/ [ɽ] (see below), for example, *shra* [r̥a] ‘meat’ (DDC18: 80, vD15: 63) vs. *zhra* [ɽa] ‘what’ (vD15: 22); *shrap* ‘balcony’ (DDC18: 80, vD15: 63) vs. *zhrap* ‘layer of butterfat on top of salted Bhutanese tea’ (vD15: 67); *shror.to.la* ‘bamboo sieve / scoop (skimming ladle)’ (DDC18: 81) vs. *zhror* ‘dialect word for *churma* “native beer”’ (vD15: 66); and *shrok* ‘juniper’ (DDC18: 81, vD15: 64) vs. *zhrong* ‘insect’ (DDC18:71, vD15: 66 ‘worm’). But near-minimal pairs with the voiceless apical sibilant fricative /sh/ are rare and include *shra* ‘meat’ (DDC18: 80, vD15: 63) vs. *sha* ‘uncastrated’ (DDC18: 79); *shrap* ‘balcony’ (DDC18: 80, vD15: 63) vs. *shap.sho.ba* ‘flat’ (DDC18: 79); *shram* ‘shoe’ (DDC18: 80, vD15: 63) vs. *sham.pa.leng* ‘*Rumex nepalensis*’ (DDC18: 79); and *shrok* ‘juniper’ (DDC18: 81, vD15: 63) vs. *sho* ‘leaf litter’ (DDC18: 80). In addition, Bumthang Ura lexemes with onset /shr/ have cognate forms in Bumthang Chume with onset /sh/, for example, BtU *shra* ‘meat’ (DDC18: 80, vD15: 63) vs. BtC *sha* (DDC18: 79); BtU *shrai.ma*

'harrow' (DDC18: 81, vD15: 63) vs. BtC *shai.ma* (DDC18: 79); BtU *shram* 'shoe' (DDC18: 80, vD15: 63) vs. BtC *sham* (DDC18: 79); and BtU *shror.to.la* 'bamboo skimming ladle' (DDC18: 81) vs. BtC *sho.ti.li* (DDC18: 80). A possible external example from Kurtöp is Bumthang *shrai* 'overflow' (vD15: 64), Kurtöp *she* (KD16: 219), cf. perhaps Dzongkha *zhal*. The internal and external comparative evidence indicates that, at least in inherited, native lexemes, Bumthang Ura /shr/ [r̥] is an allophone of the voiceless apical sibilant fricative /sh/ before /a, o, u, ai/.

The Bumthang Ura voiced apical trilled fricative [ɽ] (vD15: 22), transcribed in van Driem (2015: 22) and DDC (2018: 4) as /zhr/, only occurs in a limited number of Bumthang Ura lexemes and exclusively before rhymes with back vowels /a, o, u/ and diphthong /ai/. Near-minimal pairs with the voiced apical sibilant fricative /zh/ are extremely rare, for example, BtU *zhra* [ɽa] 'what' (vD15: 22) vs. BtU *zha.la* 'branch' (DDC18: 70, a likely loan from Dzongkha *źal-lag* 'branch', cf. Bumthang Chume *yak.thang* DDC18: 74). In addition, Bumthang Ura onset /zhr/ unequivocally corresponds with cognate forms in Bumthang Chume with onset /zh/, e.g., *zhrong* 'insect' (DDC18: 71, vD15: 66 'worm') vs. BtC *zhong* 'insect' (DDC18: 71); BtU *zhrang.ma* 'dumb' (DDC18: 71) vs. BtC *zhang.ba* (DDC18: 70); BtU *zhrang.mai* 'willow' (DDC18: 71) vs. BtC *zhang.mai.seng* (DDC18: 17); BtU *zhrur.tsi* 'wine strainer' (DDC18: 71) vs. BtC *zhur.ti* (DDC18: 71); and BtU *zhru.wa* 'lung' (DDC18: 71) vs. BtC *zhi.wa* (DDC18: 70). The internal and external evidence leads to the conclusion that, at least in native lexemes, Bumthang Ura /zhr/ [ɽ] is an allophone of voiced apical sibilant fricative /zh/ before back vowels /a, o, u, ai/, with [ʑ] occurring before front vowels /i, e/. Bumthang Ura /zhr/ and Bumthang Chume /zh/ evolved from several underlying onsets, e.g., *gl- > *gj- > BtC *zh-* ~ BtU *zhr-* ('lung', §); *kl- > *kj- > BtC *zh-* ~ BtU *zhr-* ('willow' (426), §8.2); perhaps also *Kla > *Kʲa > BtC *zha*, BtU *zhra* 'what' and *Kloŋ > *Kʲoŋ > BtC *zhong*, BtU *zhrong* 'insect' (cf. forms for 'mosquito' like Tshangla *kroŋ.tɕuŋ* and Burmese *khraṅ* < *ʔkraŋ 'mosquito', Lashi *ʾkjaŋ* Hill 2019: 63).

The aspirated apical trilled fricative [ɽ̥ʰ][114], transcribed by van Driem (2015: 22) and DDC (2018: 4) as /hr/, occurs in a limited number of Bumthang Chume lexemes, where it contrasts with the voiced apical trill /r/ [r], for example, in *'ra* 'hair' (DDC18: 60) vs. *hra* 'hawk, kite' (DDC18: 85); *hrai* 'come (imp.)' (vD15: 22) vs. *rai.ba* 'fringe'

[114] In van Driem (2015: 22) transcribed as an unvoiced aspirated trill [r̥ʰ].

(DDC18: 76); *hram* [r̥ʰam] ‘break down’ (vD15: 22) vs. *ram.shing* ‘beam’ (DDC18: 76); and *hri.di-shing* ‘rolling pin’ (DDC18: 85) vs. *ri.bung* ‘rabbit’ (DDC18: 76). Because the voiceless apical trilled fricative /shr/ [r̥] occurs exclusively in Bumthang Ura, not in Bumthang Chume, there is no need for positing minimal pairs for the distinction between /shr/ [r̥] and /hr/ [r̥ʰ]. The Bumthang Chume aspirated apical trilled fricative [r̥ʰ] is the realisation of an underlying onset cluster *khr-*, as the comparative Tibetan and Bumthang Ura evidence in ‘hawk’, ‘pattern’ and ‘roll’ in §4.5 shows. Other examples of the correspondence between Bumthang Chume /hr/ and Tibetan /khr/ are Bumthang Chume *’ri.hrung* ‘crane’ (DDC18: 60), Tibetan *khruṅ-khruṅ* and Bumthang Chume *hruk ~ ja.hruk* ‘tea whisk’ (DDC18: 32), Tibetan *khrug ~ ja.khrug*.

This short analysis of the fricative onsets in the Bumthang varieties accentuates two methodological pitfalls. The first is the risk of setting up a phonological inventory of a ‘language’ using evidence of individual dialect varieties without first setting up a phoneme inventory of these respective varieties (as was done by van Driem 2015 for Bumthang on the basis of evidence from both Bumthang Chume and Bumthang Ura). The second is the danger of using evidence from different sources to set up minimal pairs for phonemes of a single variety (as I do here with data from vD15 and DDC18).

§8.5. Dakpa-Dzala r̥- ~ ʂ-

Dzala also has an onset transcribed in DDC (2017) as *hr-*, for which DDC (2017) does not provide a phonetic value. Like in Bumthang Chume, this sound phonetically approaches an aspirated apical trilled fricative [ɽʰ]. It occurs only in a limited number of lexemes, where in some cases, it alternates with a high register onset trill *’r-*, for example, in *’rap ~ hrap* ‘beeswax, wax’ (DDC17: 57), *’ru ~ hru* ‘spinach’ (DDC17: 57), *’ro.sheng ~ hro.sheng* ‘pine tree’, *’rog.po ~ hrog.po* ‘ant’ (DDC17: 58), *’rot ~ hrod* ‘wind’ (DDC17: 58). In three examples, the alternation is not recorded: *hri.la* ‘rolling pin’ (DDC17: 90), *hri* ‘fold, roll, furl, muffle, swathe, wind’ (DDC17: 90) and *hred* ‘rip, tear, rend, split’ (DDC17: 90). Similarly, this alternation is not described for *’rang* ‘balance, scales’ (DDC17: 58), *’rau* ‘hard’ (DDC17: 58), and *’rung.ma* ‘blessed cord’ (DDC17: 58): these latter three have cognate forms in Tibetan with onset cluster *sr-*, i.e. *sraṅ, sra.po* and *sruṅ.ma*.

Lù (2002) transcribes what must be the same sound in Dakpa Mámǎ, Dakpa Bāngxīn, Dakpa Wénlàng and Dakpa Dáwàng most commonly

with a retroflex sibilant fricative [ʂ], marginally [ʐ], or a cluster of a voiceless velar fricative and trill [xr], e.g., DkM *ʂuk*^{55}*.pu*^{53} ‘ant’ (Lù02: 356), DkD *ʂuk*^{55}*.po*^{53} ‘ant’ (Lù02: 356), DkB *ʂu*^{55}*.po*^{53} ‘ant’ (Lù02: 356), DkW *xrok*^{55}*.pu*^{53} ‘ant’ (Lù02: 356); DkD *ʐi*^{35} ‘roll’ (Lù02: 382); DkW *ʂu*^{55} ‘spinach, dry curry’ (DDC18: 358, 366), DkB *ʂru*^{55}*.ma*^{53} ‘spinach’ (DDC18: 358), *ʂu*^{53} ‘dry curry’ (Lù02: 366); DkM *røn*^{35} ‘wind’ (Lù86: 161), DkW *xrot*^{55} ‘wind’ (Lù86: 161); DkM *ʂo*^{55}*.ɕeŋ*^{53} ‘pine’ (Lù02: 357), DkD *ʂu*^{55}*.ɕeŋ*^{53} ‘pine’ (Lù02: 357), DkW & DkB *xro*^{35}*.ɕeŋ*^{55} ‘pine’ (Lù02: 357); and DkM, DkD & DkB *ʂa*^{55}*.po*^{53} ‘hard’ (Lù02: 386), DkW *ʂau*^{55} ‘hard’ (Lù02: 386). Other examples of DD /ʂ/ are DkM, DkD, DkW & DkB *ʂu*^{53} ‘nit’ (Lù02: 356), DkW *ʂaŋ*^{55}*.kor*^{55} ‘weight’ (Lù02: 368); DkM, DkD & DkB *ʂi*^{55} ‘smell (n)’ (in ‘delicious smell’, ‘smelly’, ‘fishy smell’, Lù02: 389).

Again, like in Bumthang, the origin of Dakpa-Dzala *hr-* ~ *ʼr-* ~ *ʂ-* ~ *xr-* is either Tibetan *sr-* (‘hard’, ‘balance, weight, scale’, §8.2) or Tibetan *Kr-* (‘ant’, ‘smell (n)’, §4.5).

§8.6. Bumthang Chume ʼr-

The Bumthang Chume high register tone onset trill *ʼr-* corresponds regularly to Bumthang Ura *kr-* and Tibetan onset cluster *Kr-*, for example, in BtC *ʼrong* (DDC18: 60), BtU *krong* (DDC18: 12), Tib *groṅ* ‘village’; BtC *ʼrot.pa* (DDC18: 60), BtU *kroth.pa* (DDC18: 12), Tib *grod-pa* ‘tripe’; BtC *ʼra* (DDC18: 60), BtU *kra* (DDC18: 12), Tib *skra* ‘hair’; and in two examples to Tibetan *sr-*: *ʼrung* ‘story’ (DDC18: 60), BtU *krung* (DDC18: 12), Tib *sruṅ*; BtC *ʼrut* ‘unripe wheat spike’ (DDC18: 60), BtU *krus* (DDC18: 12), Tib *srus* < *srus. This may imply that Bumthang forms for which no Tibetan comparative evidence is available likely also derive from an underlying form with onset *kr-*, for example, BtC *ʼron.man* ‘thread’ (DDC18: 60), BtU *kron.man* (DDC18: 15) < *kron.man; BtC *ʼre.wa* ‘pair of bamboo sticks used for harvesting wheat’ (DDC18: 60), BtU *kre.wa* (DDC18: 12) < *kre.wa. Bumthang Ura is the conservative variety, cf. Kt *ʼra* ‘hair’ (KD16: 205) and Kt *ʼrot.man* ‘thread’ (KD16: 206).

§8.7. Dakpa-Dzala ŋl- and ŋr-

Dakpa-Dzala has a few concepts with an onset cluster of a velar nasal and a lateral medial *ŋl-*. Unfortunately, these do not seem to have cognates in either Tibetan or Other East Bodish, so I am unable to establish their origin.

(432) ‘feel very cold’ DkM *ŋleŋ*^{55} ~ Tib *graṅ-ba* ~ Kt *ngak.pa*

(433) ‘lick’ DkW *nglak*^{35}, Dz *nglag* ~ Tib *ldag.pa* or *ljags* ‘tongue (H)’ ~ Kh *phlin*, Kt *phrin*

Dakpa-Dzala has a few concepts with an onset cluster *ŋr-*. Cognate forms from Tibetan and Other East Bodish are rare, but there appears to be a tendency for the Dakpa-Dzala forms to have cognates in Written Tibetan and Other East Bodish with an onset *dr-*, *br-* or *gr-* and in spoken Tibetan with a corresponding retroflex onset, usually voiced *ɖ-* (or *dʐ-* ~ *ɖʐ-*, or low register tone *ʈ-* or *tʂ-* ~ *ʈʂ-*). Moreover, the Written Tibetan evidence consistently has a prefixed *ḥ-*. I propose that this prefixed *ḥ-* in written Tibetan corresponds in Proto-Dakpa-Dzala, and perhaps also in Proto-Bodic, to a spoken prefixed nasal *n-*, and that no matter the written Tibetan onset cluster *dr-* or *gr-*, these were originally all *gr- in Proto-Bodic. This would explain how PB *n-gr- > PDD *ngr- > DD *ŋr-*. At the same time, PB *n-gr- would result in Proto-Central Bodic *n-ɖ-, with that retroflex onset in spoken Tibetan reflected in Written Tibetan as either *gr-* or *dr-* (indicating the change from onset cluster to retroflex was taking place at the time of committing spoken Tibetan to writing, see also §4.5, Bialek (2018) and Dempsey (1995)), and the *n*-prefix reflected in written Tibetan as prefixed *ḥ-*, i.e. PB *n-gr- > PCB *ḥ-dr ~ *n-gr-.

(434) ‘ask, inquire’ Dz *ngri*, DkW *ŋreu*^{35}< PDD *n-gri ~ Tib *ḥdri-ba*, PCB *ḥ-dri < PB *n-gri

(435) ‘full, satiated’ DkW & DkB *ŋreŋ*^{35}, Dz *ngreng* < PDD *n-greŋ ~ Tib *ḥgraṅs-pa*, PCB *ḥ-graṅs < PB *n-graŋ(s)

Written Tibetan evidence seems absent in ‘thin’.

(436) ‘thin’ Dz *ngra.pu*, DkW *ŋra*^{35}*.pu*^{55}, DkB *ŋra*^{35}*.po*^{53} < PDD *n-gra, PCB *ḥ-gra < PB *n-gra, cf. also Chi 錯 *ngjo* < *ŋ(r)a ‘irregular, uneven’

Somewhat related, but with two different etymologies for the Dakpa-Dzala and the Other East Bodish and Tibetan forms is ‘scratch1’.

(437) ‘scratch1’ DkW *ŋro*^{55}*.pu*^{55}, DkB *ŋlo*^{55}*.po*^{53} < PDD *n-grok ~ Bt *brat* (vD15), Tib *ḥbrad-pa* < PCB *ḥ-brat < PB *n-brat

§9. LEXICAL INNOVATIONS

A second criterion that would show the coherence of the East Bodish subgroup would be lexical innovations that are shared by all presumed East Bodish languages, including Dakpa and Dzala.

§9.1. Other East Bodish + Dakpa-Dzala vs. Tibetan

I have identified only a few lexical innovations that are shared by the Dakpa-Dzala varieties and the Other East Bodish varieties, but not by Tibetan. There will undoubtedly be more that escaped my attention, or are as of yet data-deficient, but to me, it seems there will not be many such shared innovations.

The concept 'seed' has a Tibetan / Dzongkha loan in Khengkha and Bumthang but a distinctive, inherited form in Dakpa Wénlàng, Dakpa Bāngxīn, Dzala and Kurtöp, although Dakpa Mámă and Dakpa Dáwàng have unrelated forms of unknown etymology. The morpheme *sa* probably refers to (020) 'earth, soil'. The Dakpa-Dzala and Other East Bodish forms suggest a labialised onset, perhaps of a velar or uvular onset, and the Tibetan form may be a contraction (e.g., *sa.ɢʷan > *sa.ɢon > Tibetan *son* but Dakpa-Dzala and Other East Bodish *sa.gon*).

(438) 'seed' DkW *sa*^{55}*.gon*^{55}, DkB *sa*^{55}*.gun*^{35}, Dz *sa.gon*, Kt *sa.wan* ~ *sa.gon* ~ Tib *son*

A shared lexical innovation may be the forms for 'stay, live, reside'.

(439) 'stay, live, reside' DkM & DkD *ne?*^{35}, DkW & DkB *ɳi*^{35}[115], Kh *nik*, Bt *nyit* (vD15), Kt *ni* ~ *nit* < PEB *net ~ Tib *gnas-pa*

There appears to be no Tibetan form corresponding to East Bodish *kʰrat 'waist', with many East Bodish varieties instead having forms cognate with other Tibetan forms. Perhaps, the East Bodish forms represent a reanalysis of the Tibetan prefix *r-* in medial position, with subsequent aspiration of the onset (*rkad.pa > *krat.pa).

(440) 'waist' Kh *khrat*, Kt *thrat*, Dz *khred* < PEB *kʰrat ~ DkM & DkD *ce:*^{55}*.pa*^{53}, DkW & DkB *ke*^{55}*.pa*^{53}, Dz *kep.log* ~ *ke.pa*, Bt *ket.pa* (DDC18, vD15), Tib *sked.pa* ~ *rked.pa* < PB *(s/r)ket.pa

Shafer (1954: 350) indicates that Dakpa-Dzala forms like *nis* 'seven' derive from an inherited Tibeto-Burman root, and that it is Tibetan that has innovated. I agree that *bdun* 'seven' is a Tibetan innovation, as also remarked by Michailovsky and Mazaudon (1994: 546), Hyslop (2014: 168) and Bosch (2016: 34–35). Dempsey (1995:276) writes: "there appears to be some good evidence that ST 'seven' may have been *snəs or *sñəs instead of *snis, i.e. a different rime than that of 'two'." Indeed, the Other East Bodish and Dakpa-Dzala evidence clearly favours the vowel /e/, not /i/ in the reconstruction.

[115] Note that, at least in the Dakpa-Dzala varieties, these forms meaning 'stay' are also used as a copula in possessive phrases.

(441) ‘seven’ DkM & DkD *nis*^{55}, DkW & DkB *ŋi*^{55}, Dz *’ni*, Kh *nyit*, Bt *’nyit ~ ’nyis*, Kt *nis ~ ’ni* < PB *(s)nes ~ Tib *bdun*

The concept ‘yellow-throated marten (*Martes flavigula*)’ is data-deficient for the Dakpa varieties, but has cognate forms in Dzala, Bumthang Ura, Kurtöp and probably Bumthang Chume that are distinct from Tibetan forms for ‘marten’ or ‘weasel’. Because the marten is such an iconic species in the Himalayan region, my suspicion is that these forms derive from a substrate language or are perhaps an innovation related to magico-religious beliefs that spread through the area. The Gongduk form *zi.naŋ.la* strongly suggests a Gongduk substratum form but other Dakpa evidence may shed more light on this.

(442) ‘(yellow-throated) marten’ Dz *zhi.dang.la*, BtU *zhi.dang.la* (but BtC *zhir.ngan*), Kt *zhi.dong.la* ~ Tib *og-dkar ~ sre-moṅ*

In a few cases, I presume semantic change in Dakpa-Dzala and Other East Bodish, where Tibetan may have preserved the original meaning: *gor ‘round’ > Dakpa-Dzala and Other East Bodish ‘stone’, *(r)tse ‘summit, tip’ > Dakpa-Dzala and Other East Bodish ‘sharp’, and *k^{hw}a ‘crow’ > Dakpa-Dzala and Other East Bodish ‘chicken’.

(443) ‘stone, rock’ DkM & DkD *kor*^{35}, DkW & DkB *gor*^{35}, Bt *gor*, Kh *gor*, Tib *sgor* ‘round’ < PB *gor[116] < *sg^{w}ar ‘round’, WBur *wanḥ* (Hill 2019: 260) ~ Tib *rdo*

(444) ‘sharp’ DkM, DkD, DkW & DkB *tse*^{53}, Dz *tse.pu*, Kt *tse.co.pa*, Tib *rtse* < PB *(r)tse

There may have been a more ancient Bodish form for ‘chicken’ also reflected in Tshangla ‘bird’, perhaps related to Tib *khwa* ‘crow’.

(445) ‘chicken’ DkM & DkD *kha?*^{53}, DkW & DkB *kha*^{53}, Dz *kha.ma*, Bt *kha.wa*, Kh *kha.ga*, Kt *khau*, Tsh *k^{h}a* ‘bird’, perhaps Tib *khwa* ‘crow’? ~ Tib *bya*

‘Sweet’ and ‘tasty’ (cf. §4.1) may have been synonymous, with Tibetan ‘soiled, turbid’ coming to mean Dakpa-Dzala and Other East Bodish ‘sweet’: ‘sweet’ as in ‘sugar-sweet’ is not commonly a taste traditionally recognised or appreciated by people of the region. Tibetan *mṅar-mo* may be an innovation.

---

[116] Cf. also Chinese 卵 *lwanX* < *k.r^{ˤ}or? ‘egg’ and Proto-Khoina-Jerigaon *da.k.ror ‘round’ (> Khoina *da.krø* and Jerigaon *ka.trø*), Proto-Kuki-Chin *kuar ‘hollow, sunken’ (VanBik 2009:113), Proto-Northern-Naga *gor ‘hole, cave’ (French 1983), Newar *nu.gɔr* ‘heart’ with ‘heart’ a compound including ‘stone’.

(446) ‘sweet’ DkM & DkD *ŋ̊uk^{35}.po^{53}*, DkW & DkB *ŋ̊ok^{35}.pu^{53}*, Kt *nyok*, Kh *nyog.ba*, Tib *ñog-pa* ~ Tib *mn̄ar-mo*

In the case of ‘sell’, Other East Bodish and Dakpa-Dzala may retain an inherited Trans-Himalayan form also reflected in Chinese 買 *meaX* < *mˁraj?, where the original meaning may have been ‘barter’. Again, the Tibetan form is a likely innovation.

(447) ‘sell’ DkM & DkD *me?^{53}*, DkW *møu^{53}*, DkB *met^{53}*, Dz *’me*, Kh *muy*, Bt *’mui* (vD15), Kt *’mui* ~ Tib *ḥtshoṅ-ba*

§9.2. Dakpa-Dzala vs. Tibetan, Other East Bodish vs. Tibetan

In this initial survey, I have identified around two dozen concepts, where both Dakpa-Dzala and Other East Bodish have forms for which I could not directly identify cognate Tibetan forms, and which hence may be independent lexical innovations of the Dakpa-Dzala varieties and the Other East Bodish varieties, deriving from putative Proto-Dakpa-Dzala and Proto-Other East Bodish.

(448) ‘comb’ DkM & DkD *cuk^{35}.ɕen^{53}* ~ DkW &DkB *tsep^{53}*, Dz *tsep* ~ Bt *se.nap*, BtC *sö.nap*, Kt *nap*

(449) ‘knife, machete’ DkM & DkD *chau^{53}*, DkW & DkB *tɕhu^{55}.bu^{53}*, Dz *khyou* ~ *khyou.bu* ~ *chou* < PDD *k^{hj}a.bu ~ BtU *yur.wa*, BtC *yu.ba*, Kh *yür.bu*, Kt *yu.ru* < POEB *jur.ba ~ Tib *gri*

(450) ‘stairs, ladder’ DkM *proŋ^{31}.che?^{53}*, DkD *proŋ^{35}.he?^{53}* ~ Kh *li.dang*, Dz *’li.tang*, BtC *’lit* < POEB *gli? ~ DkW & DkB *gen^{35}.dʑe^{55}* (< Tib *skas-ḥdzeg*), BtU *kas*, Kt *ka* ~ *kâ*, Tib *skas* < PB *(s)kas

(451) ‘float’ DkM, DkD & DkB *haŋ^{55}.ja^{35}* ~ DkW *bon^{35}*, Dz *bon*, Kt *pon* < POEB *bon ~ Tib *ldiṅ-ba*

(452) ‘insect’ BtU *zhrong*, BtC *zhong*, Kh *jong*, Kt *zhong* < POEB *kroŋ ~ DkM & DkD *kun^{35}.pu^{53}*, DkW *gon^{35}*, DkB *gun^{35}.pu^{53}*, Dz *gon* < PDD *gon ~ Tib *ḥbu* < PB *(ḥ)bu (but cf. OEB (296) ‘snake’ < ‘insect’)

(453) ‘break1’ DkM, DkD, DkW & DkB *pot^{53}*, Dz *phod* < PDD *p^{h}ot ~ Kh *dhor*, Kt *dor* (vi) ~ *thor* (vt) < POEB *dur ~ Tib *ḥgye-ba*, *bcag-pa*, *gcod-pa*

(454) ‘today’ DkM & DkD *ta^{31}.ɕi^{53}*, DkW & DkB *da^{35}.ɕi^{55}*, Dz *dai* < PDD *da.s^{j}i ~ Kh *da.sum*, Bt *du.sum* (vD15, DDC18) < POEB *da.sum ~ Tib *da-naṅ* ~ *de-riṅ*

(455) ‘day before yesterday’ DkM *thek*^{35}*.ɕim*^{53}, DkD *thek*^{55}*.ɕem*^{53}, DkW & DkB *thek*^{55}*.ɕom*^{53} ~ Kh *then.la*, BtU *the.nger.ma*, BtC *ther.ma* ~ Tib *kha-ñin* ~ *kha.saṅ*

(456) ‘next year’ DkW & DkB *mren*^{35}, Dz *mren* (DDC17:65) < PDD *mren ~ Bt *na.mung*, Kt *na.mung* < POEB *na.muŋ ~ Tib *saṅ-phod*, *phyi-lo*

(457) ‘autumn’ DkM & DkW *to*^{55}*.ne*^{31}, DkD & DkB *ton*^{55}*.te*^{53}, Dz *ton* < PDD *ton ~ Bt *gwan*, Kt *gwan* < POEB *g^{w}an ~ Tib *ser-kha*

(458) ‘leg’ DkM & DkD *le*^{35}*.me*ʔ^{53}, DkW *li*^{35}*.min*^{55}, DkB *li*^{35}*.men*^{53}, Dz *le.me ~ le.men* < PDD *le.men or Tib *lus-smad* ‘lower body’? ~ Kh *ta.wa*, Bt *ta.wa*, Kt *ta.wa ~ tau* < POEB *ta.wa ~ Tib *rkaṅ-pa*

(459) ‘egg’ DkM & DkD *kha*ʔ^{53}*.lum*^{53}, DkW & DkB *kha*^{53}*.lum*^{53}, Dz *kha.lum*[117] < PDD *k^{h}a.lum ~ Kt *khau.ti*, BtU *te*, BtC *khau.te*[118] < POEB *ti ~ Tib *sgoṅ-ṅa*

(460) ‘lie’ Dz *zo*, DkT *zok* (TAB) ~ Bt *cang* ~ Kt *co* ~ *pco* ~ BtC *shop*, Tib *śob* ~ Tib *skyag-rdzun*

(461) ‘sheep’ Kt *yoo*, Kh *yo*, BtU *yo.ge* < POEB *jo ~ DkM, DkD, DkW & DkB *jeŋ*^{35}, Dz *yeng*, Tib *g.yaṅ-mo ~ g.yaṅ-dkar*, Japhug rGy *qaʑo* < *(qa-)jaŋ < PB *g-jaŋ, Chi 羊 *yang* < *ɕaŋ ~ Tib *lug*[119]

(462) ‘tail’ DkM & DkD *khlɛ*ʔ^{53}, DkW & DkB *khrek*^{53} < PDD *k^{h}lek ~ BtC *’nyi.phang ~ mi.phang*, *’nyi.phang* (vD15), BtU *mik.phang*, Kt *mi.pang* < POEB *m^{j}ik.p^{h}aŋ < *mik.p^{h}aŋ ~ Tib *rṅa-ma*, *mjug- ma*

(463) ‘head’ DkM *kɔk*^{35}*.the*ʔ^{53}, DkD *kok*^{35}*.te*^{53}, DKW & DKB *go*^{35}*.te*^{55}, Dz *gog.te*, Tib *mgo-gtad* ‘face towards’ ~ Kt *gu.yung*, Bt *gu.yung*, Dzo *mgu-to*

(464) ‘lick’ DkW *nglak*^{35}, Dz *nglag* < PDD *ŋlak ~ Kh *phlin*, Kt *phrin* < POEB *p^{h}lin ~ Tib *ldag.pa*

(465) ‘he/she (3sg)’ DkW & DkD *pe*^{35}, DkW *bi*^{35}, DkB *be*^{35}, Dz *be* < PDD *be (cf. POEB (467) *bot ‘they (3pl)’) ~ Kh *gon*, Kt *gon*,

---

[117] All ‘chicken’ + ‘round object’, but cf. Bhujel *rkalum* ‘testicle’ (Watters 2004b: 444).

[118] All ‘chicken’ + form related to PBG *tɯi^{1} ‘water’?

[119] DDC18 and KD16 do not confirm Michailovsky and Mazaudon’s Bt (Ck, Cm) *^{L}jok* (MM92) or Bt (Ck) *^{L}joːʔ* (MM92) and Kt *^{L}joːʔ* (MM92), but DDC18 does have Bt *yok* ‘ewe’.

Bt *gon* (vD15) < POEB *gon[120] ~ Bt *khit* [k^{hj}it] (vD15:27), Kh *khit*, Kt *khit*, Tib *khyod* 'you (2sg)' < PB *k^{hj}ot[121] ~ Tib *kho* ~ *mo*

(466) 'tomorrow' DkW & DkD *na^{31}.neŋ^{55}* ~ DkW & DkB *no^{35}.gor^{35}*, Dz *no.ngar* < PDD *na.gor ~ Bt *yam.pat* (vD15), Kt *yang.pa* ~ *yam.pa*, Kh *yam.pa* < POEB *lam.pa ~ Tib *saṅ*

The Dakpa-Dzala varieties add specific inclusive[122] and exclusive[123] plural markers to the regular second and third person plural pronouns. These varieties also use these markers on a first person plural pronoun *ŋa* which is cognate with the regular Tibetan first person singular pronoun (not with Dakpa-Dzala *ŋe* 'I (1sg)'), i.e. *ŋa.taŋ* '1pl (exclusive)', *ŋa.raŋ* ~ *ŋa.naŋ* '1pl (inclusive)'. The Other East Bodish varieties have specific pronouns for all plural pronouns, in which Other East Bodish 'they (3pl)' is likely cognate with Dakpa-Dzala 'he/she (3sg)', Other East Bodish 'you (2pl)' is derived from 'you (2sg)' but with nasal dental coda *-n* not dental stop *-t*, and Other East Bodish 'we (1pl)' has Tibetan cognates.

(467) 'they (3pl)' DkM & DkD *pe^{35}.ra?^{53}*, DkW & DkB *be^{35}.ra^{55}* < PDD *be.ra < *bot.ra ~ Bt *bot* (vD15), Kh *bot*[124], Kt *bot* < POEB *bot (cf. DD (465) 'he, she (3sg)') ~ Tib *khoṅ* '3sg (honorific)'

(468) 'you (2pl)' DkM & DkD *ʔe^{55}.ra?^{53}*, DkW & DkB *e^{53}.ra^{53}*, Dz *'i-ra* < PDD *i.ra ~ Bt *yin* (vD15), Kh *win* < POEB *win ~ Tib *khyod-cag ~ khyod-daṅ-tsho*

(469) 'honey, nectar2' Kt *ngi ya.ma ~ nyi a.ma*, Kh *ngi.ru.ma* < POEB

---

[120] Perhaps attributable to a Gongduk substrate, cf. *gon* '3sg' (DDC05: 1).

[121] Khengkha *k^{h}it* is the third person singular anaphoric pronoun while *gwe(h)* is the third person singular pronoun (Dorji forthcoming). This can probably be reconstructed for Proto-Bodic, i.e. PB *k^{hj}ot '3sg (anaphoric)' > POEB *k^{h}it '3sg (anaphoric)' but Tib *khyod* '2sg'; PB *k^{hw}et '3pl (regular)' > Kh *gwe(h)* '3pl (regular)' but Tib *khyed* '2pl'.

[122] Cf. the plural pronoun marker (inclusive) DkM & DkD *-ra?^{53}*, DkW & DkB *-ra^{53}*, sometimes *-naŋ* (TAB), Dz *-ra*, Tib *-ra*, Dzo *ga-ra* 'all'. This also exists in some Other East Bodish varieties, cf. Khengkha *ŋe.ra* '1sg (inclusive)' vs. *ŋet* '1sg (exclusive)' (Dorji forthcoming).

[123] Cf. the 'plural pronoun marker (exclusive)' DkM, DkD, DkW & DkB *-taŋ^{53}*, and Dz *-tang* ~ Tib *-tsho* ~ *-cag* ~ *-daṅ-tsho*, Dzo *-bcas*.

[124] Dorji (forthcoming) explains the distinction between Khengkha *gwe* '3pl' and *bot* '3pl' as *gwe* being the regular third person plural pronoun, whereas *bot* is an anaphoric third person plural pronoun. Similarly, *gon* is the regular third person singular pronoun, whereas *k^{h}it* is an anaphoric third person singular pronoun. While *k^{h}it* (< Proto-Bodic *k^{hj}ot '3sg (anaphoric)') and *gwe* (< Proto-Bodic *k^{hw}et '3pl (regular)') are of Bodic origin, *gon* (< Proto-Other East Bodic *gon '3sg (regular)', perhaps Tibetan *khoṅ* '3sg (honorific)') and *bot* (< Proto-East Bodic *bot '3pl (anaphoric)') are of East Bodic origin, perhaps deriving from a (Gongduk and Ole Monkha?) substratum.

*ŋʲi a.ma < *ŋi a.ma ~ DkM & DkD *ɕa:[35].maʔ[53]*, Dz *shâ* ~ Tib *sbraṅ* ‘honey’

§9.3. Other East Bodish vs. Tibetan, Dakpa-Dzala = Tibetan

In this section, I present around two dozen concepts where I could find Tibetan cognates for the Dakpa-Dzala forms, but where I was unable to find Tibetan cognates for the Other East Bodish forms. Pending the identification of possible Tibetan cognates, these may provisionally be considered as Other East Bodish innovations, deriving from putative Proto-Other East Bodish forms.

(470) ‘urine’ Bt *seng.ma* (vD15), Bt *zeng.ma*, Kt *zeng.ma*, Kh *zeng.ma* < POEB *zeŋ.ma ~ DkM, DKD, DkW & DkB *tɕhin[53]*, Dz *chin*, Tib *gcin-pa* < PB *(g)cin

(471) ‘rain’ BtC *yoi*, Bt *yö* (vD15), Kh *yü*, Kt *yui* < POEB *lul ~ *lol? ~ DkD *nam* (W02), DkM, DkD *nam[53]*, DkW & DkB *nam[55]*, Dz *nam*, Tib *gnam* < PB *(g)nam

(472) ‘rob, steal’ Kt *zhu* ~ DkM, DkD, DkW & DkB *kun[53]*, Dz *kun.ma be*, Tib *rkun*

(473) ‘hit (target)’ Kt *zhik* ~ DkM, DkD, DkB *phok[53]*, Tib *phog-pa*

(474) ‘arrive’ Kh *khrak*, Bt *khrak* (vD15), BtC *hrak* (vD15), Kt *thrak* ~ *thrâ* < POEB *kʰrak ~ DkM & DkD *oŋ[35]*, DkW & DkB *ɤoŋ[35]*, Dz *wong*, Tib *ḥoṅ-ba* < PB *(ḥ)oŋ

(475) ‘jump’ Kt *ling* < POEB *liŋ ~ DkW & DkB *tɕhoŋ[55]*, Dz *chong*, Tib *mchoṅ-ba* ‘jump, leap’ < PB *(m)tɕʰoŋ

(476) ‘thread’ BtC *’ron.man*, BtU *kron.man*, Kt *’rot.man* < *kron.man < *krut.man ~ DkM, DkD, DkW & DkB *kut[55].pa[53]*, Tib *skud-pa* < PB *(s)krut.pa

(477) ‘husband’ Kt *phop.sa*, Kh *pho.ja* ~ DkM & DkD *mak[35].po[53]*, Dz *’mag.po*, Tib *mag-pa* ~ DkW & DkB *za[35].tshaŋ[53]*, Tib *bzaḥ-tshaṅ*

(478) ‘porcupine’ Kh *’u.sa.la*, Kt *au.se.la* ~ *’u.si.la* < POEB *u.sa.la ~ DkT *ʑus.maŋ* (TAB), Dz *zhui.mang* (alternatively *’u-sa-ling*), Tib *gzig-moṅ* ~ *gzuṅ-mo*, *gzugs-mo*, *gzig-mo* < PB *(g)zu(g)s.moŋ

(479) ‘goat’ Kh *le.le*, Bt *’le.’le* (DDC18, but *ra* vD15) < POEB *le.le ~ DkM, DkD, DkW & DkB *ra*, Dz *ra*, Tib *ra* < PB *ra

(480) ‘snow’ Dz *kha.wa*, DkT *kho*, Tib *kha-ba* < PB *kʰa.ba ~ Kh *ka*, Kt *ka*, Bt *ka* (DDC18, vD15) < POEB *ka

(481) ‘rat, mouse’ Kh *’nya.pae*, Bt *’nyi.wa*, Kt *’ngi.ya* < POEB *ŋʲi.pa < *ŋi.pa ~ DkM & DkD *tɕi^{35}.po^{53}*, Tib *byi-tsi* < PB *bʲi ~ Dz *’ma.tsang.ma*, DkW & DkB *ɕu^{35}*

(482) ‘who’ Kh *ae yo*, Bt *’ai* (vD15), Kt *’ê ~ ae yo* < POEB *ai ~ DkM, DkD, DkW & DkB *su^{53}*, Dz *su*, Tib *su* < PB *su

(483) ‘where’ Kh *ao yo*, Bt *’ao* (vD15), Kt *’au* < POEB *au ~ DkM & DkD *ka^{35}.to^{53}* (Tib *gaṅ-du*), DkW & DkB *ga^{35}.tɕe^{53}* (Tib *ga-śeḍ*?), Tib *ga ~ ga-na ~ gaṅ-na ~ gaṅ-du* < PB *ga

(484) ‘what’ Kt *zha*, Kh *jae ~ zyae*, Bt *zhra* [ɽa] (vD15) < POEB *gla? ~ DkT *zi* (TAB), Dz *zi*, DkM, DkD, DkW & DkB *tsi^{35}*, Tib *ci* < PB *dzi

(485) ‘ant’ Kt *bruk.ti.la*, BtC *bruk.to.la*, Kh *buk.ta.li* < POEB *bruk.ta.la? ~ DkM *ʂuk^{55}.pu^{53}*, DkD *ʂuk^{55}.po^{53}*, DkW *xrok^{55}.pu^{55}*, DkB *ʂru^{55}.po^{53}*, DkT *ʐuk.pu* (TAB), Tib *grog-mo* < PB *g-rok

(486) ‘vagina’ Bt *pe.pe* (vD15), Kh *pe.pe* < POEB *pe.pe ~ Dz *tu*, Tib *stu* < PB *(s)tu

(487) ‘big (size)’ Kh *jik.pa.la*, Bt *jik.pa.la*, Kt *jik.pa ~ jik.pa.la* ~ DkM, DkD & DKB *bom^{35}.mo^{53}*, DkW *bam^{35}.bu^{55}*, Tib *sbom-po* < PB *(s)bom

(488) ‘fire’ Kh *ga.mi*, Kt *ga.mi*, Bt *ga.mi* (vD15) < POEB *ga.mi ~ DkM, DkD, DkW & DkB *me^{35}*, Dz *me*, Tib *me*, OTib *mye* < PB *mʲe, Chi 焜 *xjw+jX* < *mə̥jʔ ‘burn’

(489) ‘fall down’ Kt *dar*, Kh *dhar* < POEB *dar ~ DkM & DkD *tip^{35}*, DkW & DkB *dip^{35}*, Dz *dib*, Tib *rdip-pa* (perhaps Kt *dim* ‘collapse, crumble’) < PB *(r)dip

For ‘walnut’, the second morpheme of the Tibetan and Dzala form is cognate with the first morpheme in the Other East Bodish forms.

(490) ‘walnut’ BtU *kha.cu*, BtC *khu.ci*, Kt *khu.ci*, Kh *khu.chi* ~ Dz *tar.ka*, Tib *star-kha ~ star-ga*

§9.4. Dakpa-Dzala vs. Tibetan, Other East Bodish = Tibetan

In this section, I present two dozen concepts where I could find Tibetan cognates for the Other East Bodish forms, but where I was unable to find Tibetan cognates for the Dakpa-Dzala forms. Pending the identification of possible Tibetan cognates, these may provisionally be considered as Dakpa-Dzala innovations, deriving from putative Proto-Dakpa-Dzala forms.

(491) ‘sun’ DkM, DkD, DkW & DkB *plaŋ*^{53}, Dz *plaŋ* < PDD *plaŋ ~ BtU *ne*, Kh *ne*, Kt *ne*, BtC *nyi*, Tib *nyi-ma* < PCB *nʲi < PB *ni, Chi 日 *nyit* < *C.nik, OBur *niy* (Hill 2019:202)

(492) ‘black’ Dz *mleng.bu*, DkM & DkD *pleŋ*^{35}*.pho*^{53}, DkW & DkB *mleŋ*^{55}*.bu*^{55} < PDD *mleŋ[125] ~ Kt *nyun.ti*, BtU *nyon.di* (semantic change from (175) ‘blue’) < POEB *(s)ŋon ~ Tib *nag-po*

(493) ‘return, repeat, again’ DkM, DkD, DkW & DkB *tap*^{53}, Dz *tap* < PDD *dap ~ Kh *lok.si*, Bt *lok* (vD15), Tib *log-pa* < PB *lok

(494) ‘hoof’ DkM & DkD *ne*^{35}*.wa*^{53} ~ DkW & DkB *ŋo*^{35}*.ɕup*^{55} ~ Dz *nom.sheng* ~ BtU *mik.pa*, BtC *mik.pat* ~ *’mik.pat*, Kt *’muk.pa*, Tib *rmig-pa* < PB *(r)mik.pa

(495) ‘hungry’ DkM & DkD *prem*^{35}, Dz *brem ne* < PDD *brem < PB *bram ~ Kt *bru*, Kh *bro.wa na*, Tib *bro-ba* < PB *bro.ba

(496) ‘two’ DkM, DkD, DkW & DkB *nai*^{35}, Dz *noi* < PDD *nos? ~ Tib *gñis* ~ Kh *zon*, Bt *zon* (vD15, DDC17), Kt *zon*, Tib *zuṅ* ‘pair, couple’ (vD15) < PB *zuŋ?

(497) ‘melt’ DkM, DkD, DkB *ʑur*^{35} ~ Dz *zhig* ~ Kt *zhu* ~ *zhus*, Tib *bźu-ba* < PB *(b)zʲu

(498) ‘cloud’ DkM *sa*^{55}*.ca?*^{53}, DkW *sa*^{55}*.tɕa*^{55}, Dz *sa.kya* < PDD *sa.kʲa ~ Kt *’muk.pa*, Tib *smug-pa* < PB *(s)muk.pa

(499) ‘vomit’ DkM & DkD *kop*^{35}, DkW & DkB *gop*^{35}, Dz *gob* < PDD *gop ~ Kt *cuk*, Tib *skyug-pa* < PB *(s)kʲuk

(500) ‘DkM & DkD *ŋer*^{35} ‘buy’ (< *ŋe*^{35}), DkW *ŋeu*^{35} ‘buy’ (< *ŋe*^{35}), DkB *ŋiu*^{35} ‘buy’ (< *ŋe*^{35}), Dz *nge* ‘buy’, Tib *brña* < *brɲʸa ‘borrow’ ~ Kh *ngi*, Bt *’ngüi* (vD15), Kt *ngui*, Tib *dɲul* < PB *(d)ŋul ‘silver’ ~ Kt *nyu* ‘borrow’, Kh *ŋu*^{23} ‘buy’ (IT21), Bt *ŋʏ*^{23} ‘buy’ (IT21), Tib *ño* ‘buy’

(501) ‘pus’ DkM, DkD & DkB *jan*^{35}, DkW *ian*^{35}, Dz *yan* < PDD *jan ~ Bt *nak*, Kh *’nag*, Kt *naa*, Tib *rnag* < PB *(r)nak

(502) ‘younger sister’ DkM & DkD *ʑo*$^{\cdot 35}$*.mo*^{53}, DkW & DkB *ʑo*^{35}*.mo*^{53}, Dz *zhok.mo* ~ Kt *no.me* ~ *no.mi* ~ Kh *no.met*, Bt *no.met* (vD15) ~ Tib *nu.mo* ~ *nu-smad*

(503) ‘younger brother’ DkM, DkD, DkW & DkB *ʑok*^{35}*.po*^{53} < PDD *bʲok.po? ~ Kh *no*, Bt *no* (vD15, DDC18), Kt *no*, Tib *nu-bo* < PB *nu

[125] And cf. Manange *mlên-kya* (Hildebrandt 2004: 84).

(504) ‘small’ DkM & DkD *priu*^{53}, DkW *breu*^{55}*.ɣu*^{55}, DkB *briu*^{53}, Dz *priu* < PDD *pri ~ Bt *cing.ku* (vD15), Kh *ching.ku.la*, Kt *cing.ku*, Tib *chuṅ-ṅu* < PB *tɕ^{hj}uŋ (< *t^{j}uŋ?)

(505) ‘kidney’ Dz *krai.bu*, DkT *krai.bu* < PDD *krai.bu ~ Kt *khe.do*, Bt *khai*, Tib *mkhal-ma* < PB *(m)k^{h}al

(506) ‘language’ DkW, DkD & DkB *man*^{55}, DkW *mat*^{55}, Dz *’mad* < PDD *(s)mat ~ Kh *kha*, Kt *kha*, Tib *kha* < PB *k^{h}a

(507) ‘hoe’ DkM & DkD *o*^{35}*.ŋa*^{53}, *waŋ*^{35}*.ŋa*^{53}, Dz *wa.nga* < PDD *wa.ŋa ~ Kt *ko.go*, Bt *ko.ma*, Kh *ko.ma*, Tib *rko.ma* < PB *(r)ko.ma

(508) ‘dung, faeces’ DkM, DkD, DkW, DkB *ɳin*^{53} < PDD *(s)n^{j}in ~ Bt *cok* (vD15), Kt *cô*, Tib *rkyag-pa, skyag-pa* < PB *(r/s)k^{j}ak

(509) ‘wind’ Dz *’rod ~ hrod*, DkT *ɾot* (TAB) < PDD *krot (*srot?) ~ Bt *’long* (vD15), BtU *’long*, BtC *zho.long*, Tib *rluṅ* < PB *(r)luŋ

(510) ‘frost’ DkM *phla*^{55}*.khu*^{53}, DkW *phra*^{55}*.ɣu*^{55} < PDD *p^{h}lak ~ BtC *chak.pa*, Kt *chak.pa ~ cha.wa ~ châ.wa*, Tib *ḥkhyag-pa* < PB *(ḥ)k^{hj}ak

(511) ‘garlic’ DkM & DkD *preŋ*^{35} ~ DkW *tɕha*^{55}*.tɕu*^{55}, DkB *tɕa*^{55}*.tɕu*^{53}, Dz *cha.chu*, BtC *thra.thru*, BtU *thra.dru* < PEB *t^{h}ra.t^{h}ru? ~ BtU *kiu.li*, BtC *kiu*, Tib *rgya-kiḥu*, Dzo *ki-cu-ram* < PB *ki.u

(512) ‘shy, shyness, shame, embarrassment’ Dk *phlaŋ*^{55}*.no*^{53} (DkM) ~ Kt *ngo.tsha*, Tib *ngo-tsha*

(513) ‘forget’ DkM, DkD, DkW & DkB *ŋat*^{35}, Dz *ngad*, Tib *brjed-ṅas*, Tsh *ŋat* < PDD *ŋat ~ Bt *zhit* (vD15), Kt *zhit*, Tib *brjed-pa* or perhaps rather *yid* ‘(conceptual) mind’ cf. Tsh. *jit.ka mi {le}* ‘forget’ < PB *jit

(514) ‘throw away’ DkM, DkD *ot*^{35}, DkW, DkB *wat*^{35}, Dz *wad* < PDD *wat ~ Kt *cang ~ yuk.cang*, Dzo *g.yug-ḥbyaṅ* ~ Tib *dbyug-pa*

(515) ‘knee’ Dz *khu.lag*, DkT *kho.lok.pa* ~ Kt *pus.kum*, BtC *pun.mong*, BtU *pus.pung*, Kh *put.mong*, OTib *spus-mo*, Tib *pus-mo*

The following distinctive Dakpa-Dzala forms are perhaps related to the particle *e ~ u (~i)* (question particle) in polar questions to a second person in Khams Tibetan varieties[126].

[126] Cf. for a possible source Tibetan (Kham) *ka e thes* ‘Are you tired?’ (Liljenberg 2006: 7), *ja ḥthuṅ-le e yin* ‘Will you drink tea?’ (Liljenberg 2006: 5), *bde-mo u yin* ‘Are you well?’ (Liljenberg 2006: 15). Note that Hyslop (2014: 170) and Bosch (2016: 34–35) reconstruct the Dakpa-Dzala and the Other East Bodish pronoun ‘you (2sg)’ to Proto-East Bodic forms like *i or *wi ~ *we, respectively, and consider these East Bodish

(516) ‘you (2sg)’ DkM & DkW *ʔi*^{53}, DkD & DkB *ʔe*^{53}, Dz *’i* < PDD *i ~ Kh *wet*, Bt *wet* (vD15), Kt *wi ~ we* ~ Tib *khyod* < PB *k^{hj}ot[127]

§9.5. Dakpa-Dzala = Tibetan but also Other East Bodish = Tibetan

We can find a considerable number of concepts, in which Dakpa-Dzala has a form cognate with – hence derived from – one Tibetan form, whereas Other East Bodish has a form cognate with – hence derived from – another Tibetan form. In some cases, there has been semantic change in either Dakpa-Dzala or Other East Bodish from the original meaning in Tibetan. In other cases, Tibetan itself has several, semantically closely related or perhaps near-synonymous forms, with Dakpa-Dzala inheriting one form, and Other East Bodish inheriting another form.

(517) ‘we (1pl)’ DkM & DkD *ŋa*^{35}*.raʔ*^{53} *~ ŋa*^{35}*.taŋ*^{53}, DkW & DkB *ŋa*^{35}*.ra*^{53} *~ ŋa*^{35}*.taŋ*^{53}, Dz *nga.tang* < PDD *ŋa < PB *ŋa ‘1sg’ ~ Bt *nget* (vD15), Kh *nget*, Tib *ṅed* ‘1sg (arch.)’, *ṅed-cag ~ ṅed-ra* ‘1pl (arch.)’ < PB *ŋet

(518) ‘flow’ DkM & DkD *cur*^{35}, DkW & DkB *dzur*^{35}, Tib *ḥphyur-ba* ~ Kt *ju*, Tib *rgyun*

(519) ‘dry’ DkM & DkD *cem*^{55}*.pha*^{53}, DkW *kem*^{55}*.ŋi*^{55}, DkB *kem*^{55}*.mo*^{53}, Tib *skem* ~ Kh *kam*, Bt *kam*, Kt *kam*, Tib *skam.po* < PB *(s)kam

(520) ‘back’ DkT *gyab*, Dz *gyab ~ jab* (< Tib *rgyab*) ~ Bt *kai* (DDC18, vD15), Kt *kê*, Kh *kai*^{42} *~ kɛp*^{44}*.pʌ*^{22} (Ikeda 2021b: 133), Tib *sgal* < PB *(s)kal

(521) ‘get, obtain, earn’ DkM, DkD & DkB *thap*^{53}, Dz *thab*, Tib *ḥthob-pa* ~ Kh *nyon*, Kt *nyong ~ nyang ~ myang*, Tib *smyoṅ-ba*

(522) ‘sweat’ DkW & DkB *ŋy*^{35}*.pa*^{53}, DkM & DkD *ŋeʔ*^{53}, Dz *nge.pa ~ ngi.pa*, Tib *rṅul* ~ Bt *tshat.pa*, Kt *tshat.pa*, Kt *tshat.pa*, Tib *tshad-pa*

---

forms a lexical innovation. Other East Bodish *-t* (in, e.g., Kurtöp and Bumthang) may derive from the same *-s* suffix as found in ‘I (1sg)’. The Tamang evidence, e.g., *e:* (Lee 2011: 37), however, suggests a Proto-Bodic form *e or *i, while Tibetan has been innovative.

[127] Alternatively, as Hyslop and Bosch proposed, the Dakpa-Dzala and Other East Bodish forms may all be cognate, deriving from PB *wi < PDD *ji (§7.1) < DD *i*; PB *wi < PEB *we (§6.3) < EB *wet* with coda *-t* again from the ergative marker *-s*. Perhaps cognate are Tibetan forms like *yi* ‘this’ found in Tsang, Tö Dingri and Lhokha Tibetan.

(523) ‘knead’ DkM & DkD *dziʔ^{35}*, DkW & DkB *dzik^{35}*, Tib *rdzi-ba* ~ Kh *noy*, Kt *ʼne*, Tib *mñe-ba*

(524) ‘front’ DkM & DkD *ŋeʔ^{35}*, DkB *ŋ̊en^{55}*, DkW *ŋi^{55}.ka^{55}*, Dz *nyi.kha* ~ *ʼnyi.ka*, Tib *sn̥on* ~ Kh *dong.o*, Kt *dong.go*, Tib *gdoṅ*

(525) ‘have intercourse’ Dz *gyag*, Tib *rgyag-pa* ~ Bt *ju* (vD15), Tib *rgyo-ba*

(526) ‘know’ Kh *bran*, Bt *bran* (vD15), Kt *bran*, Tib *dran-pa* ~ DkM, DkD, DkB *khan^{55}.ni^{53}*, DkW *kan^{55}.nu^{55}*, Tib *mkhan*

(527) ‘tell’ DkM, DkD, DkW & DkB *ɕat^{53}*, Dz *shad*, Tib *bśad-pa* ~ Kh *lap*, Kt *lap*, Bt *lap* (vD15), Tib *lab-pa*, Chi 誱 *dep* < *lˤap ‘garrulous’

Sometimes, there is no clear distinction between Dakpa-Dzala and Other East Bodish, with varieties from either subgroup having forms cognate with different Tibetan forms.

(528) ‘be born, sprout’ DkM, DkD, DkW & DkB *kroŋ^{53}*, Kh *krong*, Bt *khrong* (vD15), Tib *ḥkhrung-ba* ~ Kt *ke*, Tib *skye-pa*

(529) ‘fat’ Dz *che*, Kt *tsi.lu* ~ *tshi.lu*, Tib *tshil* ~ Kh *nyam*, Kt *nyam*, Tib *ñams*

(530) ‘low’ DkM, DkD & DkB *me^{35}.po^{53}*, Kh *mo*, Tib *dmaḥ* ~ Kt *ʼmat*, BtC *ʼmat*, Tib *smad*

(531) ‘shake’ DkM, DkD & DkB *phrik^{53}*, Tib *sprug-pa* ~ Kt *ʼyu*, Dz *kyod*, Tib *g.yo-ba* ~ *g.yug-pa* (?)

The cognates between Dzala and the Other East Bodish varieties may be contact-induced, evidencing the exposure of Dzala speakers to Dzongkha, rather than varieties of Tibetan, after the incorporation of their lands by the Drukpa-Bhutanese state in the mid-17th century. Similarly, the cognates between primarily Kurtöp and Dzongkha, rather than Kurtöp and Dakpa-Dzala or Kurtöp and Tibetan, likely evidence the contact situation between Kurtöp and Bodish languages such as Dzongkha and Chocangacakha: The Kurtöp speaking area is the ancestral home of Bhutan’s royal dynasty, and hence has had greater exposure to Dzongkha than the other East Bodish varieties.

There are also a few cases where we actually find more than two Tibetan forms reflected in the Dakpa-Dzala and Other East Bodish varieties, with in some cases semantic change in the descendent varieties, and in other cases, semantically closely related forms in Tibetan.

(532) ‘fly (v)’ DkM & DkD *phir^{55}*, Tib *ḥphir-ba* ~ DkW & DkB *phen^{55}*, Dz *ben*, Tib *ḥphen-pa* ~ Kh *phur*, Kt *phur*, Tib *ḥphur-ba*

(533) ‘plough (v)’ DkM & DkD *mø:*^{55}, DkB *mø*^{55}, Tib *rmod-pa* ~ Kt *tsho*, Kh *tsho*, Bt *tshu*, Tib *ḥtsho-ba* ~ Dz *nor*, DkW *no*^{35}*.ru*^{35}, Tib *nor*

(534) ‘laugh, smile’ DkM & DkD *cen*^{35}*.tar*^{53}, DkW & DkB *git*^{35}*.tha*^{53}, Tib *dgyes-pa thar-ba* ~ Dz *ge*, Kh *ga*, Kt *ga*, Tib *dgaḥ-ba* ~ Bt *gad* (vD15), Tib *bgad-pa*

(535) ‘be afraid’ DkM & DkD *chak*^{53}*.ka*^{35}, DkW & DkB *tɕa*^{53}, Tib *skrag-pa* ~ Kh *dhe*, Tib *ḥdrog-pa* ~ Kt *pret*, Tib *bred-pa*

(536) ‘wife’ DkM & DkD *pak*^{35}*.ser*^{55}, DkW & DkB *bak*^{35}*.sar*^{55}, Dz *bag.sar*, Tib *bag-ma* ~ *bag-gsar* ~ Kh *nae.tshang*, Kt *’ne.tshang* ~ *’ne.sang*, Bt *’nä.sa*, Tib *gnas.tshaṅ* ~ Kt *’na.ma*, Bt *na.mo* ~ *na.ma* (vD15), Bt *’nä.mo*, Tib *mnaḥ-ma* ~ *ña-ma* ~ *ña-mo*

(537) ‘daughter-in-law’ DkM & DkD *pak*^{35}*.ser*^{55}, DkW & DkB *bak*^{35}*.sar*^{55}, Dz *bag.sar*, Tib *bag-ma* ~ *bag-gsar* ~ Bt *na.mo* ~ *na.ma* (vD15), Kh *na.ma*, Tib *mnaḥ-ma* ~ *ña-ma* ~ *ña-mo*

(538) ‘run’ DkM & DkD *pir*^{35}, Tib *phyir* ~ Dz *’yar*, Tib *g.yar* ?, D. Tsh. *jar {po}* ~ Kt *juk* ~ *ju*, Tib *rgyug-pa*

What the existence of sets such as those above implies for the linguistic history of the Bodish languages as a whole is difficult to assess. Since this study is based on secondary sources – basically lexical lists – that may be incomplete, individual linguistic varieties may have other forms cognate with the forms above that are not reported in the available literature. For example, in set ‘to fly’ (532), Dakpa Mámă and Dakpa Dáwàng may also have forms cognate with Tibetan *ḥphen-pa* and *ḥphur-ba* meaning ‘to fly’ or similar, Dakpa Wénlàng and Dakpa Bāngxīn and Dzala may also have forms cognate with Tibetan *ḥphur-ba* and *ḥphir-ba* meaning ‘to fly’ or similar, and the Other East Bodish varieties may also have forms cognate with Tibetan *ḥphen-pa* and *ḥphur-ba* meaning ‘to fly’ or similar. Different ways of ‘to fly’, for example ‘to flutter, to fly unsteadily by flapping the wings quickly and lightly’, ‘to soar, to fly high in the sky without using the wings’, ‘to flap the wings’, ‘to hover around, like a bee’, ‘to fly off from a static position’ etc. may not be adequately reflected in the source materials. We also cannot exclude the possibility that inherited forms were replaced by later loans in one or more varieties. But at the same time, it is also possible that semantic distinctions that were made in the proto-language and that are still reflected in the written Tibetan forms were lost in the spoken descendent languages, with a single form for ‘to fly’ replacing earlier forms with more semantic detail. More accurate studies will rely on the availability of more detailed sources for the East Bodish languages, such as the dictionary by Hyslop

et al. (2016). Because this source has *(nam.do) gi* ‘to float, hover, or soar (in the sky)’ (KD2016: 115), we may presume that *phur* is the only, and general, form for any type of ‘flying’.

§10. SHARED INNOVATIONS AND RETENTIONS

In §1.2, I summarised the present state of research on the relation between the East Bodish languages and Tibetan. Based mainly on Hill (2019), I indicated that there are three sound changes and one shared innovation that evidence a close relation between the East Bodish varieties and Tibetan, and five sound changes that indicate that the East Bodish varieties are distinct from Tibetan. The three shared sound changes are Houghton’s Law (Hill 2019: 25), Schiefner’s Law (Hill 2019: 26–28), and the change to *-as > *-os* (Hill 2015; 2019: 25–26). The shared lexical innovation is the lexeme ‘five’. The sound innovations in which East Bodish did not participate are Laufer’s Law (Hill 2019: 20–21), Bodman’s Law (Hill 2019: 18–19), Conrady’s Law (Hill 2019: 17–18), Benedict’s Law (Hill 2019: 14–16), and Dempsey’s Law (Hill 2019: 12–13). The palatalisation of non-laterals (Hill 2019: 16–17), finally, shows a rather mixed picture. In the following sections, I discuss each of these again, in light of the additional evidence presented in this paper.

§10.1. Shared sound changes

According to Hill, there are three sound changes that East Bodish shares with Tibetan, namely, Schiefner’s Law (Hill 2019: 26–28), Houghton’s Law (Hill 2019: 25), and the change to *-as > *-os* (Hill 2015; 2019: 25–26). These sound changes set Tibetan and East Bodish apart from Chinese and Burmese, the two other languages with which Hill makes his comparison.

§10.1.1. Houghton’s Law

Hill (2019: 25) identified Houghton’s Law as a defining innovation shared by East Bodish and Tibetan in comparison to Chinese and Burmese. Hill provided four examples for Tibetan, two with supporting evidence from East Bodish, one lacking evidence from East Bodish, and one with conflicting evidence from East Bodish. The present East Bodish evidence is supportive only in the case of ‘fish’. However, even in this case, we also may consider that an inherited East Bodish form †*ŋa* (cf. also Tshangla *ŋa*, Gongduk *ku.ŋə* (DDC05: 58)) was replaced by the

form *ɲa* in all East Bodish varieties due to linguistic contact with Tibetan and Dzongkha.

(539) ‘fish’ Tib *ña* < *ṅʸa ‘fish’, DkM, DkD, DkW & DkB *ŋa*^{35}, Dz *nya* , Kh *’nya*, Bt *nya* (vD15, DDC18), Bur *ṅāḥ*, Chi 魚 *ngjo* < *ŋa

Tibetan *gñan-po* occurs in Tibetan and the East Bodish varieties in a wide variety of semantic contexts, although all are negative and harmful, but I find the correspondence to Burmese *ṅanḥ* ‘poisonous snake’ tentative at best: Why not compare this Burmese form to Tibetan *ṅan-pa* which has a similar broad negative semantic content?

(540) ‘(something) negative’ Tib *gñan-po* < *gṅʸan ‘pestilence’, Bur *ṅanḥ* ‘poisonous snake’ (Hill 2019: 25) *or* Tib *ṅan-pa* ‘inferior, poor, bad, etc.’, Kt *ngan* ‘black magic’, DkT *ngan.pa* ‘culprit’ (W02)

The concepts of ‘borrow’ and ‘buy’ are complex and show considerable semantic changes and levels of borrowing in the attested varieties. The Dzala form for ‘borrow’ is a later Dzongkha loan, hence no change *-a* to *-e*, whereas the Dakpa Mámă, Dakpa Dáwàng, Dakpa Wénlàng and Dakpa Bāngxīn forms for ‘buy’ are early loans from Tibetan *brña* ‘borrow’ that do follow the correspondence Tibetan *-a* to Dakpa-Dzala *-e*. The actual etymologically related forms to Tibetan *brña* ‘borrow’ are Dzala *nge* ‘buy’ and Dakpa Wénlàng *ŋeu*^{55} ‘borrow’, which lack the palatalisation of the onset, but follow the correspondence Tibetan *-a* to Dakpa-Dzala *-e*. Moreover, Kurtöp *nyu* ‘borrow’ is etymologically related to Tibetan *ño* ‘buy’, with regular correspondence between Tibetan *-o* and Other East Bodish *-u* (§6.2), and not to Tibetan *brña* ‘borrow’.

(541) ‘borrow’ Tib *brña* < *brṅʸa, Bur *ṅhāḥ*, DkM & DkD *ŋer*^{35} ‘buy’ (< *ŋe*^{35}), DkW *ŋeu*^{35} ‘buy’ (< *ŋe*^{35}), DkB *ŋiu*^{35} ‘buy’ (< *ŋe*^{35}), Dz *’nya* ‘borrow’ (< Dzo *brña*) ~ Dz *nge* ‘buy’, DkW *ŋeu*^{55} ‘borrow’ (< *ŋe*^{55}) ~ Kt *nyu* ‘borrow’, Kh *ŋu*^{23} ‘buy’ (IT21), Bt *ŋʏ*^{23} ‘buy’ (IT21), Tib *ño* ‘buy’

Hill also already noted the fact that the Kurtöp form for ‘gums’ does not follow Tibetan in the palatalisation of the velar nasal onset: The additional Dzala evidence confirms that. Perhaps, a dental prefix attested in Japhug rGyalrong (Jacques 2014) may explain the lack of palatalisation in East Bodish.

(542) ‘gums’ Dz *’wa.ne*, Kt *’nê* ~ Tib *rñil* / *sñil* < *rṅʸil / *sṅʸil, Chi 齦 *ngjɨn* < *ŋə[n] ~ Japhug *tɯ-rni* < PB *tV-rñil

We can also observe that Other East Bodish shares with Burmese the palatalisation of a velar nasal onset, whereas we do not find that in Tibetan and Dakpa-Dzala, in the colour terms that express any dark colour, like ‘black’, ‘brown’, ‘(dark) blue’, ‘(dark) green’, etc.

(543) ‘blue’ Kt *nyun.ti* ‘black’, BtU *nyon.di* ‘black’, Kh *ŋ̍oŋ⁴².tɛ²².la²²* ‘black’ ~ *ŋ̍uŋ²²ti²²* ‘black’ (IT21, but Kh *ŋun²⁴.ti⁴⁴.lʌ²¹* ‘green’ IT21) < PB *ŋʲon, WBur *ñ̃ñui* < *ṅyuiw, Lashi *ŋ̍jaːuV* ‘green, blue, brown’ (Hill 2019: 213) ~ Tib *sṅo* ~ *sṅon-po* ‘green, blue’, DkM, DkD & DkB *ŋau⁵⁵.po⁵⁵* ‘blue’, DkW *ŋau⁵⁵*, Dz *’ngou* ‘blue’ < PB *(s)ŋon

In ‘few, little’, comparative Chinese evidence is absent, but the Khengkha evidence suggests an underlying palatalised velar onset, with Khengkha and Dakpa-Dzala following the Tibetan palatalisation.

(544) ‘few, little’ Kh *nying.wa* (but Kt *nging.ba*) ~ DkM & DkD *ŋ̍uŋ³⁵.po⁵³*, DkB *ŋ̍̊uŋ³⁵.ko⁵³*, Tib *ñuṅ-ba* < PB *ŋʲuŋ

The evidence that Dakpa-Dzala and Other East Bodish share the sound change prescribed by Houghton’s Law with Tibetan is still far from convincing.

§10.1.2. Schiefner’s Law

According to Schiefner’s Law (Hill 2014; Hill 2019: 26–28), Proto-Bodish is characterised by the softening of the voiced affricates, in particular, the softening of *dz- > *z-* and *ǰ- > *ź-*, with evidence from Tibetan, Kurtöp and Monpa. Indeed, this is the case in lexemes such as ‘eat’ and ‘dew drop’.

(545) ‘eat’ DkM, DkD, DkW & DkB *za³⁵*, Dz *za*, Tib *za-ba* < PB *za < *dza ~ Kt *zu* (also *za* < Dzo), Kh *zu*, Bt *zu* (vD15) < Tib *zo*, Bur *cāḥ*, Japhug rGy *ndza*, Chi 咀 *dzjoX* < *dzaʔ

(546) ‘dew drop’ DkM, DkD & DkW *ziː³⁵.pa⁵³*, Kt *zi.pa* ~ *ziu* ~ *zi.wa* ~ *zir.pa*, Tib *zil.pa* < PB *zil < *dzil, Bur *chīḥ*

With only evidence internal to Bodish, we find ‘copper’ and ‘corner’ (Hill 2019: 28).

(547) ‘copper’ Dz *zeng*, Bt *zang*, Kt *zang*, Tib *zaṅs* < PB *zaṅ < *dzaŋ

(548) ‘corner’ Dz *zur*, Bt *zur*, Kt *zur*, Tib *zur* < PB *zur < *dzur

To this can perhaps be added ‘leopard’ and ‘leak, drip’.

(549) ‘leopard’ DkM, DkD, DkW & DkD *zik³⁵*, Dz *zik*, Bt *zik*, Kh *zek*, Kt *zî*, Tib *gzig* < PB *zik < *dzik, cf. Muya Qiang *ndzi⁵³* (Sun 1992)

(550) ‘leak, drip’ DkM & DkD *ze^{35}*, DkW *ze^{35}.do^{35}*, DkB *zet^{35}* ~ Kt *zak*, Tib *zags-pa* ~ *ḥdzag-pa* < PB *(ḥ)dzak

Both van Driem (2015: 66) and Hill (2019: 28) compare Tibetan ‘pair’ to Other East Bodish ‘two’. I am not sure whether that is a valid comparison: Given the fact that the rhyme *-uŋ* in Tibetan regularly corresponds to rhyme *-oŋ* in Other East Bodish and Dakpa-Dzala (§3.3), there is no reason why this would have become *-on*.

(551) ‘two’ Kh *zon*, Bt *zon* (vD15, DDC17), Kt *zon*, Tib *zuṅ* ‘pair, couple’ (vD15: 66, Hill 2019: 28) < PB *zuŋ < *dzuŋ, Bur *cuṃ*, Chi 雙 *sraewng* < *sˤroŋ

Perhaps, then, not all instances of *z-* in the Bodish languages are secondary developments, as stated by Hill (2019: 28). Indeed, if we accept Hill’s (2019: 26) observation that “Although many Tibetan words begin with *tsh-*, essentially no Tibetan word begins with *dz-*. This asymmetrical distribution suggests the presence of an erstwhile *dz, which subsequently changed into another sound”, we can similarly question why Proto-Bodic would have had an onset *s-*, but not its voiced counterpart *z-*, which would similarly be an asymmetrical distribution. This would then also clear the way for a reconstructed Proto-Bodic proto-phoneme *z^{j}- as source of Bodish *ź-*, in addition to *l^{y}, *r^{y}, and *ǰ- already mentioned by Hill (2019: 28). On the other hand, evidence of a change *ǰ- > *ź-* is absent from the East Bodish varieties.

§10.1.3. Change *-as* to *-os*

As I showed in §6.2, in some verbs, the Other East Bodish varieties relied on the imperative stem of Tibetan verbs for the formation of the regular verb root, while the Dakpa-Dzala varieties relied on the present *or* imperative stem of the Tibetan verbs, and these imperative Tibetan verbal forms, ending on *-o*, followed the regular pattern of change from *-o* to *-u* in the Other East Bodish varieties.

Exactly because the Other East Bodish and Dakpa-Dzala varieties relied on the imperative stems of the verbs ending on *-o*, and not on the past stems of the verbs ending on *-os*, there is no automatic implication that the change from *-as* to *-os* in Tibetan must have preceded the split of the ancestor of the Dakpa-Dzala and Other East Bodish varieties and Tibetan, as Hill (2015; 2019: 25–26) purported.

Jacques (Jacques 2013: 296, fn. 9; Jacques 2021: 146-148) provided an alternative hypothesis, namely, the generalisation of the third person object past stem.

§10.2. Conservative retentions

Hill (2019) also summarises the evidence where the languages of the East Bodish group have not participated in certain phonological innovations characteristic of the varieties of Tibetan proper. These include Laufer's Law (Hill 2019: 20–21), Bodman's law (Hill 2019: 18–19), Conrady's Law (Hill 2019: 17–18), Benedict's law (Hill 2019: 14–16), Dempsey's Law (Hill 2019: 12–13), palatalisation of non-lateral consonants (2019: 16–17) and the merger of the onset *w- with *y*- (2019: 19–20).

§10.2.1. Laufer's Law

The East Bodish languages show a mixed picture where it concerns Laufer's Law, which expresses the correspondence between Chinese labio-velars (K^{w}-) or labio-uvulars (Q^{w}-) followed by rhymes with vowel *-a-* or *-ə-* and Tibetan velars followed by the vowel *-o-* (Hill 2006; 2019: 20). Only in (032) 'come' do all the East Bodish languages have vowel *-a-*. On the other hand, in (193) 'feather' and (443) 'stone/round' all the East Bodish languages have vowel *-o-*. In (417) 'bear' only the Other East Bodish varieties and Dzala have vowel *-a-*, with the other Dakpa-Dzala varieties having vowel *-o-*. In concept (474) 'arrive' Dakpa-Dzala has vowel *-o-*, and in concept (197) 'tripe (stomach)', Other East Bodish has vowel *-o-*, with evidence from the other varieties missing. Perhaps, the forms with *-o-* are later Tibetan loans in individual varieties. However, considering the fact that languages like Tshangla and the Western Kho-Bwa varieties also have forms with vowel *-o-* in 'bear' (cf. also Kuki-Chin *-o-*, Tangkhulic *-o-*, Tani *-u-*), Laufer's Law may in fact be a much older innovation affecting more languages outside the Sinitic and Lolo-Burmese clades.

§10.2.2. Bodman's Law

The East Bodish languages did not participate in Bodman's Law regarding the fortition of laterals from *l- to *d*- when preceded by prefixes *m*- (Hill 2019: 18). Rather, the East Bodish languages either lost the prefix and retained the simple lateral onset, or, in some cases, retained the prefix. Cognate sets evidencing that the Dakpa-Dzala and Other East Bodish varieties did not participate in this sound change can be found in §4.9. In fact, it is my understanding that it was Conrady's

Law, not Bodman's Law, that explains the correspondences in section §4.9.

§10.2.3. Conrady's Law

Somewhat related to Bodman's Law is Conrady's Law, which states that when an *h̲-* precedes a fricative, lateral, or *r*, a dental stop is inserted between *h̲* and the following consonant. Cognate sets evidencing that this phonological development did not take place in the Dakpa-Dzala and Other East Bodish varieties can be found in §4.9. The only exception may be a variant of Conrady's Law in the case of 'liver', cf. §4.8.

§10.2.4. Benedict's Law

Benedict (1939: 215) suggested a Tibetan sound change *l^{y}- > *ź-*. As the examples 'four', 'bow', 'tasty' and 'field' in §4.1 show, Dakpa-Dzala and Other East Bodish do not adhere to Benedict's Law.

§10.2.5. Dempsey's Law

Hill (2019: 12) defined Dempsey's Law as a merger of *-e and *-i before velars in Tibetan. The data for the Dakpa-Dzala and Other East Bodish varieties in sections §3.1, §3.2, and §6.3 indicate some important modifications.

Proto-Bodic rhymes with vowel *-i are reflected in the Dakpa-Dzala and Other East Bodish varieties with vowel *-e*, whereas in Tibetan they retained vowel *-i* (§3.1). Proto-Bodic rhymes with vowel *-e are reflected in the Dakpa-Dzala and Other East Bodish varieties with vowel *-i*, whereas in Tibetan they retained the vowel *-e* (§3.2). The only exceptions are closed Proto-Bodic rhymes with vowel *-e preceded by a palatalised onset, which are reflected with vowel *-i* in the Other East Bodish varieties (§6.3).

Because palatalisation of the onset is a secondary Tibetan innovation preceding high vowels /i, e/ (§4.2, §4.3, §4.4, §4.8), the reconstructed Proto-Central Bodic forms would have the general format *$C_{i}^{j}i(C_f)$, but the underlying Proto-Bodic forms, from which the Other East Bodish and Dakpa-Dzala forms directly descend, have the general format *$C_i i(C_f)$. Hence, the merger of vowels *-e and *-i before velars is a Central Bodic innovation, and not a Proto-Bodic innovation. Unlike what Hill (2019: 13) ascertains and like earlier reported by Michailovsky and Mazaudon (1994: 549), palatalisation of the onset is a conditioning factor for the merger of *-e and *-i in Tibetan.

§10.2.6. Palatalisation of non-laterals

According to Hill (2019: 16–17), Tibetan palatalised non-lateral onsets (including velar and dental stops, bilabial and dental nasals, and fricatives), where the East Bodish varieties did not. However, Hill already noted that: "Because the environment that conditions the palatalisation seen in this change and in Benedict's law (...) remains obscure, it is necessary to reconstruct this environment (noted *^{y}) into the earliest stages of Tibetan linguistic history (...)." Indeed, the evidence presented in earlier sections shows that the actual picture is relatively complex. The results are summarised here.

Other East Bodish and Dakpa-Dzala did not palatalise the velar onsets /k-, k^{h}-, g-/ (§4.2), the bilabial onsets /p-, p^{h}-, b-/ (§4.3) and the nasal onset /n/ (§4.4) preceding high vowels /i, e/. In both cases, Other East Bodish and Dakpa-Dzala reflect the simple, non-palatalised onsets. However, Other East Bodish and Dakpa-Dzala palatalised the bilabial onsets /p-, p^{h}-, b-/ if preceded by any vowel other than the high vowels /i, e/ (§3.5). Other East Bodish and Dakpa-Dzala did not palatalise the dental onsets /t-, t^{h}-, d-/ when preceding vowel /e/ (§4.8). Other East Bodish and Dakpa-Dzala palatalised the nasal onset /m/ (§5.3). Other East Bodish did not palatalise the fricative onset /s/ before high vowel /i/ (§7.2), while Dakpa-Dzala palatalised the fricative onset, resulting in the same reflexes as Tibetan.

§10.2.7. Merger of *w- with *j-*

Through several examples from Kurtöp, Hill (2019: 19–20) built on the observation by Michailovsky and Mazaudon (1994: 552) that Tibetan palatal onset *y-* corresponds to both onset *w-* and initial *y-* in the East Bodish languages. Jacques (2013) had earlier suggested that Tibetan changes *w- to *y-* only before the high vowel /i/. In section §7.1, I show that this change occurs before *all* vowels, except the lower back vowel /a/. I also show that this is a sound change that affected both Tibetan and Dakpa-Dzala, but not Other East Bodish. Whether the sound change spread into Dakpa-Dzala from Tibetan, or whether this is indicative of a later split of Dakpa-Dzala from Tibetan compared to the split of Other East Bodish from Tibetan, is a matter of further investigation.

§10.3. Other sound changes and correspondences

Hill (2019) also indicated that there are several other sound changes that set Tibetan apart from other Trans-Himalayan languages, in particular Chinese and Burmese, but that the evidence to support a conclusion that the East Bodish varieties also participated in these sound changes is hitherto limited. I will present further evidence for the following sound changes: Li Fang-Kuei's Law (Hill 2019: 22–23), Simon's Law (Hill 2019: 28–29), Peiros and Starostin's Law (Hill 2019: 32–33), the Tibetan merger of vowels /a/ and /ə/ (Hill 2019: 29–30) and the Tibetan merger of vowels /a/ and /e/ before dentals, *-r*, and *-l* (Hill 2019: 31–32).

§10.3.1. Li Fang-Kuei's Law

In §4.2, I indicated that while I preliminary reconstruct Proto-Bodic onset *rgy, thereby presuming that the sound change *ry- > *rgy*- purported by Li Fang-Kuei's Law (Hill 2019: 22–23) affected both East Bodish and Tibetan, I tend to think that all concepts with Tibetan onset *rgy*- where the Other East Bodish and Dakpa-Dzala varieties (including Dakpa Wénlàng, Dakpa Bāngxīn and Dzala) have palatal onsets instead of simple onsets are later borrowings from Tibetan, in part because the rhymes of many of the concept that attest to this correspondence do not match the expectation for the Other East Bodish varieties.

§10.3.2. Simon's Law

According to Simon's Law (Hill 2019: 28–29) Tibetan has a sound change *mr- > *br*-. Despite the marginal evidence in §4.7, the East Bodish varieties do not seem to have participated in this sound change, but rather preserved the onset cluster *mr*-.

§10.3.3. Peiros and Starostin's Law

While Old Chinese has distinct velars and uvulars and in Burmese the velars are preserved but the uvulars are lost, leaving a zero onset, in Tibetan, there was a merger of velars and uvulars. This is known as Peiros and Starostin's Law (Hill 2019: 32–33). As none of the East Bodish varieties has uvular onsets, and velar onsets in East Bodish correspond to velar onsets in Tibetan, it becomes clear that the East Bodish varieties have followed Tibetan here.

§10.3.4. Merger of vowels /a/ and /ə/

As none of the East Bodish varieties has a distinctive schwa and, with a few exceptions that can be explained through phonotactic conditioning (such as *-a > Dakpa-Dzala *-e* in §5.1 and *-aC_f > Other East Bodish *-iCf* in §6.3), the East Bodish vowel /a/ corresponds to the Tibetan vowel /a/, the merger of vowels /a/ and /ə/ (Hill 2019: 29–30) must have occurred before Tibetan and East Bodish split.

§10.3.5. Merger of vowels /a/ and /e/ before dentals, *-r*, and *-l*

Tibetan is characterised by a merger of vowels /a/ and /e/ before dentals, *-r*, and *-l* (Hill 2019: 31–32). Despite the fact that the Dakpa-Dzala varieties show vowel /e/, not /a/, before dentals and *-r* in some lexemes (§5.1), this can be attributed to phonotactic conditioning by coronal onsets or codas. In other words, rather than Dakpa-Dzala having preserved the original rhymes with vowel /e/, for example, in (257) 'new' and (261) 'eight', cf. also Chinese 鮮 *sjen* < *ser 'fresh' (= 'new') and 八 *peat* < *pˁret 'eight', the change from Tibetan rhymes with vowel /a/ to Dakpa-Dzala rhymes with vowel /e/ was a later development also observed in Dakpa-Dzala rhymes other than the coronal rhymes.

§10.3.6. East Bodish innovations

Finally, in this paper I have identified a set of five sound correspondences shared by all the East Bodish varieties that set them apart from Tibetan. These are:

1 lowering of vowel /i/ to /e/ preceding coda /k, p, ŋ, n, m/ (§3.1),
2 fronting of vowel /e/ to /i/ preceding coda /k, t, n, r/ (§3.2),
3 closing of vowel /u/ to /o/ in closed rhymes (§3.3),
4 affrication of palatalised bilabial onsets before back vowels /a, o, u/ (§3.5),
5 diphthongisation of rhyme *-al* (§3.4).

I will shortly discuss these innovations here. For quick comparison, I have consulted the STEDT database for most of the comparative forms.

To start with the diphthongisation of rhyme *-al*, this is a unique innovation only with respect to Written Tibetan. Many spoken Tibetan varieties follow the same innovation, with in many varieties the diphthong being subsequently realised as monophthong *-e*, for example, Kyirong has [pɛj.bá] 'frog' (Hedlin 2011: 23), Lhasa [pʰɛ̰ː] 'wool' and Lhasa [kɛ̰ː] 'cross over'. Similarly, many spoken Tibetan varieties have palatalised bilabial onsets even before back vowels /a, o, u/, for example,

Dingri Töke [tɕʰa̲], Dzongkha [ptɕa̲], Kyirong [tɕa̲], and Kham [ɕa̲] ‘bird’; Dzongkha [bdʑa̲ː] ‘summer’.

More unique in the Bodic context are the first three sound innovations. However, if we look further afield, we can find other languages and linguistic varieties that have made the same changes. I already mentioned Maung Wun’s Law (Hill 2019: 60–62) before velars /k, ŋ/ for Burmese, exemplified, for example, in Written Burmese *khrok* < *kruk ‘six’ and Burmese *to?*[44] ’thick’ (Sun 1991). We also observe this in Chinese, for example, 毒 *dowk* < *[d]ˤuk ‘poison’ and 篤 *towk* < *tˤuk ‘firm, solid’. In addition, we can see this innovation in some Naga languages like Sangtam and Lotha, in Taraon and Idu Mishmi, and in Karenic. We also observe this in Lepcha and Karbi, for example, in Lepcha [ta.rók] ‘six’ and [tʰóŋ] ‘drink’, and in Karbi [tʰə.rok] ‘six’ and [toŋ] ‘suck’. The East Bodish varieties are unique in displaying this sound change also in non-velar rhymes, in which it is much less commonly attested elsewhere. For example, while Proto-Tamangic ‘three’ is reconstructed to *[B]som, the Tamangic languages do not share the same vowel /o/ in concepts like ‘winter’, ‘elbow’ or ‘shoulder’, except for Tukche Thakali *[3]pom* ’shoulder’.

The East Bodish innovation of lowering of vowel /i/ to /e/ preceding coda /k, p, ŋ, n, m/ is, to my current knowledge, only shared by a single Trans-Himalayan language, namely Karbi. In this language, we find, for example, *rek* ‘louse’, *theng* ‘tree’, *neng* ‘heart’, *hem* ‘house’, *ner.lo* ‘year’, *mek* ‘eye’, *men* ‘ripe’, and *a.men* ‘name’. We also find exceptions, such as *ning* ‘year’ and *ding* ‘long’.

Karbi, on the other hand, does not share the East Bodish innovation of fronting vowel /e/ to /i/ preceding coda /k, t, n, r/. This innovation is only found in scattered individual varieties, for example, Bahing *tik* ‘support on’, Spiti Tibetan *si.ro* ‘yellow’, Maerkang Bola rGyalrong *sir*[33]*.po*[44] ’yellow’ and rGyalrong *kĕ.snĕs* ’seven’. Rhymes with vowel /i/, not /e/ are much more widespread in the concept ‘nail’: indeed, for this concept, STEDT reconstructs two proto-forms, one with rhyme *-en* and one with rhyme *-in*.

These observations posit a conundrum with regard to the possible implication of the innovations that I propose here to be shared by the East Bodish varieties. We observed that (a few) individual varieties have forms that confirm to the proposed sound correspondence, whereas (most) other varieties have forms that do not follow the innovation. These later varieties share the same rhymes as the Written Tibetan forms. I attributed this to later language contact and borrowing from Tibetan or

other Bodic varieties in these individual varieties. The forms in the varieties that have preserved the innovated rhyme are then more 'archaic' and 'conservative'. On the other hand, the scattered attestations of the same innovations in other Trans-Himalayan varieties in various concepts may also indicate independent innovations in individual varieties, or, dependent on how phonemic (rather than phonetic) the transcription of the forms from secondary sources are, perhaps even individual speakers.

Nonetheless, I think that despite these reservations, we may state that at the innovations *C_iiC_f > C_ieC_f and *C_iuC_f > C_ioC_f before velar coda /k, ŋ/ are solidly attested for all East Bodish varieties. For other coda, the evidence is more mixed, as is the evidence for the innovation *C_ieC_f > C_iiC_f.

§10.4. Shared lexical innovation

As I explained in §9.1, there are very few lexical innovations shared by Other East Bodish and Dakpa-Dzala versus Tibetan. In considerably more cases, either Dakpa-Dzala has innovated versus Other East Bodish and Tibetan, or Other East Bodish has innovated versus Dakpa-Dzala and Tibetan, or both Dakpa-Dzala and Other East Bodish appear to have independently innovated versus Tibetan. The lexical evidence does not provide strong evidence for the coherence of Other East Bodish and Dakpa-Dzala as a subgroup versus Tibetan.

One of the few exceptions is the innovation shared between Other East Bodish, Dakpa-Dzala and Tibetan in 'five'. The East Bodish varieties indeed share the Tibetan *l*-prefix in this concept, where the Other East Bodish varieties show the characteristic sound change from lateral *l-* to palatal *y-* before back vowels {a, o, u}.

(552) 'five' DkM & DkD *le^{35}.ŋe^{53}*, DkW & DkB *le^{35}.ŋa^{53}*, Dz *la.nga*, Bt *ya.nga* (vD15), Kt *ya.nga*, Kh *ya.nga*, Tib *lṅa* < PB *la.ṅa

However, the question is to what extent this *l*-prefix, which on basis of the Dakpa-Dzala and Other East Bodish evidence could be reconstructed as a fully formed CV syllable *la-*, is a uniquely identifying innovation of the Bodish languages. While we indeed find many languages with either a bilabial stop prefix (e.g., Lushai [Mizo] *pà.ngá*, VanBik 2009; Mongsen Ao *pha.ŋa*, Coupe 2007; Dulong *pɯ^{31}.ŋa^{53}*, Dài and Huáng 1992), or a bilabial nasal prefix (e.g., Idu Mishmi *ma^{31}.ŋa^{55}*, Jingpho *mă^{31}.ŋa^{33}*, Maerkang rGyalrong *kə.mŋo*, all from Dài and Huáng 1992),

which both likely go back to the same bilabial stop prefix, and some languages with vowel prefixes (Tani languages, see below), there are few attestations of lateral prefixes beyond the Bodish group.

We can find a lateral prefix, sometimes with rhotacisation to rhotic /r/, in several languages of Nepal, for example, in Dolakha Thangmi *walŋa* and Sindhupalchowk Thangmi *whalŋa* 'five' (Turin 2012: 911, likely from *b-lŋa) and Kham *rŋa:* (Watters 2004a: 384). However, since neither of these languages has a close genetic relation with Bodic in the same way that the Dakpa-Dzala and Other East Bodish varieties have, the concept 'five' here may be a Bodic loan. Although Proto-Tani 'five' is reconstructed as *ŋo (Sun 1993: 145), we find that most Tani reflexes have a prefix in the lexeme. While this is a simple vowel prefix in languages such as Bengni, Bokar and Padam-Mishing, it is a palatal prefix in Apatani *ja.ŋo* (Sun 1993: 145). Crucially, while two other Apatani numerals have an *a*-prefix (e.g., *a-kó* 'one', *à-ñe* ~ *à-ñi* 'two' (Sun 1993)), none has a *ja*-prefix. Because Apatani and Bodic languages do not appear to have a known genetic or contact relationship, the Apatani form could be an independent innovation.

Nonetheless, this single form is no reason to discount the fact that the Dakpa-Dzala, Other East Bodish and Tibetan varieties all share a unique innovation in the lexeme 'five', namely, a lateral prefix rather than a bilabial prefix. Whether this is the result of shared inheritance or pervasive borrowing of the innovated form later on remains a matter of investigation. The fact that for 'five' the Other East Bodish forms show the characteristic change *l- > *y*- before /a, o, u/ (§6.6) and the Dakpa-Dzala forms display the change *-a > -*e* following coronal onsets (§5.1) may imply the former.

§11. Conclusion: Affiliation of East Bodish

In this section, I will first discuss whether, based on the evidence provided in the previous sections we can concluded that Tibetan and the languages considered to belong to East Bodish form a coherent group within the Trans-Himalayan language family (11.1). In section 11.2, I focus on the second premise of this paper, namely, to find out whether the East Bodish subgroup exists, and whether we can speak of a proto-language called Proto-East Bodish or Proto-East Bodic. I will discuss the possible internal phylogeny of East Bodish or East Bodic in §11.3, and I will then discuss some methodological lessons derived from this research in §11.4.

§11.1. Are Tibetan and 'East Bodish' a coherent group?

The evidence that Tibetan and 'East Bodish' form a coherent group, distinct from other Trans-Himalayan languages, in particular Chinese and Burmese, seems to be supported by the following shared innovations:

1 Schiefner's Law (§10.1.2, although more external evidence that would support TH *dz- > PB *z*- and evidence for *ǰ- > *ź*- is needed),
2 Peiros and Starostin's Law (§10.3.3),
3 the merger of /a/ and /ə/ (§10.3.4),
4 the merger of /a/ and /e/ before coronals (§10.3.5).

I found much less evidence for earlier assumptions that the 'East Bodish' varieties share the following innovations with Tibetan:

1 Houghton's Law (unconvincing evidence, §10.1.1),
2 the change from *-as* to *-os* (the forms presumably attesting to this may rather be the result of the generalisation of the imperfective versus the past tense verb stems, §10.1.3),
3 the shared innovation in 'five' (this may be the result of borrowing, §10.4).

Despite these reservations regarding individual sound correspondences, there is sufficient evidence that the 'East Bodish' languages, i.e. the Other East Bodish languages and the Dakpa-Dzala varieties, together with Tibetan and other Bodish varieties, from a subgroup within the Trans-Himalayan language family.

§11.2. Is East Bodish a coherent subgroup?

The distinctiveness of *all* the varieties of East Bodish versus Tibetan, i.e. the coherence of East Bodish as a single subgroup, is supported by the following shared innovations:

1 lowering of vowel /i/ to /e/ preceding coda /k, p, ŋ, n, m/ (§3.1),
2 fronting of vowel /e/ to /i/ preceding coda /k, t, n, r/ (§3.2),
3 closing of vowel /u/ to /o/ in closed rhymes (§3.3),
4 affrication of palatalised bilabial onsets before back vowels /a, o, u/ (§3.5),
5 diphthongisation of rhyme *-al* (marginally, because it also occurs in spoken Tibetan varieties, §3.4).

In addition, there are a few shared retentions of all the East Bodish varieties that set them apart from Tibetan, where the East Bodish varieties did not participate in the sound changes prescribed by:

1 Bodman's law (§10.2.2),
2 Conrady's Law (§10.2.3),
3 Simon's Law (§10.3.2),
4 Benedict's Law (§10.2.4),
5 palatalisation of the velar, dental, nasal, and bilabial stop onsets, but only before high vowel /i/ (§10.2.6).

Moreover, the East Bodish varieties did not participate in the characteristic sound change (retroflexation) affecting the velar and bilabial plosive and rhotic medial onset clusters (§4.5, §4.6) in most varieties of spoken Tibetan, where the East Bodish varieties conservatively reflect the Written Tibetan spelling.

I have some reservations regarding the participation of the East Bodish languages in the sound changes prescribed by Li Fang Kuei's Law (these may be loans, §10.3.1) and Laufer's Law (the evidence is mixed and also attested in Trans-Himalayan languages outside the Sinitic and Lolo-Burmese branches, §10.2.1). Because of a combination of two opposite sound changes, described in §3.1, §3.2 and §6.3, we cannot conclude that East Bodish has participated in the merger of vowels /e/ and /i/ before velars as is prescribed by Dempsey's Law (§10.2.5). Whether it is because of inheritance or language contact and borrowing, only the Dakpa-Dzala varieties have participated in the palatalisation of the fricative /s/ (§7.2, §10.2.6) and the merger of *w- and *j*- (§10.2.7) described for Tibetan.

At first sight there is reasonable phonological evidence in the form of three shared innovations that would suggest East Bodish is a coherent subgroup. However, the question is how unique these innovations are. The quick comparison in §10.3.6 with cognate forms in other Trans-Himalayan languages, including those of the southern Himalayas, indicates that there are scattered varieties of spoken Tibetan, Burmese, Tamangic, and unclassified languages like Karbi and Lepcha that share one or more of these innovations. So, could these perhaps be aerially dispersed phonological innovations, or are they independent innovations in separate branches? I tried to explain the fact that these rhyme correspondences are diffusely attested in the individual East Bodish varieties, with almost as many or sometimes even more counterexamples from individual varieties than supporting examples, through later loans from Bodic languages in the case of counterexamples. On the other hand,

we could also consider the supporting forms to be innovations in individual varieties, perhaps even in individual speakers. Similarly, the shared retentions vis-à-vis Tibetan are not unique and are also found in many other languages, especially in the languages mentioned shortly before.

Nonetheless, I think that despite these reservations, we may state that the innovations *C_iiC_f > *C_ieC_f* and *C_iuC_f > *C_ioC_f* before velar coda /k, ŋ/ are solidly attested for all East Bodish varieties. For other coda, the evidence is more mixed, as is the evidence for the innovation *C_ieC_f > *C_iiC_f*. The observation that both these innovations *C_iiC_f > *C_ieC_f* and *C_iuC_f > *C_ioC_f* are also shared by Karbi is perhaps relevant, given the fact that East Bodish and Karbi are not spoken in a contiguous area, and these developments may either indicate a genetic relationship or (more likely) independent innovations.

From the lexical perspective, this initial survey identifies only nine possible lexical innovations of Dakpa-Dzala and the Other East Bodish varieties. However, of these nine innovations, six, namely 'stone', 'seven', 'sharp', 'chicken', 'sell' and 'sweet', may represent semantic change between Dakpa-Dzala and Other East Bodish on the one hand and Tibetan on the other. While the Dakpa-Dzala and Other East Bodish varieties retained the original Proto-Bodic forms in their original meanings, Tibetan innovated forms (like *rdo* 'stone' and *bdun* 'seven'). The concept 'yellow-throated marten' is perhaps a substrate form, leaving only 'seed' and 'stay, live, reside' as possible shared lexical innovations of all the East Bodish varieties. In this paper, I also noted a number of possible new lexical innovations of all the East Bodish varieties, that await further confirmation. First of all, it has to be secured that they do not have any Tibetan cognates, and secondly, more supporting evidence from individual East Bodish varieties has to be uncovered. I list them here: (324) *tot 'burn', (325) *pot 'put into', (286) *k^{h}lak 'boil1', (392) *plek 'exchange', (393) *plak 'slip', (394) *pluk 'pull out', (396) *plut 'take off', (395) *plik 'remove cover', (397) *plut? 'pry, make a hole', (398) *bla 'dust, dirt, ash', (399) *blai 'on, above'.

On the other hand, I identified two dozen lexical innovations by Dakpa-Dzala, where Other East Bodish has different lexical innovations, both as compared to Tibetan. I also identified two dozen lexical innovations unique to Other East Bodish (i.e. not shared with either Tibetan or Dakpa-Dzala) and two dozen lexical innovations unique to Dakpa-Dzala (i.e. not shared with Other East Bodish or Tibetan). Finally,

in two dozen concepts, I could find a Tibetan cognate for the Dakpa-Dzala forms, but another Tibetan cognate for the Other East Bodish forms. The relatively large number of lexical innovations in both Other East Bodish and Dakpa-Dzala with no apparent cognates in known contact languages could indicate unknown linguistic substrata.

Concluding, the most parsimonious decision would be to consider East Bodish to be a polyphyletic, rather than a monophyletic subgroup. In other words, from a purely linguistic perspective, "East Bodish" does not exist.

§11.3. Phylogeny of 'East Bodish'

In the above analysis, I have shown that there are a few phonological innovations that are shared by Tibetan and the East Bodish varieties versus other Trans-Himalayan languages. I have also shown that there are a few phonological innovations that are shared by Dakpa-Dzala and the Other East Bodish varieties versus the Tibetan languages. In this section, I will focus on the internal phylogeny of the East Bodish varieties.

The Dakpa-Dzala varieties have participated in two sound innovations that occurred in Tibetan but not in the Other East Bodish varieties: the palatalisation of fricative /s/ before high vowels (§7.2) and the merger of *w- and *j*- before all vowels but /a/ (§7.1). This could indicate that ancestor language of the Other East Bodish varieties split from the ancestor language of the Tibetan and Dakpa-Dzala varieties before the ancestor of the Dakpa-Dzala varieties split form the ancestor of the Tibetan varieties. However, there also remains the distinct possibility that the Dakpa-Dzala varieties made these innovations after the split, influenced by Tibetan due to longer and / or more intense language contact.

The Other East Bodish varieties are characterised by ten innovative sound changes that are not shared by the Dakpa-Dzala varieties and Tibetan (§6.1-§6.10). The Dakpa-Dzala varieties, on the other hand, have three innovations not shared by Other East Bodish and Tibetan (§5.1-§5.3). This may indicate that Other East Bodish has a much longer history of separation from Dakpa-Dzala and Tibetan, or that (all the analysed) Other East Bodish varieties have a substratum distinct from the substratum of Dakpa-Dzala, which may explain more phonological changes within a similar span of time.

Considering the observation that the Dakpa-Dzala varieties participated in two Tibetan sound changes while Other East Bodish did not and that the Other East Bodish varieties have far more phonological innovations vis-a-vis Tibetan than Dakpa-Dzala, Other East Bodish split from Tibetan and Dakpa-Dzala earlier than Dakpa-Dzala split from Tibetan. The non-composite lexical innovations unique to either the Dakpa-Dzala or to the Other East Bodish varieties indicate substrate language influence with non-Bodic languages, where we must presume that the Dakpa-Dzala and the Other East Bodish ancestral languages were superstrate languages for distinct non-Bodic substrate languages before their further diversification. It is difficult to imagine that languages that served as a substrate for the individual attested varieties or later contact-induced sound changes and borrowings could have such pervasive impacts on the phonology and lexicon of *all* the Dakpa-Dzala and *all* the Other East Bodish varieties. The shared lexical forms between Dakpa-Dzala and Tibetan as well as between Other East Bodish and Tibetan could be the result of both inheritance from Proto-Bodic or of later contact with Bodish languages. We must presume that at least since the time of the formation of the Tibetan empire and the spread of Tibetan Buddhism, both religious and secular refugees may have sought refuge throughout the southern Himalayas to escape turmoil, persecution, conflict etc. on the Tibetan plateau. This would have resulted in substantial Tibetan linguistic influence on all the languages spoken by people that were at least partially converted and strongly influenced by Tibetan Buddhism and Tibetan culture, or that came under some form of Tibetan authority. Since the mid-17th century, the linguistic influence of classical or liturgical Tibetan and Dzongkha in Bhutan and classical or liturgical Tibetan and Central Tibetan in the Tawang area may have further influenced the Other East Bodish varieties and Dakpa-Dzala, respectively.

When we compare the sound correspondences between East Bodish and Tibetan to the approximate chronological order of the sound changes deriving Old Tibetan from Proto-Bodish in Hill (2019: 22), we may carefully conclude that while Other East Bodish is a direct descendent from Proto-Bodic (not having participated in the merger of *w- and *j*- and Laufer's Law and all subsequent changes), Dakpa-Dzala split from the ancestral language of Old Tibetan at a slightly later moment, after participating in the merger of *w- and *j*- and Laufer's Law but not in all subsequent changes. This analysis supports the hypothesis of East Bodish as a paraphyletic subgroup as represented in Figures 7 and 8 above.

If the present status quo suggesting that both Dakpa-Dzala and the Other East Bodish varieties derive from a common ancestor (Figure 6 above), Proto-East Bodic, which split off from Proto-Central Bodic at a certain moment in time and was spoken on the Tibetan plateau itself, is to be maintained, we need to explain the results of the phonological and lexical analysis. Perhaps, Proto-Other East Bodic descended from the Tibetan plateau into a valley of Central Bhutan (likely Bumthang), diverging from Proto-Dakpa-Dzala at a relatively early moment in time. Proto-Other East Bodic would have borrowed from a substrate language that was already spoken in the Central Bhutanese valley where they settled, hence the shared lexical innovations of all the Other East Bodish varieties. Proto-Dakpa-Dzala, on the other hand, remained in contact with Proto-Central Bodic on the Tibetan plateau for a longer time, hence phonologically and lexically assimilating more to Proto-Central Bodic, before finally descending into a valley in north-eastern Bhutan or Tawang (likely Lekpu-Pangchen). There, they may have encountered a substrate population as well, resulting in additional linguistic divergence from Proto-Other East Bodic. This explanation would partially explain the few shared lexical innovations between the Dakpa-Dzala and the Other East Bodish varieties, as they encountered a lot of 'new' concepts (species, crops, technologies) after they had separated from each other, borrowing from different substrate languages. But such a theory could hardly account for the low number of shared phonological innovations. This may have occurred if the period between the split of Proto-East Bodic from Proto-Bodic and the split of Proto-Other East Bodic and Proto-Dakpa-Dzala from Proto-East Bodic was really short.

The linguistic evidence presented above could be consistent with the hypothesis that the language ancestral to Proto-Dakpa-Dzala was *not* Proto-East Bodic but represents a separate branch from Proto-Bodic (Figure 7 above). The split of Proto-Dakpa-Dzala followed the split of Proto-East Bodic, hence the two shared sound changes between Proto-Central Bodic and Proto-Dakpa-Dzala. But the split of Proto-Dakpa-Dzala preceded many of the sound changes that affected Proto-Central Bodic, explaining the conservative retentions shared between the Other East Bodish and Dakpa-Dzala varieties not shared with the Central Bodish varieties. The few phonological innovations shared between Proto-Dakpa-Dzala and Proto-East Bodic could be considered later independent innovations.

The final hypothesis is that Proto-East Bodic was the first split from Proto-Bodic. Proto-Dakpa-Dzala and Proto-Bodish both derive from the

later split of Proto-Central Bodic, but Proto-Dakpa-Dzala split at an earlier moment in time (Figure 8 above). This would explain why Dakpa-Dzala and the Bodish varieties share a few phonological traits not shared with Other East Bodish. This would also presume that the few shared phonological innovations by the Dakpa-Dzala and the Other East Bodish varieties would be independent innovations, and many of the innovations made by (spoken) Tibetan varieties, while both Dakpa-Dzala and Other East Bodish retained the written Tibetan forms, occurred only *after* the split between Dakpa-Dzala and Bodish.

Of the three possible hypotheses, the idea that Dakpa-Dzala forms a separate group within the Bodic clade, descending directly from Proto-Bodic, postdating the split of Proto-East Bodic from Proto-Bodic but predating the split of Proto-Central Bodic from Proto-Bodic (i.e. Figure 7 above), seems to be the most likely scenario.

§11.4. Methodological implications

This analysis of the putative East Bodish linguistic subgroup highlights some issues of a methodological nature. I would like to specifically address three: The complexity of a situation where there is both a genetic and a language contact relation between two or more linguistic varieties; the importance of idiosyncratic, exceptional attested forms in individual varieties for reconstruction in cases of intense language contact with genetically related languages; and the value of analysing Bodish languages, and Trans-Himalayan languages in general, in terms of onsets and onset clusters versus rhymes, and not in terms of initials, nuclei and coda.

The individual linguistic varieties of the Dakpa-Dzala and the Other East Bodish group do not only stand in a genetic relationship with each other and with the Bodish or Tibetan languages, including Old and Written Tibetan, but have also remained in close contact ever since their separation. This can not only be observed in concepts where *all* varieties have borrowed forms from Tibetan, but also in concepts where, based on the established sound correspondences, some varieties have a retained an inherited form, whereas other varieties have a borrowed form. Because of the inherent genetic relationship between the source languages and the borrowing languages, this results in a considerable proportion of *faux amis*. Hence, the reconstruction of the Bodic language group presents an incredibly complex situation, far more complex than say, for example, that presented by Bodic and Tibetan loans in a non-Bodic linguistic subgroup like Proto-Western Kho-Bwa (Bodt forthcoming). The best,

perhaps the only, way in which we can approach this situation is by establishing regular sound correspondences between the varieties. Whenever deviation from these established sound correspondences cannot be explained through phonotactic conditioning factors, we must presume later borrowing.

Secondly, there is a need to look at idiosyncratic forms in individual varieties that may preserve inherited forms where other varieties have borrowed from genetically related contact languages, particularly if those contact languages are superstrate languages. Examples can be found especially in §3.1, §3.2 and §3.3, where sometimes only a single linguistic variety has preserved what must be presumed the inherited form, whereas all other varieties have borrowed etymologically related, but phonologically distinct forms from genetically related contact languages.

The third issue concerns, e.g., observations by Michailovsky and Mazaudon (1994) on the relationship between the vowels /o/ and /u/ in the East Bodish and Bodish varieties. In this paper, I show that the apparent inconsistencies in this relationship can be solved through an analysis of the entire rhymes that contain these vowels, rather than simply focusing the analysis on the vowels themselves. I have earlier taken this approach in the case of Western Kho-Bwa (Bodt forthcoming), and I think this is a more fruitful approach for Trans-Himalayan languages in general.

§12. SOME RELATED OBSERVATIONS

After providing the linguistic overview of the Other East Bodish and Dakpa and Dzala languages, I will present some assorted, related thoughts on the history of these purported East Bodish varieties. In §11.1, I will present some ideas about the age of the Dakpa and Dzala and other East Bodish languages, and in §11.2, I will discuss the names ‘Dakpa’ and ‘Dzala’ from an ethnolinguistic perspective. I present my ideas on the origin of two of the geographic outgroups of Dakpa-Dzala in §11.3, and on the possible origin of these languages in §11.4. Finally, I present my ideas on the etymologies for some of the grain crops in the East Bodish languages in §11.5 and on the possible pastoral origins of the East Bodish speakers in §11.6.

§12.1. Age of East Bodish and further links

Hyslop and d'Alpoim Guedes (2020) estimated the age of the East Bodish languages (Proto East Bodish) at twice that of Old Tibetan (i.e. 2500 years maximum). Wu, Bodt and Tresoldi (2022) indicate that Khengkha and Bumthang (and possibly also Kurtöp and Mangdep) split from the remaining Bodish languages around 3000 years before present, with one group including Tawang Monpa, Tshona Monpa and Dzalakha splitting from the Central Bodish languages around 2100 years before present.[128] Huber (2020: 6) connects the Dung or Shar Dung "conservative remnants of very old social groups from the southernmost Tibetan plateau and its Himalayan highland interface zone who migrated south to the research area (i.e. north-eastern Bhutan and north-western Arunachal) during the mid-1300s" to the East Bodish speakers. Perhaps, people that spoke East Bodish languages may have entered Bhutan at that time suggested by Huber, but rather than being the first East Bodish speakers there, they may have settled among people that spoke East Bodish languages that had settled in the area earlier.

Also, Huber (2020: 6) related the East Bodish speakers to "older groups more widely diffused along across the south-eastern Tibetan plateau and along its margins and who represent one of the many components that constituted the early eastern Himalayan highland and proto-'Tibetan' populations" or the 'Mon clans', who have a "common ancestral heritage with the earlier speakers of Qiangic and Naic languages". The analysis by Wu, Bodt and Tresoldi (2021) shows no specific connection between the Qiangic and Naic languages in the sample and the East Bodish varieties. Rather, East Bodish languages are most closely related to West Himalayish, Bodish and Tshangla.

Van Driem (2001: 872) wrote that:

> The ancestors of the modern 'Bumthang Group' speakers migrated into an area, a portion of which at least appears to have been originally inhabited by the ancient Gongduk. There are indications that a Gongduk substrate may underlie the languages of the Bumthang group. The extent of the Bumthang languages was probably restricted to the northernmost reaches of their present range until the beginning of the first millennium, and Khengkha represents a southward expansion which took place approximately in the first millennium, probably pushing back and assimilating the forebears of the modern Gongduk as they progressed into the sparsely populated south-central hills.

[128] Note that this phylogeny considers East Bodish as a coherent subgroup.

Unfortunately, data on Gongduk are very sparsely available, despite documentation and research on the language having been ongoing since the 1990s. Much remains to be written about Gongduk, including an etymology of the name itself, which I think is derived from Gongduk *gəŋ* 'narrow valley' and *duk* 'village', i.e. the villages in the narrow valleys.[129] Except the lexicon and sample sentences DDC (2005) and some lexical, morphological, and comparative data and analysis in van Driem (2013) and Gerber (2015 and 2020a), there is no grammatical description and no accessible corpus of texts of the language. Nonetheless, we can make a few preliminary observations regarding a possible Gongduk substratum to the East Bodish languages, as well as a possible East Bodish superstratum to Gongduk in return. For example, forms for 'honey, nectar1' that do not follow regular sound correspondences (cf. §3.1 and §7.2) may derive from Gongduk *ziŋ* 'honey' (DDC05: 58), which is realised as [ðiŋ], thus explain alternation between onsets /s/ and /z/ and resistance to the sound change *-iC$_f$ > -*eC$_f$*. Similarly, the highly divergent Other East Bodish third person singular pronoun *gon* has a clear cognate in Gongduk གོན་ *gon* '3sg, he, she' (DDC05: 1) and may be a Gongduk substrate item. And rather than proposing difficult etymologies between East Bodish *ju* ~ *jo* 'milk, breast' (see §4.8, §12.6), perhaps East Bodish borrowed this word from Gongduk རུ་ *ju* (DDC05: 67). Lexical cognates are also prevalent with languages of the Dakpa-Dzala group when they are absent from languages of the Bumthang group, for example, རྟོག་ཆ་ *ɬop.cʰa* 'food' (DDC05: 55), Dakpa Tawang *top.chay* (W02: 77) and ཏག་མཉེང་ *tək.mə.leŋ* 'neck' (DDC05: 68), Tib *ltag.pa* 'nape of the neck', Dakpa Mámă *tak^{55}.pa^{53}* 'neck' (Lú 2002: 359). We can also find some lexical cognates between Gongduk and Tshangla, e.g., ཚམ་ *tsham* 'hair (on the head)' (DDC05: 10), Tshangla *tsʰam* and རེད་ག་ *bi.dək* 'leg' (DDC05: 9), Tshangla *bi* 'leg'. Further afield, there are cognates between Gongduk and Kho-Bwa that are not shared with Bodic, e.g., ལྕག་ *lak* 'penis' (DDC05: 68), PWKB *lak; དུག་ *duk* 'village' (DDC05: 19), PWKB *tʰuk and Tshangla *duŋ*).

Notable sound correspondences between Gongduk and Bodic languages and Tshangla include first and foremost the fortition of sibilant fricatives and affricates *s- > *t-* observed in what is ostensibly the oldest layer of Gongduk vocabulary (Gerber 2015 and 2020a: 73 and fn. 15), for example, ཏ་ *tə* 'meat' (DDC05: 57), Tib *śa*; སྡད་ *ɬa.də* 'kill' (DDC05: 84), Tib *bsad-pa*; ད་ *də* 'salt' (DDC05: 57), Tib *tshwa*; རོ་ཟ་ *to.wə*

[129] Note that the oldest reference has the spelling *guṅ-duṅ* (Bodt 2012: 79, 331).

'three' (DDC05: 65), Tib *gsum*; དབེན་ *də.men* 'sister' (DDC05: 67), Tshangla *za.min*; and རྩེ་ *ʑde.jə* 'ten' (DDC05: 65), Tshangla *se*. Gongduk shares this sound correspondence with, for example, the Hrusish, Kuki-Chin, Bodo-Garo, Tangkhulic languages and Karbi (Bodt and Lieberherr 2015: 80-81). On the other hand, a Gongduk sibilant affricate *tsh-* often corresponds to Bodic sibilant fricative *s-*, for example, ཚེར་ཀ་ *tsʰir.kə.lə* 'yellow' (DDC05: 77), Tib *ser.po*; ཆར་བ་ *tsʰer.ba* 'hail' (DDC05: 88), Tib *ser.ba*; ཚང་ 'weighting scale' (DDC05: 53), Tib *sraṅ*; and ཆེར་བ་ *tsʰir.ba* 'urine' (DDC05: 59), Bt *seng.ma*. Gongduk is noted by absence of onset clusters: where such clusters exist in Bodic, they correspond to simple onsets in Gongduk, for example, ཀྱད་པ་ *kat.pə* 'brain' (DDC05: 59), Tib *klad-pa*; ཕུམ་ *pʰum* 'cheese' (DDC05: 56), Tib *phrum*; ཇེད་པ་ *jet.pə* 'eight' (DDC05: 65), Tib *brgyad*; མཱ་ *ma* 'arrow' (DDC05: 103), Dakpa Wénlàng *mla*^{35}. Like East Bodish, but unlike Tibetan, Gongduk does not palatalise onsets before high vowel /i/, for example, ཏི་ *ti* 'one', Dakpa Wénlàng and Dakpa Bāngxīn *thi*^{53} but Tibetan *gcig*; པེ་ *pi.jə* 'give' (DDC05: 50), Dzala *bi*, Kurtöp *bi* but Tibetan *sbyin-pa ~ byin-pa*; པེ་ *pi* 'flour', Dzala *phe*, Kurtöp *phi* but Tibetan *phye*; བེན་པ་ *bin.pə* 'thigh', Kurtöp *bin.ma* 'calf (of leg)' but Tibetan *sbyin-ma ~ byin-ma* 'calf (of leg)'. And finally, Gongduk may have merged the rhymes *-al* and *-at* to *-at*, e.g., in ཁྱད་ *kʰat* 'go' (DDC05: 113), Tibetan *ḥgal-ba* 'cross over'; ལ་བྱད་ *la.bat* 'cotton' (DDC05: 35), Tibetan *kha.bal*; and ཀྱད་ *kat* 'name' (DDC05: 45), Tibetan *skad* 'voice, speech, language'. These are just a few examples of sound correspondences.

Hopefully, in the near future, a complete descriptive grammar of Gongduk based on an accessible corpus of texts and recordings will become available. This will enable a more detailed analysis of the possible relation between the East Bodish languages and Gongduk. It will also enable possible future revitalisation efforts in the language.

As I recently had more intense practical exposure to, and hence learnt more about, a variety of the Gurung language of the Tamangic (a.k.a. Tamang-Gurung-Thakali-Manange) cluster of languages spoken in Central Nepal, I can't escape the impression that the 'East Bodish' languages and these Tamangic languages (and possibly Basum, see §12.4) share a common ancestry, and that at least part of this ancestry is distinct from a shared ancestry with the varieties of Tibetan.

Finally, I would like to propose some preliminary hypotheses regarding the ethnolinguistic history of (eastern) Bhutan. While the high Himalayan ranges to the north may have prevented people from the lower areas in the south from moving up onto the Tibetan plateau, they

may have been less of a barrier for people moving from the plateau down south, passing through the river valleys cutting through the Himalayas. People intimately aware with the topography of the region will also know that, at least for people on foot, the mountains and hills of the region do not present great obstacles for movement, rather, the major rivers prevent people from moving from one area to the next. Until the construction of (semi-)permanent hanging bridges constructed from cane, logs placed from rock outcrop to rock outcrop or cane ropes spanning the reduced width of the river during the winter season were the only ways to cross. In addition, people would only cross these rivers if there was an actual requirement to do so, for example, if a band of nomadic hunter-gatherers needing to expand its territory to increase the resource base for sustenance due to increasing population size in their original habitat. Settled populations practicing agriculture and animal husbandry would be able to sustain larger populations in relatively smaller areas, decreasing the need for territorial expansion and thus migration across these rivers. Moreover, traversing a river on logs or ropes would be doable for a small family-band of people with sparse belongings, but not for villagers with all their household belongings and livestock.

Perhaps, the area to the east of the Mangdechu was the homeland of the ancestors of the present-day Gongduk speakers, with the ancestors of the Monkha speakers inhabiting the area between the Mangdechu and the Mochu and the ancestors of the Lhokpu inhabiting the areas west of the Mochu. Inhabitation may have been limited to the lower areas for considerable time, with populations slowly expanding northwards. All these populations may originally have been nomadic hunter-gatherers, like the Kusunda in Nepal.

As the first migrant population, the Tshangla, moved in from the plains of the Brahmaputra, they would have partially intermixed with the existing Gongduk populations. Hence, we would presume that Gongduk and Tshangla share linguistic and genetic material. When, much later, the ancestors of the East Bodish speakers entered the area from the northeast, they would have partially settled in previously unpopulated or sparsely populated areas, the higher altitudes and upper river valleys. On their gradual descent southwards, they partially intermixed with existing populations at the lower altitudes. As I presume the East Bodish speakers to have entered the area from the Tibetan plateau through the Nyamnyang river valley in the northeast, the Dakpa and Dzala and perhaps Kurtöp speakers may show less linguistic and genetic admixture,

although later contact with Tshangla, Bumthang, Brokpa, Tibetan and Dzongkha would have resulted in a more diverse picture.

While the ancestors of the Tshangla speakers may not have crossed the Drangmechu and Kurichu in its upper reaches due to the fast-flowing rivers in the deep V-shaped gorges, they would have entered the lower lying areas downriver. The East Bodish speakers, on the other hand, entered the upper river valleys from the north. If this assumption is correct, we would expect to find the contemporary East Bodish Chali speakers, living on an 'island' between the Drangmechu and the Kurichu, to share linguistic and genetic material with Gongduk speakers, more so than with Tshangla speakers. Khengkha may represent an East Bodish superstratum closely related to Bumthang and Mangde on the existing Gongduk-Tshangla mixture, as East Bodish speakers moved down into the lower Mangdechu and Chamkharchu river basin and intermixed with the indigenous population.

Because of the long religious history of the valleys of Bumthang and the relatively similar climatological conditions, these valleys must have attracted people from the Tibetan plateau for a long time. Moreover, the upper reaches of the Mangde and Bumthang valleys are in relatively close proximity to the Tibetan plateau, and harbour speakers of Bodic languages like Lakha and Brokkat. Hence, the Bumthang and Mangde populations and languages may show a much greater linguistic and genetic similarity to Central Bodic populations and languages.

I am not sure to what extent a Monkha substratum would be detectable in these languages and in the genetic makeup of their speakers. But according to Gerber (2020a), Monkha and Gongduk share some phonological features that could be attributed to an old contact situation, which perhaps may also represent ancient genetic links. The affiliation of Monkha, Tshangla and Gongduk to languages beyond the borders of Bhutan remains an enigma.

§12.2. Some thoughts on the names 'Dakpa' and 'Dzala'

The names 'Dakpa' and 'Dzala' have gained traction in the linguistic literature since Shafer (1954) in the case of Dakpa (Shafer's *Dwags*) and van Driem (2001: 914–915) in the case of Dzala. However, this nomenclature only describes the situation of these languages *in Bhutan*, where Dzala refers to the variety spoken in the upper Kholong river valley of Trashi 'Yangtse district and the Khoma river valley in Lhuentse district, whereas Dakpa refers to the variety spoken in pockets in the

Tawang (Gong, Drangme) river valley in lower Trashi 'Yangtse district and in several pockets in the Gamri river valley of Trashigang district.

As I described in more detail in Bodt (2012, 2015), in Tawang district of Arunachal Pradesh, the name Dakpa refers specifically to the linguistic variety spoken by the people of the region historically known as *Dakpa Tshonga* 'the five divisions of the Dakpa' (Tib *dags-pa tsho-lṅa*, Bodt 2015: 206–208). Indeed, this area is contiguous with the Dakpa speaking communities in lower Trashi 'Yangtse (Tib *bkraḥ-śis g.yaṅ-rtse*) district in Bhutan, and the people share a common history, language, and culture. The people of the heartland of Tawang district, the *Shar Nyima Tshosum* 'three division of the eastern sun' area (Tib *śar ñi-ma tsho-gsum*, Bodt 2015: 205–206) of Seru, Lhau and Khampa, do not commonly refer to themselves as 'Dakpa', and neither do the people of other 'Dakpa' speaking areas, such as the people of Mokto and Zhang in the south-eastern areas of Tawang district bordering Bhutan and West Kameng district, and the people of the north-eastern area of the district, around Hro and Zhangdak. The name is not commonly used to self-identify by the people of the *Pangchen Dingdruk* 'six bands of Pangchen' area (Tib *spaṅ-chen ldiṅ-drug*, Bodt 2015: 208–209) along the Nyamnyang river in the northwest of the area bordering Bhutan. And even the 'Dakpa' speakers of Trashigang district in Bhutan do not refer to themselves as 'Dakpa' in communication amongst themselves. Instead, with the exception of the people of Pangchen Dingdruk, who preferably refer to themselves as Pangchenpa, all the other 'Dakpa' call themselves 'Monpa' and their language Monket 'the Mon language'. In fact, for many people speaking these linguistic varieties, the name 'Dakpa' has pejorative connotations, as it refers to a geographic and administrative area of Tawang district, and its people and language, that was for long considered marginalised and even 'backward'. The name 'Dakpa' likely expanded in usage from the relatively small 'real' Dakpa population just across the Bhutanese border to include all the speakers of these related varieties of the Tawang-Bhutan-Tibet border area. Perhaps, the early British researchers and explorers, in particular B.H. Hodgson (Hodgson 1853) and R.E. Cooper (Cooper 1933), relied on the Bhutanese *sgar-pa* administrators of eastern Bhutan – speakers of Dzongkha and Tibetan – for whom these people were indeed 'Dakpa', which through Hodgson's 'Tákpa' and Cooper's 'Dakta' was (erroneously) taken over by Shafer as Dwags (Shafer 1954). The Tshangla speakers of this area call all the settled people of the area Brami.

The name 'Dakpa', for either a people or a language, is also unknown from the *Lekpo Tshozhi* 'four divisions of Lekpo' area (Tib *legs-po tsho-bźi*, Bodt 2015: 208–209) across the border in Tibet, and it is not in use among the two geographically separated, post-17th century migrant communities in the Pemakö area, now Metok county of Tibet. Like the people in Tawang district, they consistently refer to themselves as Mönpa ([møn[35].pa[53]], Tibetan *mon-pa*, Chinese 门巴 Ménbā, Lù 1986: 1–2, 2002: 3) and to their language as Mönket ([møn[35].kɛt[53]], Tibetan *mon-skad*). The varieties described by Lù (1986, 2002) include the 'Southern' varieties of 麻玛 *Mámǎ* (Tib *mar-maṅ*) township[130] under the then 勒布 *Lēibù* (i.e. Tib *legs-po*) district in 错那 *Cuònà* (Tib *mtsho-sna*) county, which forms the basis of his 1986 description, and that of 门达旺 *Mén Dáwàng* (i.e. Tawang in Arunachal Pradesh, Tib *rta-dbaṅ*)[131]; and the 'Northern' varieties of 文浪 *Wénlàng* township[132] in 德兴 *Déxìng* (Tib *bde-źiṅ*) district of 墨脱 *Mòtuō* (Tib *me-tog*) county, and that of 邦金 *Bāngxīn* (Tib *spaṅ-źiṅ*) sub-district[133] in 德兴 *Déxìng* district of Mòtuō county (Lù 2002: 33). Lù correctly observed that the varieties of Mámǎ and that of Dáwàng are different, and also that the varieties of Wénlàng and Bāngxīn are different.

Considering the fact that the name Monpa has referred to different people across the Himalayas in different periods of time (cf. Pommaret 1994; Bodt 2012; Huber 2020), the preference of the name Dakpa over the name Monpa for the linguistic sub-group is understandable from an outsider perspective but makes little sense to the majority of the speakers of the varieties that are subsumed under the label, if any sense at all. For

---

[130] Now 麻玛门巴族乡 *Mámǎ Ménbāzú xiāng* (Tib *mar-maṅ mon-pa mi-rigs śaṅ*, Marmang Monpa ethnic township), Lǐ and Cáirang (2016). Note that the Chinese transcriptions of the local names are hopelessly inconsistent across various sources including Lù (1986), Lù (2002) and Lǐ and Cáirang (2016): e.g., 麻玛 *Mámǎ* vs. 麻麻 *Mámá* and 达旺 *Dáwàng* vs. 逮旺 *Dǎiwàng*. I use the transcriptions 麻玛 *Mámǎ* and 达旺 *Dáwàng* here because those most closely represent the local pronunciations.

[131] Lù does not provide details on how and where he obtained those data.

[132] Now 文浪 *Wénlàng* (Tib *wan-laṅ*) village of 德兴 *Déxìng* (Tib *bde-źiṅ*) township (Lǐ and Cáirang 2016). This variety is also spoken in the other villages of this township such as 巴顶孜 *Bādǐngzī* (Tib *spa-steṅ-rtse*), 德果 *Déguǒ* (Tib *sde-sgo* [de.gɔn] 'turnip'), 雀热 *Quèrè* (Tib *ho-ra*), 那栋 *Nàdòng* (Tib *nar-stoṅ*) and 易翁白 *Yìwēngbái* (Tib *yid-ḥoṅ-dpal* [ju.huŋ.pɛk]).

[133] Now 帮辛 *Bāngxīn* (Tib *spaṅ-źiṅ*) township (Lǐ and Cáirang 2016). This variety is also spoken in at least one other village of this township, 根登 *Gēndēng* (Tib *skem-sdeṅ*).

them, whether they speak Dakpa 'proper' or another variety, they all speak Monket and they are all Monpa. But in western Arunachal Pradesh, Monpa is not an exclusive term to refer to speakers of this Monket. Monpa, as an officially recognised Scheduled Tribe, has political rather than ethnolinguistic implications, and at present is used to refer to the Central Bodish Brokpa, the 'East Bodish' 'Dakpa', the Tshangla, the Khispi, and the Duhumbi speakers of western Arunachal alike (Bodt 2014a, 2014b).

In addition, it is important to realise that Dzala is considered as a separate language purely because it is spoken in Bhutan. On the other hand, all the other 'Dakpa' varieties continue to be considered as a single language with 'dialects' because nothing has been written about their internal diversity yet. Considering the wide variation that I observed among these 'Dakpa' varieties, but at the same time the level of understanding that people of each of these varieties, including Dzala, have of the *lingua franca* of the Tshosum area, Dzala could just as well be considered one of those 'dialects', or the other varieties should similarly be promoted to the level of independent 'languages'.

In recognition of the most widely used local names and understandings, I would suggest the following internal phylogeny for the Bodish varieties spoken in the Arunachal-Bhutan-Tibet[134] border area:

Dakpa (the name of the cluster of linguistic varieties of Bodish), consisting of a dialect continuum: *Dzala* (*Dzala 'mat* ~ Dzalakha: upper Trashi 'Yangtse district, Bhutan; also Khomakha in north-eastern Lhüntse district, Bhutan and Wénlàng Ménbā: Medog district, Tibet), *Pangchen* (*Pangchenpa 'mat*: upper Nyamnyang river valley, Zemithang circle, Tawang district, Arunachal Pradesh; also Bāngxīn Ménbā: Medog district, Tibet), *Tibet Monpa* (*Mönpa* ~ Mámă Ménbā: upper Nyamnyang river valley, Tshona district, Tibet), *Dakpa proper* (*Dakpa ket*: lower Nyamnyang river valley and south bank of the Tawang river valley, Dudunghar, Lumla and Bongkhar circles, Tawang district, Arunachal; also lower Trashi 'Yangtse district, Bhutan), *Tawang Monpa* (*Monpa*, *Monket*: Tawang river valley, Mukto, Jang, Tawang, Kitpi and Lhou circles, Tawang district, Arunachal; also Trashigang district, Bhutan).

[134] I am almost tempted to call this the Arunachal-Bhutan-China "ABC" border area, but will refrain from doing, so, for obvious reasons.

§12.3. The origin of the speakers of Wénlàng and Bāngxīn Cuònà Ménbā

The areas where Mámă Ménbā (i.e. the erstwhile Lekpo Tshozhi, now Tibet), Dzala (the Kholong and Khoma river valleys in Bhutan), Pangchen Monpa (the erstwhile Pangchen Dingdruk area in the Nyamnyang river valley of Tawang district), Dakpa proper (i.e. the erstwhile Dakpa Tshonga area of Tawang district) and Tawang Monpa (the major part of Tawang district) are spoken at present are a geographically contiguous area, albeit separated over three nations: Bhutan, India and China. This area forms the heartland of 'Dakpa', and perhaps also the homeland (Bodt 2014a).

The Wénlàng and Bāngxīn varieties of Cuònà Ménbā are spoken in a geographically discontinuous area. The data in this paper also provide additional linguistic evidence for the origin of the speakers of these varieties. The oral history of the villages of Wénlàng / Wanlang, locally called [uŋlaŋ] or [ŋulang], and Bāngxīn / Pangzhing, locally called [paŋtɕʰɛn], indicates that their ancestors came from the upper Kholong river valley in eastern Bhutan and the Pangchen river valley in Tawang, respectively. Hence, we expect Lù's (2002) Wénlàng (DkW) to be close to Dzala (Dz), and Bāngxīn (DkB) to be an intermediate form equidistant to Dzala to its west, Mámă (DkM) to its north, and Dáwàng (DkD) to its east (ignoring Dakpa proper to the south, of which no descriptions exist except the notes in van Driem 2007).

Here, several additional socio-linguistic observations need to be made. Wénlàng and Bāngxīn are not located in geographically adjacent areas but are separated from each other by the Tshangla (墨脱门巴 Mòtuō Ménbā) speech area, excluding the possibility of more recent language contact between Wénlàng and Bāngxīn. Whereas Tshangla has been the main contact language for Wénlàng, Tibetan, in particular varieties of Kham (Tib *khams*) Tibetan such as Powa (Tib *spo-ba*) Tibetan, has been a major contact language for Bāngxīn.

This paper is not intended to provide a thorough comparison of all the Dakpa and Dzala varieties that have hitherto been described. The available morphological and syntactic data on Dzala, Dakpa proper, Pangchenpa and Tawang Monpa are still insufficient, and Lù (1986, 2002) remains the only detailed description of some of the Dakpa-Dzala varieties. However, on basis of the limited sound correspondences and linguistic innovations internal to the Dakpa-Dzala group provided in this paper, Wénlàng is in many respects closer to Dzala than it is to Mámă and Dáwàng. Bāngxīn occupies an intermediate position: In many cases, Wénlàng and Bāngxīn cluster together, and Mámă and Dáwàng cluster

together, but in some cases, Bāngxīn clusters together with Mámă and Dáwàng.

This all implies, that the linguistic variety spoken in the Pangchen valley of Tawang district is linguistically intermediate between the Dzala, the Mámă and the Tawang / Dáwàng varieties. Even without having any description of the Dakpa variety, the evidence from the later migrant settlements in Pemakö indicates that the entire Dakpa-Dzala area forms a single large dialect continuum. This dialect continuum would also include Dakpa 'proper'.

As became clear in the preceding analysis, some of the defining Dakpa-Dzala sound correspondences, such as Tibetan and Other East Bodish vowel *-a* corresponding to Dakpa-Dzala vowel *-e* in almost all rhymes, have more cognate sets that form exceptions, than cognate sets that confirm the correspondence. This indicates the prolonged history of close interaction between Dakpa-Dzala and Tibetan. Only because Dakpa-Dzala became more separated from spoken Central Tibetan in the pockets of the Monyul region where it is still found today, it preserved its unique characteristics. Otherwise, Dakpa-Dzala would likely have become assimilated as one of the spoken Central Tibetan varieties. Variation in phonology, morphology, lexicon, and syntax that we can nowadays observe between and among spoken Bodic varieties like Töke, Kongpo, Dakpo, Lhoka Tibetan, Dränjongke (Sikkimese) and Dzongkha may similarly derive from an old non-Bodic Bodish substrate to these varieties.

§12.4. A possible origin of (Dakpa-)Dzala?

Then, a few notes on a possible connection of the Dzala and Dakpa languages and the divergent Bodish variety of Basum. I visited the Basum lake and its surroundings in 2018 and was able to spend three nights there. In that period, I was able to have some surprisingly frank and candid discussion with the people of the area on a wide range of topics, including history and linguistics. According to the oral history of the local people from the large, northernmost village of Dzala, a large section of their community migrated southwards long before recorded history. Could there be a possible connection between Dzala village, the Basum language, and the Dzala and perhaps Dakpa speakers of Bhutan and Arunachal?

From a linguistic perspective, Qú et al. (1989: 61) first noticed some lexical similarities between Basum and Cuònà Ménbā. Tournadre (2014) classified Basum as an unclassified Bodish language that does not belong

to the Tibetic branch. He noted that Basum has a negator *a-* as opposed to the negator *ma-* or *myi-* in Tibetic languages (Tournadre 2014: 112)[135], as well as some correspondences with other non-Tibetic Bodish languages (like Tamang and Kurtöp), such as not palatalising Proto-Bodish *ti- and *si (Tournadre 2014: 112, 114). Suzuki and Nyima (2016) consider Basum to be a non-Tibetic language. A grammar of Basum has been completed by Wang Sanchuan ('Samten') at the Centre National de la Recherche Scientifique (CNRS) in Paris under the auspices of Guillaume Jacques. This grammar will hopefully provide more material with which we can compare this enigmatic language to Dzala and the other languages of the Dakpa-Dzala and East Bodish group.

§12.5. Reconstruction of grain crops

In this section, I would like to propose a few etymologies for the names of crops that are cultivated in the Himalayan region by focusing on their East Bodish names.

In the concept 'finger millet', we see that Dzala and Kurtöp have a form cognate with Tibetan, with Dzala preserving the Tibetan onset cluster *kʰr-* where Kurtöp has the retroflex onset. The Dakpa varieties, Bumthang and Khengkha, on the other hand, have a form cognate with Tshangla. This clearly indicates that 'finger millet', despite continuing to be the staple grain, especially among the Dakpa-Dzala speakers, is a more recent introduction. According to the National Biodiversity Centre (2008: 44–45), the highest diversity in finger millet landraces can be found in the southern, mostly Nepali-speaking districts of Samtse and Sarpang: Finger millet was, therefore, likely introduced from the subcontinent through the Tshangla area, but the Tibetan form *khre* may originate from Bhutan. Although finger millet *Eleusine coracana* is ultimately of African provenance, the cultigen already makes its appearance in the Indian subcontinent archaeologically in the early second millennium BCE.

(553) 'finger millet' Dz *khre*, Kt *thre*, Tib *khre*, Dzo *khye* ~ DkT *koŋ.pu* (TAB), Kh *kong.pu*, Bt *kong.bu*, Tsh *koŋ.pu* (TAB)

Names for 'foxtail millet' are not commonly attested in the literature. According to the National Biodiversity Centre (2008: 48) the highest diversity in foxtail millet landraces can be found in the mostly Tshangla-

[135] Negator *a-* is more common, and serves, for example, as the standard negator in Tamangic languages of Nepal such as Manange (Hildebrandt 2004: 159).

speaking district of Samdrup Jongkhar in south-eastern Bhutan. Proso millet, called *tɕʰe.ra* (TAB) in Tsh, and foxtail millet may be ancient crops in eastern Bhutan. While the Tshangla and one of the Khengkha names are cognate, the Kurtöp and secondary Khengkha form are cognate at a higher level.

(554) 'foxtail millet' Kt *ran*, Kh *ran* ~ Tsh *jaŋ.ra* (TAB), Kh *yang.re*

There are three distinct roots for 'paddy rice', one probably meaning 'paddy, standing rice' represented in Other East Bodish and Tibetan, one probably meaning 'husked rice grains' represented in Other East Bodish, and a third form reflected in Dakpa-Dzala.

(555) 'paddy, rice' BtU *mras*, Bt *mrat* (vD15), Kt *mra* ~ *mrâ*, Tsh *ba.ra* (TAB), Tib *ḥbras* < *ḫmras, Chi 糲 *lat* < *(mə-)rˁat ~ Kh *i.pa*, BtC *'i.ba*, Kt *'i.pa* 'food, cooked rice' ~ DkM & DkD *dem*^{35}, DkW & DkB *dep*^{35}, Dz *dep*

Both the root forms for 'millet', *ran* ~ *ra* and the forms for 'paddy rice' *rat* ~ *ra* may derive from the same root *rat preceded by distinct prefixes. Whereas 'millet' was *kə-rat which via *kʰrat became *kʰre* in Central Bodish and was then borrowed in Other East Bodish and Dzala, *kə-rat, losing the prefix, became *rat and subsequently *ran* and Tshangla *ra* and *re* (as is also found in Other East Bodish and Central Bodish forms for 'sweet buckwheat'). An *m*-prefix to the same root form for 'millet', i.e. *mə-rat, may have become Tibetan *b-ras* and Tshangla *ba-ra* as well as Other East Bodish *m-rat*.

Whereas the Other East Bodish varieties have unique forms for 'bitter buckwheat', also borrowed in some Tshangla varieties, the Dakpa-Dzala varieties have a loan from Tibetan also reflected in Dzongkha and other Central Bodish varieties. There is no evidence that 'bitter buckwheat' can be reconstructed to a putative 'Proto-East Bodish' form from which both Dakpa-Dzala and Other East Bodish descend.[136]

(556) 'bitter buckwheat' BtU *bras.ma*, BtC *bran.ma* (< *brat.ma*?), Kt *bra.ma* 'Job's tears' (< *brâ.ma*?), Tsh *brai.ma* (TAB) < *bras.ma ~ DkM & DkD *pre*$^{:35}$, DkW & DkB *bre*^{35}*.mo*^{55}, Dz *bre.mo* < DD *bra.mo, Tib *bra-bo*, Dzo *byḥo ~ byow* < PB *bra.bo ~ Tsh *kʰa.la*

[136] This in contrast to the assertation by Hyslop and d'Alpoim-Guedes (2020). Notably, for long, Hyslop maintained the reconstructions *branma 'bitter buckwheat' and *kjabran 'sweet buckwheat' (e.g., Hyslop 2015, 2020). In May 2022, I intimated her of my Proto-Western Kho-Bwa form *brasma 'bitter buckwheat', which is likely an old Tshangla contribution. In Hyslop (2022), she presents the forms *brasma and *kjabras ~ *kjabrasma, however, without providing additional support for the sound correspondences (onset *br- and rhyme *-as) that she bases her reconstruction on.

Like with ‘bitter buckwheat’, the forms for ‘sweet buckwheat’ show a clear distinction between the Dakpa-Dzala and the Other East Bodish forms. The Dakpa-Dzala forms all derive from a putative form *gr^{j}a.bra (or *rg^{j}a.bra) in which *gr^{j}a ~ *rg^{j}a may refer to China (Tib *rgya-nag* ‘black *rgya*’) or India (Tib *rgya-dkar* ‘white *rgya*’), suggesting an origin of sweet buckwheat either to the east or the south.[137] As I have explained in §4.2, the onset *rg^{j}- indicates that these forms are loans from Tibetan. The morpheme *bra in the Dakpa-Dzala form means ‘buckwheat’, cf. Tibetan *bra-bo* ‘bitter buckwheat’.[138] While the vowel change *-a* to *-e* is regular after coronal /r/, the variation between /b/ and /p^{h}/ in the onset cluster indicates these may be later innovations based on a borrowed Tibetan form. The Other East Bodish forms have the same initial morpheme (cf. also in Dzongkha) but the second morpheme derives from *rat as a general form for millets or food grains. The most common Tshangla form, *gun.tsun*, is unrelated, but some varieties of Tshangla use *bre.mo* or *bra.ma* for ‘sweet buckwheat’.

(557) ‘sweet buckwheat’ DkM & DkD *ca$^{\cdot 55}$.pre^{55}*, DkW *tɕa^{55}.bre^{55}* DkB *dʑa^{35}.bre^{35}*, Dz *kya.phre*, Tib *rgya-bra* < PB *rg^{j}a.bra ~ Bt *ca.rai*, Kt *ca.ra* < Dzo *rgya-red ~ rgyas-red* < PEB *rg^{j}a.rat

The Dakpa-Dzala and Other East Bodish evidence below and the National Biodiversity Centre (2008: 61) show there are three distinct roots for ‘wheat’ in Bhutan, one derived from Tibetan *gro*, one derived from Dzongkha *kar*, and one Dakpa-Dzala and Other East Bodish form with unknown etymology. The highest diversity of wheat landraces can be found in Chukha and Bumthang districts, suggesting a western Bhutanese / Dzongkha source for *kar* and a central Bhutanese source for the borrowed Dakpa-Dzala and Other East Bodish forms *go*, in addition to Tibetan *gro*. Whether this represents distinct lexical innovations and subsequent borrowing, or distinct names for distinct wheat varieties is unclear. Notably, some varieties, like Dzala, Kurtöp and Khengkha have

[137] Of these two, India is actually the more likely candidate. See, for example, Dzala *kya.chang* ‘foreign liquor’ (DDC17: 3) of which the Dzongkha translation is *rgya-gar-gyi chang* ‘Indian liquor’, similarly, the syllable *kya* in Dzala *kya.phre* and the syllable *rgya* in Dzongkha *rgya-red* ‘sweet buckwheat’ also likely refer to ‘India’.

[138] A second plausible etymology is that *phre* (and its derived voiced form *bre*) represents an old pronunciation of what is now commonly spelled in Tibetan as *khre*, i.e. ‘millet’. Perhaps by the time this word was committed to writing in Tibetan, it was already realised with a retroflex onset [ʈ^{h}e] and was, quite arbitrarily and without regard for the more archaic pronunciation preserved in Dakpa-Dzala, spelled as *khre* and not as *phre*, which would similarly be realised in Tibetan with a retroflex onset. However, calling ‘sweet buckwheat’ as ‘Indian millet’ seems less likely than calling it as ‘Indian (bitter) buckwheat’.

more than one name for ‘wheat’. Again, Tshangla *boŋ* ‘wheat’ is unrelated.

(558) ‘wheat’ DkM & DkD *ko*^{53}, Bt *go*, Kt *go*, Kh *go* ~ Kh *kar*, Dz *kar*, Bt *ka*, Dz *ka* ~ Tib *gro*, Dzo *bjo*, Kt *dho*, DkW & DkB *dʐo*^{35}

Basically, the only food grain that can be securely reconstructed for both Dakpa-Dzala and Other East Bodish is ‘barley’, which reconstructs to Proto-Bodic *nas. However, this is a pervasive Bodish form found in practically all Bodish and Tibetic varieties. Tshangla, however, has unrelated forms *pʰe.muŋ* and *ɕo.pʰu*.

(559) ‘barley’ Bt *nas*, Kt *nâ* (cf. *nas.phi* ‘barley flour’), Tib *nas*, DkM & DkD *naʔ*^{35}, DkW & DkB *ne*^{35} < PB *nas

Now that we have established that except for the pervasive form *nas ‘barley’, which could also have been a Bodish loan, there are no grain crops that can be reconstructed for putative Proto-East Bodish, we are left with the question: What did the ancestors of the contemporary Other East Bodish and Dakpa-Dzala speakers do for their livelihood?

§12.6. Pastoral origins of the East Bodish speakers?

When we consider domestic livestock species, we only find clear cognate terms in all the Other East Bodish and Dakpa-Dzala varieties for the species ‘ox/bull (~ cattle/cow)’ and ‘horse’. Of these, ‘horse’ has a clear cognate in Tibetan, but the form for ‘ox/bull’ has an additional morpheme *-ri* in all the Other East Bodish and Dakpa-Dzala varieties which is absent in Tibetan – the resulting reconstruction *ba.ri, shared between Other East Bodish and Dakpa-Dzala, reminisces Tibetan *ḥbri* ‘female yak’. With very limited evidence, the forms for ‘male yak’ and ‘female yak’ are also cognate between Other East Bodish, Dakpa-Dzala and Tibetan, although Hyslop attributed these terms to borrowing from Tibetan (see Gwendolyn Hyslop p.c. in Jacques et al. (2021: 106)). The terms for ‘goat’ show a clear split between Other East Bodish on the one hand and Dakpa-Dzala and Tibetan on the other hand, indicating either later loans from Tibetan in Dakpa-Dzala or a longer genetic or contact relationship between Dakpa-Dzala and Tibetan. The Other East Bodish forms may be onomatopoeic innovations. There is a similar distinction in the forms for ‘sheep’, with Other East Bodish again having an independent innovation[139], while Dakpa-Dzala has a cognate with a

[139] Unless we consider a rather far-fetched contraction of the two syllables after elision of the coda and onset nasals (Tibetan *g.yaṅ-mo* > *ja(ŋ).(m)o* > Other East Bodish *jo*).

(rather archaic) Tibetan *g.yaṅ-mo* ~ *g.yaṅ-dkar*[140], rather than with the more common Tibetan *lug*, which appears to be a Tibetan innovation.

(560) 'horse' DkM, DkD, DkW & DkB *te*^{53}, Dz *te*, Tib *rta*, Kt *ta*, Kh *ta* < PB *(r)ta

(561) 'ox, bull' DkM & DkD *pa*$^{:35}$*.ri*^{53} 'yellow cattle (黃牛)', DkB *pa*^{35}*.ri*^{53} 'yellow cattle (黃牛)', Kh *ba.ri* 'ox', Bt *ba.ri* 'bull, ox', Kt *ba.ri*, Dz *ba* 'cattle, cow' < PEB *ba.ri, Tib *ba* < PB *ba

(562) 'female yak' Bt *bre* 'yak', Tib *ḥbri* 'female yak' < PB *(ḥ)bri

(563) 'male yak' Bt *yak*, Dz *'yâ*, Tib *g.yag*, Kt *'ya* (in *'ya.dui* 'yak herder'), DkT *ya* (W02) < PB *(g)jag

(564) 'goat' Kh *le.le*, Bt *'le.'le* < POEB *le.le ~ DkM, DkD, DkW & DkB *ra*, Dz *ra*, Tib *ra*, Bt *ra* (vD15) < PB *ra

(565) 'sheep' Kt *yoo*, Kh *yo*, BtU *yo.ge* < POEB *jo ~ DkM, DkD, DkW & DkB *jeŋ*^{35}, Dz *yeng*, Tib *lug*[141] ~ Tib *g.yaṅ-mo* ~ *g.yaṅ-dkar*, Chi 羊 *yang* < *ɢaŋ, Japhug rGy *qaʑo* < *(qa-)jaŋ < PB *jaŋ

If we accept that the term for 'horse' may be a loan from Tibetan that precedes the Dakpa-Dzala shift *-a* > *-e* following dentals, and that 'male yak' and 'female yak' are indeed Tibetan loans in all varieties, then the only livestock species that could be confidently reconstructed for all Other East Bodish and Dakpa-Dzala varieties is 'ox/bull', with only a partial cognate in Tibetan. As with the food grains, the Other East Bodish varieties have the most aberrant terms, whereas the Dakpa-Dzala varieties have terms more closely related to Tibetan, again indicating a much longer and closer (genetic or contact) relation between Dakpa-Dzala and Tibetan than between either Other East Bodish and Dakpa-Dzala or Other East Bodish and Tibetan.

---

[140] I hypothesise that this is a compound of *g.yaṅ* 'fortune, prosperity' and *mo* 'female' and *dkar* 'white', respectively, and observe the fact that Tibetan *phyugs* means 'cattle' and *phyug* means 'rich'. It may not be coincidental for a society heavily dependent on livestock that two of the major species have names that are at least partial cognate with terms expressing fortune and richness.

[141] DDC18 and KD16 do not confirm Michailovsky and Mazaudon's Bt (Ck, Cm) *ʟjok* (MM92) or Bt (Ck) *ʟjoːʔ* (MM92) and Kt *ʟjoːʔ* (MM92), but DDC18 does have Bt *yok* 'ewe'. The Other East Bodish forms for 'sheep, ewe' are cognate with Tibetan *lug*, with regular correspondence *l- > *j-* and *-uk > *-ok*. The Dakpa-Dzala forms are not cognate with either the Other East Bodish forms or Tibetan *lug*, but with Tibetan *g.yaṅ-mo*. The Other East Bodish forms have cognates in Qiangic languages, such as Ersu and Namuyi *jo*^{55} (Sun 1991), perhaps all these forms are related to Tibetan *g.yaṅ* and the Chinese form as well, but a direct relation between the Other East Bodish and Dakpa-Dzala forms can't be established at the moment.

To understand the terms related to dairy production, it is important to actually understand the process of how to make them. There are two distinct processes practiced among the pastoral communities of Tibet. They both start with milk, which is obtained through milking (hence the cognacy between Tibetan *ḥo ḥjo-ba* as alternative to *ḥo bźo-ba* 'to milk' and Other East Bodish and Dakpa-Dzala 'milk'). Neither of these processes is trivial and requires a considerable level of innovation and knowledge transfer.

The first process adds a starter usually called *skyur* or *skyur-mo* in Tibetan, lit. 'sour', a bacterial culture[142], to raw milk. This is kept near a source of heat and then becomes Tibetan *źo* 'yoghurt'. Pouring this yoghurt in a churning vessel (or milk churn) and churning it with the piston (or plunger, or churn stick) makes *mar* 'butter'. This butter is then taken out and the remaining liquid is Tibetan *dar-ba* 'buttermilk', which is often drunk to accompany a meal. This buttermilk can be boiled and when again some *skyur* is added, it curdles. The solid parts that float on top are scooped out and kept in a thin cloth. The remaining liquid is squeezed out and it is left to drain: This makes a sour cheese, Tibetan *phyur-ra* (arch. Tibetan *phrum*), which can be eaten directly but can also be stored and kept at low temperatures. If this *phyur-ra* is stored in an airtight container, commonly a tightly sown calf's skin for a long time, it becomes a cured cheese called Tibetan *ḥthud* 'fermented cheese' (not to be mistaken for *phyur-rul*, which is simply 'rotten cheese'). The liquid that remains after draining out the sour cheese is called Tibetan *skyur-khu*, *phyur-khu* or *chur-khu* 'whey'. This whey can be drunk but is often given to livestock.

In the second process, raw milk is directly churned in a churning vessel. The solid parts that float on top are removed and the liquid is drained from it to form Tibetan *spri* (or *kha-spri*, *spri-mar*, *spri-ma*, *ḥo-spri*, or *druṅ* or *dkar-gyi druṅ*) 'cream'. The remaining liquid is called Tibetan *ḥo-bśaṅ* (lit. 'emptied milk'). This *ḥo-bśaṅ* can be boiled and when *skyur* is added, it curdles. The solid parts floating on top are scooped out, collected in a thin cloth, the liquid is squeezed out and it is kept to drain completely. The result is called *phyur-sgo* 'curd' and it can be eaten directly as a kind of sweetish (not sour) cheese. However, *phyur-sgo* cannot be kept for long or it will turn rancid; therefore, it is commonly dried in chunks, cubes, or strings known in Tibetan as *phyur-skam* or *phyur-skum* (popularly known as 'Tibetan / Bhutanese chewing

[142] This bacterial culture is stored in a closed container near the hearth. Small amounts are taken out whenever needed, and yoghurt is added to the main stock to maintain a base.

gum') and eaten as a snack. The liquid that remains from this process is again called *skyur-khu* or *chur-khu* 'whey'.

'Milk', 'butter', 'buttermilk', 'cheese' and 'cured cheese' are all cognate for the Other East Bodish and Dakpa-Dzala varieties as well as Tibetan. 'Yoghurt' is unfortunately absent from most sources, although the Dzala form seems related to the Tshangla innovation *nu kʰak.pa* 'set or stiff milk'. Because yoghurt is the precursor for several derived dairy products, its absence from most sources is regrettable. There is also considerable variation in the forms for 'whey', with particularly the Bumthang Ura and Kurtöp onsets being unexpected, which may indicate later loans. Both the forms for 'yoghurt' as innovation and the form for 'whey' as later introduction may be indications that all terms related to these dairy products except 'milk' itself are Tibetan loans: That the Other East Bodish and Dakpa-Dzala varieties all use the archaic Tibetan form for 'cheese' *phrum* (which now means 'gristle, cartilage') indicates the considerable antiquity of these borrowings.

(566) 'breast; milk' Kh *ju*, Bt *ju*, Bt *ju* (vD15), Kt *ju* ~ DkM, DkD, DkW & DkB *jo*^{35}, Dz *yo*, Tib *ḥjo-ba* 'to milk' < PB *tʲo

(567) 'yoghurt' Dz *yo.hag.pa* ~ Tib *źo*

(568) 'butter' Bt *mar*, Tib *mar*, Kh *mar*, Kt *mar*

(569) 'buttermilk' BtU *tar.wa*, BtC *tar.ba*, Dz *tar.wa*, Kh *tar.wa*, Kt *tar.wa*, Tib *dar-ba* 'buttermilk'

(570) 'cheese' DkT *pʰrum* (TAB), Dz *phrom*, Kh *phrum*, Bt *phrum*, Tib *phrum*

(571) 'cured cheese' DkC *thyn*^{53}, Dz *thud*, Bt *thut*, Kt *thut*, Tib *thud* ~ *ḥthud*

(572) 'whey' BtU *thrar.khu*, Kt *shur.khu*, BtC *chur.khu*, Tib *phyur-khu* ~ *chur-khu* ~ *skyur-khu*, Kh *chur.ku*

Even less can be said about the tools and utensils used in this production process: This is probably explained partially through the absence of data, rather than a lack of cognate terms. The Bumthang and Kurtöp forms for 'churn stick' are onomatopoetic, mimicking the sound of churning.

(573) 'churn stick' Dz *yo.je* ~ *tsu.ma* ~ Tib *srubs-ma* ~ *srubs-śiṅ* ~ BtC *shok.shok.met*, Kt *shor.shor.ma*

The Other East Bodish and Dakpa-Dzala forms for 'milk churn' are all cognate with the Tibetan form except for Kurtöp, and also regularly include the form for 'milk', as such, the term *zom* could also refer to any kind of a particular vessel or container.

(574) ‘churn (n)’ Bt *ju.zom*, BtU *zom*, Kh *jew.zom*, Dz *yo.zhe* ~ *yo.zom* ‘churn’, Tib *ḥo-zom* ~ Kt *tong.shi* ‘churner’

But we do find cognate terms in all the Other East Bodish and Dakpa-Dzala varieties for a ‘milking container’ that are clearly distinct from the Tibetan form. However, the compounds indicate that these are based on cognate forms for ‘container’, i.e. any container used for collecting or storing things, and they are not specifically referring to a container used for milking.

(575) ‘milking container’ Dk *ʑe.kaŋ* (TAB), BtC *ju.zhai*, BtU *ju.zhrai*, Kh *lak.jae* ‘milking container’, Dz *yo.zhe* ~ *yo.zom* ‘churn’, Kt *zhê* ~ Tib *zo-ba*

What this small overview of some terms and concepts appears to indicate, is that we do indeed find a considerable number of terms related to milk processing that are cognate in both the Other East Bodish and Dakpa-Dzala languages and Tibetan. But to what extent these are based on shared inheritance, and to what extent they are the result of borrowing, is debatable. In fact, there are indications that many of these terms were indeed introduced from Tibetan, albeit at a relative early stage. To make a more informed decision, the need for better lexica of the Other East Bodish and Dakpa-Dzala languages is apparent, as several crucial terms, in particular, for ‘yoghurt’, which is the precursor for many derived products, is absent. In addition, as so few livestock species can confidently be reconstructed for a putative shared ancestor of Dakpa-Dzala and Other East Bodish (and Tibetan), the question arises where the milk that they may have processed came from.

The terms related to agriculture and to pastoralism are not particularly stable across the contemporary Other East Bodish and Dakpa-Dzala varieties, and instead, we observe the dichotomy between Dakpa-Dzala (and often Tibetan) on the one hand, and Other East Bodish on the other hand. To me, this again lends evidence to the hypothesis that there is no shared common ancestor of the Other East Bodish and Dakpa-Dzala varieties, i.e. no ‘Proto-East Bodish’, beyond the common Proto-Bodic ancestor of all the Other East Bodish, Dakpa-Dzala and Tibetan varieties. Instead, the two ‘branches’ of East Bodish, Dakpa-Dzala and Other East Bodish, are actually distinct branches of Bodic, with independent linguistic and cultural histories, in which Dakpa-Dzala and Tibetan share a longer common ancestor than Other East Bodish and Tibetan. Whereas we could foresee an early adoption of agriculture among the ancestors of the Other East Bodish speakers, probably in the more suitable conditions of the southern Himalayan slopes, the Dakpa-

Dzala speakers maintained a pastoral lifestyle for much longer, adopting agriculture only during their relatively late dispersal into the southern Himalayas. The Tshangla name for the Dakpa-Dzala speakers may also refer to that, as Tshangla *brami* is a Tibetan loan *ḥbra-mi* 'people of the yak hair tents'.

ACKNOWLEDGEMENTS

This paper has benefited from the inputs and suggestions from many people, among whom I wish to specifically thank George van Driem, Nathan Hill, Yeshy Tempa Sotrug, the reviewers of this contribution, Anna Balikci-Denjongpa and the Bulletin of Tibetology editorial team for their valuable inputs, corrections, and suggestions. This research was made possible by the British Academy Postdoctoral Fellowship PF20\100076 "Substrate language influence in the southern Himalayas".

REFERENCES

Aris, Michael. 1979a. *Bhutan, the Early History of a Himalayan Kingdom.* Warminster: Aris & Phillips Ltd.

—— 1979b. Notes on the history of the Mon-Yul corridor. In, Michael Aris and Aung San Suu Kyi (eds.) *Tibetan Studies in honour of Hugh Richardson: Proceedings of the International Seminar of Tibetan Studies*: 9–20. Warminster: Aris & Phillips Ltd.

—— 1980. *Bhutan: The Early History of a Himalayan Kingdom.* Warminster: Aris and Phillips.

Baxter, William H. & Laurent Sagart. 2014. *Old Chinese: a new reconstruction.* New York: Oxford University Press.

Benedict, Paul K. 1939. Semantic differentiation in Indo-Chinese. *Harvard Journal of Asiatic Studies* 4.3–4: 213–29.

Beyer, Stephan V. 1993 [1992]. *The Classical Tibetan language*. Bibliotheca Indo-Buddhica series 116. Delhi: Sri Satguru.

Bialek, Joanna. 2018. The Proto-Tibetan clusters sL- and sR-and the periodisation of Old Tibetan. *Himalayan Linguistics* Vol. 17(2): 1–50.

Bialek, Joanna. 2022. *A Textbook in Classical Tibetan.* London: Taylor and Francis.

Bielmeier, Roland. 2004. Shafer's proto-West Bodish hypothesis and the formation of the Tibetan verb paradigms. In, Anju Saxena (ed.) *Himalayan Languages, Past and Present:* 395–412. Berlin: Mouton de Gruyter.

Bodman, Nicolas C. 1980. Proto-Chinese and Sino-Tibetan: towards establishing the nature of the relationship. In, Frans van Coetsem and Linda Waugh (eds.) *Contributions to historical linguistics: Issues and methods*. Leiden: Brill, 34–199.

Bodt, Timotheus Adrianus. 2012. *The New Lamp Clarifying the History, Peoples, Languages and Traditions of Eastern Bhutan and Eastern Mon.* Wageningen: Monpasang Publications.

—— 2014a. Notes on the settlement of the Gongri river valley of western Arunachal Pradesh. In Anna Balikci Denjongpa and Jenny Bentley (Eds.). *The dragon and the hidden land: social and historical studies on Sikkim and Bhutan.* Proceedings of the Bhutan-Sikkim panel at the 13th Seminar of the International Association for Tibetan Studies, Ulaanbaatar, Mongolia, July 21-27, 2013. Bulletin of Tibetology Vol. 50: 1&2: 153-190.

—— 2014b. Ethnolinguistic Survey of Westernmost Arunachal Pradesh- a Fieldworker's Impressions. *Linguistics of the Tibeto-Burman Area,* 37:2 (2014), 198–239.

—— 2021. The Duhumbi perspective on Proto-Western Kho-Bwa onsets. *Journal of Historical Linguistics* 11:1 (2021): 1–59.

—— 2022. Supplement to "East Bodish revisited: Data". Zenodo. https://doi.org/10.5281/zenodo.6559623

—— forthcoming. *Proto-Western Kho-Bwa: Reconstructing the past of a small indigenous community*. Academia Sinica Language and Linguistics monograph series.

Bodt, Timotheus A. and Ismael Lieberherr. 2015. First notes on the phonology and classification of the Bangru language of India. *Linguistics of the Tibeto-Burman Area*, 38(1): 66–124.

Bosch, André. 2016. *Language contact in Upper Mangdep: a comparative grammar of verbal constructions.* BA thesis. University of Sydney: Department of Linguistics, Faculty of Arts and Social Sciences.

Bradley, David (ed.). 1997. Tibeto-Burman languages and classification. In, *Tibeto-Burman languages of the Himalayas*. Papers in Southeast Asian linguistics No. 14: 1–72. Canberra: Pacific Linguistics.

Campbell, George. 1874. *Specimens of Languages of India, including those of the Aboriginal Tribes of Bengal, the Central Provinces, and the Eastern Frontier*. Calcutta: Bengal Secretariat Press.

Chirkova, Katia. 2017. Evidentials in Pingwu Baima. In, Lauren Gawne and Nathan W. Hill (eds.) *Evidential Systems of Tibetan Languages*: 445–459. Berlin: De Gruyter Mouton.

Coblin, W. South. 1986. *A sinologist's handlist of Sino-Tibetan lexical comparisons*. Nettetal: Steyler Verlag.

Cooper, R.E. 1933. 'Daktas' – People with a tail in the East Bhutanese Himalaya. *Man,* Vol. 33 (Aug. 1933): 125-128.

Coupe, Alexander R. 2007. *A grammar of Mongsen Ao.* Berlin: Mouton de Gruyter.

Dài Qìngxià 戴庆霞 and Huáng Bùfán 黄步凡 (eds.). 1992.《藏缅语族语言词汇》Zàng-Mián yǔzú yǔyán cíhuì [*A Tibeto-Burman Lexicon*]. 北京: 中央民族学院出版社 Běijīng: Zhōngyāng Mínzú Xuéyuàn Chūbǎnshè [Peking: Central University for Nationalities Press].

DDC (Dzongkha Development Commission). 2005. dgoṅs-ḥdus rdzoṅ-kha in-skad śan-sbyar tshig-mdzod [*Gongduk-Dzongkha-English dictionary*]. Thimphu: Dzongkha Development Commission.

—— 2016. rdzoṅ-kha ḥbrog-skad śan-sbyar skad-yig dpe-deb [*Dzongkha-Brokat bilingual language book*]. Thimphu: Dzongkha Development Commission.

—— 2017. rdzoṅ-kha daṅ dza-la-kha iṅ-liś śan-sbyar tshig-gi mdzod [*Dzongkha-Dzalakha-English Lexicon*]. Thimphu: Dzongkha Development Commission.

—— 2018. bum-thaṅ-kha rdzoṅ-kha iṅ-liś śan-sbyar miṅ-mdzod [*Bumthang-Dzongkha-English Lexicon*]. Thimphu: Dzongkha Development Commission.

—— 2018a. tshangs-la-lo – rdzoṅ-kha – iṅ-liś skad gsum śan-sbyar miṅ-mdzod tshaṅs-lhaḥi sgra-dbyaṅs [*Melody of Brahma: Tshangla – Dzongkha – English trilingual lexicon*]. Thimphu: Dzongkha Development Commission.

—— 2018b. rdzoṅ-kha daṅ maṅ-sde-paḥi tshog-tshig dpe-deb [*Dzongkha-Mangdep Phrasebook*]. Thimphu: Dzongkha Development Commission.

—— 2021. ḥbrog-skad rdzoṅ-kha iṅ-liś skad gsum iṅ-liś miṅ-mdzod daṅ tshog-tshig dpe-deb [*Drokey-Dzongkha-English lexicon & phrase book*]. Thimphu: Dzongkha Development Commission.

DeLancey, Scott. 2008. Kurtöp and Tibetan. In, Brigitte Huber, Marianne Volkart & Paul Widmer (eds.) *Chomolangma, Demawend und Kasbek: Festschrift für Roland Bielmeier zu seinem 65. Geburtstag. Band I: Chomolangma.* International Institute for Tibetan and Buddhist Studies GmbH, 29–38.

Dempsey, James (Jakob) Martin. 1995. *A reconsideration of some phonological issues involved in reconstructing Sino-Tibetan numerals*. Unpublished PhD dissertation, Ann Arbor: University of Washington.

Donohue, Mark. 2020. Language and dialect relations in Bumthang. *Himalayan Linguistics* 19(3): 1–45.

Dorji, Jagar. 2011. Hen Kha: A dialect of Mangde Valley in Bhutan. *Journal of Bhutan Studies*, 24 (Summer 2011), 69-86.

Dorji, Tenzin. forthcoming. Case-marking in Khengkha, a language of Central Bhutan. *Himalayan Linguistics*.

Dotson, Brandon. 2009. *The Old Tibetan Annals: An annotated translation of Tibet's first history.* Veroffentlichungen Zur Sozianlanthropologie. Vienna: Austrian Academy of Sciences Press.

van Driem, George. 1992. In Quest of Mahâkirântî. *Contributions to Nepalese Studies: Journal of the Centre of Nepal and Asian Studies of Tribhuvan University*, XIX (2), 241-247.

—— 2001. *Languages of the Himalayas: An Ethnolinguistic Handbook of the Greater Himalayan Region*. (2 vols). Leiden: Brill.

—— 2003. Mahakiranti revisited: Mahakiranti or Newaric? In Tej Ratna Kansakar and Mark Turin (eds.) *Themes in Himalayan Languages and*

Linguistics. Kathmandu: South Asia Institute, Heidelberg and Tribhuvan University: 21-26.

—— 2007a. Endangered Languages of Bhutan and Sikkim: East Bodish Languages. In, Moseley, Christopher (ed.). *Encyclopedia of the World's Endangered Languages.* Routledge. p. 295.

—— 2007b. Dzala and Dakpa form a coherent subgroup within East Bodish, and some related thoughts. *Linguistics of the Himalayas and beyond*: 71–85.

—— 2013. Biactantial agreement in the Gongduk transitive verb in the broader Tibeto-Burman context. In, Tim Thornes, Erik Andvik, Gwendolyn Hyslop and Joana Jansen (eds.) *Functional-Historical Approaches to Explanation. In honor of Scott DeLancey*. Amsterdam: John Benjamins, 69–81.

—— 2015. *Synoptic grammar of the Bumthang language*. Himalayan Linguistics Archive 6 (2015), 1–77.

—— 2019. Review: Lauren Gawne and Nathan Wayne Hill (eds.): Evidential Systems of Tibetan Languages (Trends in Linguistics Studies and Monographs, 302.) 472 pp. Berlin: Walter de Gruyter, 2017. £91. ISBN 978 3 11 046018 6. doi: 10.1017/S0041977X19000181. *Bulletin of the School of Oriental and African Studies*, 82 (1): 190–192.

—— 2022. The sociolinguistic situation of Sikkim's indigenous languages and the origins of the peoples of Sikkim. *Bulletin of Tibetology*, 53 (2): 7–44.

Fellner, Hannes A. and Nathan W. Hill. 2019. The differing status of reconstruction in Trans-Himalayan and Indo-European. *Cahiers de Linguistique Asie Orientale* 48: 159–172.

French, Walter T. 1983. *Northern Naga: A Tibeto-Burman mesolanguage.* New York: City University of New York (Unpublished PhD dissertation).

Gandolfo, Romolo. 2004. Bhutan and Tibet in European Cartography (1597-1800). In Karma Ura & Sonam Kinga (eds.) *The Spider and the Piglet*. Thimphu: Centre for Bhutan Studies, pp. 90–136.

Gerber, Pascal. 2015. *The phylogenetic position of Gongduk. A first inspection.* Bern: University of Bern Master Thesis.

Gerber, Pascal. 2020a. Areal features in Gongduk, Bjokapakha and Black Mountain Mönpa phonology. *Linguistics of the Tibeto-Burman Area* 43:1: 55–86.

Gerber, Pascal. 2020b. Appendix D. Comparison of basic vocabulary to Areal features in Gongduk, Bjokapakha and Black Mountain Mönpa phonology. *Linguistics of the Tibeto-Burman Area* 43:1: 1–13.

Gong, Hwang-cherng 龔煌城. 2000.《從漢藏語的比較看上古漢語的詞頭問題》Cóng hàn zàng yǔ de bǐjiào kàn shànggǔ hànyǔ de cítóu wèntí [Looking at the problem of prefixes in Old Chinese through Sino-Tibetan

Gong, Hwang-cherng 龔煌城. 1995 [2002].《漢藏語研究論文集》Hàn zàng yǔ yán jiū lùnwén jí [*Collected papers on Sino-Tibetan linguistics*]. Taipei: 中央研究院語言學研究所籌備處 Zhōngyāng yán jiù yuàn yǔyán xué

yánjiū suǒ chóubèi chù [Preparatory Office of the Institute of Linguistics, Academia Sinica]: 161–82.

Handel, Zev. 2009. *Old Chinese medials and their Sino-Tibetan origins: A comparative study.* Taipei: Institute of Linguistics, Academia Sinica.

Hedlin, Matthew. 2008. *An investigation of the relationship between the Kyirong, Yòlmo, and standard spoken Tibetan speech varieties.* MA dissertation. Chiang Mai, Thailand: Payap University.

Hildebrandt, Kristine A. 2004. *A grammar and glossary of the Manange language.* Santa Barbara: University of California. Last accessed on 01-06-2023 from https://www.siue.edu/~khildeb/Manange_Grammar.pdf

Hill, Nathan W. 2006. Tibetan vwa 'fox' and the sound change Tibeto-Burman *wa- > Old Tibetan o. *Linguistics of the Tibeto-Burman Area*, (29) 2: 75–90.

—— 2007. Aspirated and Unaspirated Voiceless Consonants in Old Tibetan. 語言暨語言學 Yǔyán jì yǔyán xué [*Languages and Linguistics*] (8) 2: 471–493.

—— 2010a. *A Lexicon of Tibetan Verb Stems as Reported by the Grammatical Tradition.* München: Kommission für Zentral-und Ostasiatische Studien, Bayerische Akademie der Wissenschaften.

—— 2010b. An overview of Old Tibetan synchronic phonology. *Transactions of the Philological Society* 108.2: 110–125.

—— 2014. Tibeto-Burman *dz- > Tibetan z- and Related Proposals. In, Simmons, Richard VanNess and van Auken, Newell Ann, (eds.) *Studies in Chinese and Sino-Tibetan Linguistics: Dialect, Phonology, Transcription and Text:* 167–178. Taipei: Institute of Linguistics, Academia Sinica.

—— 2015. Tibetan *-as > -os. *International Journal of Diachronic Linguistics and Linguistic Reconstruction* 12(6): 165–175.

—— 2019. *The Historical Phonology of Tibetan, Burmese, and Chinese.* Cambridge: Cambridge University Press.

—— 2021. The Envoys of Phywa to Dmu (PT 126). *Revue d'Etudes Tibétaines* 60: 84-143.

Hodgson, Brian Houghton. 1853. Sifán and Hórsók vocabularies, with another special exposition in the wide range of Mongolian affinities and remarks on the lingual and physical characteristics of the family'. *Journal of the Asiatic Society of Bengal* XXII (II): 121–151.

Huber, Toni. 2020. *Source of Life. Vol. I.* Austrian Academy of Sciences Press.

Hyslop, Gwendolyn. 2008. Kurtöp and the classification of the languages of Bhutan. *South Asian Linguistics, Case, Voice, and Language Coexistence. Proceedings from the 42nd Annual Meeting of the Chicago Linguistic Society 42. 2.* Chicago: University of Chicago Press.

—— 2013a. On the Internal Phylogeny of East Bodish languages. In, G. Hyslop, S. Morey and M. Post (eds.) *North East Indian Linguistics* 5, 91–109. New Delhi: Cambridge University Press/Foundation.

—— 2013b. On the non-Tibetan nature of the East Bodish languages of Bhutan. *The Third International Conference on Tibetan Language Volume 1*. New York: Trace Foundation, 219–258.

—— 2014. A Preliminary Reconstruction of East Bodish. In, Nathan Hill and Thomas Owen-Smith (eds.) *Trans-Himalayan Linguistics*, 155–179. Berlin: Mouton de Gruyter.

—— 2015. Emergent insights into Proto-East-Bodish agricultural economy. In, Mark W. Post, Stephen Morey, Scott DeLancey (eds.). *Language and Culture in Northeast India and Beyond – in honor of Robbins Burling. Canberra.* Canberra: Asia-Pacific Linguistics College of Asia and the Pacific, Australian National University: 276–288.

—— 2017. *A grammar of Kurtöp.* Languages of the Greater Himalayan Region 18. Leiden/Boston: Brill.

—— 2022. The Role of Classical Tibetan (Chöke) on the development of Kurtöp, a language of Bhutan. In, Gerald Roche and Gwendolyn Hyslop (eds.). *Bordering Tibetan languages. Making and marking languages in Transnational High Asia.* Amsterdam University Press: 53–82.

Hyslop, Gwendolyn and Karma Tshering. 2009. Preliminary notes on Dakpa (Tawang Monpa). *North East Indian Linguistics* Volume 2: 1–21.

Hyslop, Gwendolyn, Karma Tshering, Kuenga Lhendrup, and Pema Chhophyel. 2016. *Kurtöp/English/Dzongkha Dictionary* (draft).

Hyslop, Gwendolyn and Jade d'Alpoim-Guedes. 2020. Linguistic evidence supports a long antiquity of cultivation of barley and buckwheat over that of millet and rice in Eastern Bhutan. *Vegetation History and Archaeobotany*.

Ikeda, Takumi. 2021a. An Introduction to Khengkha: A Language of Central Bhutan. In, Yasuhiko Nagano and Takumi Ikeda (eds.) *Grammatical Phenomena of Sino-Tibetan Languages 4: Link languages and archetypes in Tibeto-Burman*: 71–119.

—— 2021b. Basic Vocabulary of Khengkha with English-Chinese Index Ver. 6 (2021/02/28). In, Yasuhiko Nagano and Takumi Ikeda (eds.) *Grammatical Phenomena of Sino-Tibetan Languages 4: Link languages and archetypes in Tibeto-Burman*: 121–241.

Jacques, Guillaume. 2004. *Phonologie et morphologie du Japhug (rGyalrong).* PhD dissertation. Paris: Université Paris VII – Denis Diderot.

—— 2013. On pre-Tibetan semi-vowels. *Bulletin of the School of Oriental and African Studies* 76(2): 289–300.

—— 2014. On Coblin's Law. In, Richard VanNess Simmons and Newell Ann Van Auken (eds.) *Studies in Chinese and Sino-Tibetan Linguistics.* Taipei: Institute of Linguistics, Academia Sinica, 155–165.

—— 2021. Book review of Nathan W. Hill. The Historical Phonology of Tibetan, Burmese, and Chinese. Cambridge University Press, 2019. *Journal of Historical Linguistics* 11:1 (2021), pp. 143–158.

Jacques, Guillaume & Thomas Pellard. 2020. Phylogenies based on lexical innovations refute the Rung hypothesis. *Diachronica.* 1–24.

Jacques, Guillaume, Jade d'Alpoim Guedes & Zhang Shuya. 2021. Yak Domestication: A Review of Linguistic, Archaeological, and Genetic Evidence. *Ethnobiology Letters* 12(1): 103–114.

Jäschke, Heinrich A. 1992 [1881]. *Tibetan-English Dictionary, with special reference to the prevailing dialects (to which is added an English-Tibetan vocabulary)*. London.

Joseph, U.V. and Robbins Burling. 2006. *The comparative phonology of the Boro Garo languages.* Mysore: Central Institute of Indian Languages.

Lawa, Yulha. 2021. Linguistic diversity in the Tibetan regions: a set of Language Snapshots. *Language Documentation and Description* 20, 244–312.

Lee, Sung-Woo. 2011. *Eastern Tamang grammar sketch.* MA Thesis. Dallas, Texas: Graduate Institute of Applied Linguistics, Dallas International University.

Li Fang-kuei. 1959. Tibetan Glo-ba-'dring. In, Søren Egerod and Else Glahn (eds.) *Studia Serica Bernhard Karlgren dedicata*. Copenhagen: Ejnar Munksgaard: 55–59.

Liljenberg, Karen. 2006. *Kham dialect notes.* Last accessed on 28-08-2022 from https://www.zangthal.co.uk/files/Kham_dialect_notes.pdf

Lù, Shàozūn 陆绍尊. 1986.《错那门巴语简志》Cuònà Ménbāyǔ Jiǎnzhì [*Brief description of the Cuona Menba language*]. 北京: 民族出版社 出版发行 Běijīng: Mínzú chūbǎn shè [Peking: Nationalities Press].

—— 2002.《门巴语方言研究》*Ménbā yǔ fāngyán yánjiū* [*A study of the Menba dialect*]. 中国少数民族语言方言研究丛书 Zhōngguó shào shù mínzú yǔyán fāngyán yánjiū cóngshū [Chinese Minority Language Dialect Research Series]). 北京: 民族出版社 Běijīng: Mínzú chūbǎn shè [Peking: Nationalities Press].

Lǐ, Wàn Yīng 李万瑛 and Dáwa Cáirang 达哇才让 (eds.). 2016.《西藏自治区行政村名及寺院山川名汉藏对照》Xīzàng zìzhìqū xíngzhèng cūn míng jí sìyuàn shānchuān míng hàn zàng duìzhào [*Names of the administrative villages, rivers and mountains of the Tibet Autonomous Region in Chinese and Tibetan*]. 北京: 民族出版社 Běijīng: Mínzú chūbǎn shè [Peking: Ethnic Nationalities Press].

Mainwaring, George Byres. 1898. *Dictionary of the Lepcha language* (revised and completed by Albert Grünwedel). Berlin: Unger Brothers.

Mazaudon, Martine. 1994. *Problèmes de comparatisme et de reconstruction dans quelques langues de la famille tibéto-birmane*. Thèse d'Etat, Université de la Sorbonne Nouvelle.

Michailovsky, Boyd and Martine Mazaudon. 1994. Preliminary notes on the languages of the Bumthang group. In, Per Kvaerne (ed.) *Tibetan Studies, Proceedings of the 6th seminar of the International Association for Tibetan*

Studies. Fagernes: The institute for comparative research in human culture, pp. 545–557.

National Biodiversity Centre. 2008. *Plant genetic resources of Bhutan. Volume 1. Field crops.* Serbithang, Thimphu, Bhutan: Ministry of Agriculture, National Biodiversity Centre.

Nishi, Yoshio. 1986.《現代チベット語方言の分類》Gendai Chibettogo hōgen no bunrui [A classification of modern Tibetan dialects]. 国立民族学博物館紀要 Kokuritsu Minzoku Gakuhaku Butsukan Kiyō *[Bulletin of the National Museum of Ethnology]* 11 (4): 837–900.

Nishida, Tatsuo. 1989. mTsho-sña, Tsho-ña Mon-pa. In, Kamei Takeshi, Kōno Rokurō, and Chino Eiichi (eds.) *Gengogaku daijiten*, vol. 2: 1017–1027. Sekai gengohen. Tokyo: Sanseidō.

Pommaret, Françoise. 1994. 'Entrance-keepers of a hidden country': Preliminary notes on the Monpa of south-central Bhutan. In Toni Huber (ed.) *Tibet Journal, Special issue: Powerful places and spaces in Tibetan religious culture* 19(3): 46–62.

Pulleyblank, Edwin G. 1965. The transcription of Sanskrit k and kh in Chinese. *Asia Major* (New Series) 11: 199–210.

Qú, Ǎitáng, Gòng Què, Yì Xī and Jié Áng. 瞿霭堂, 共确, 益西, 结昂. 1989.《卫藏方言的新土语—记最近发现的巴松话》Wèi cáng fāngyán de xīn tǔyǔ — Jì zuìjìn fāxiàn de bāsōng huà [A new native tongue of Central Tibetan — The recently discovered Ba Song language]. *Minzu Yuwen* 3: 39–61.

Sagart, Laurent, Guillaume Jacques, Yunfan Lai, Robin J. Ryder, Valentin Thouzeau, Simon J. Greenhill & Johann-Mattis List. 2019. Dated language phylogenies shed light on the ancestry of Sino-Tibetan. *Proceedings of the National Academy of Sciences* 116(21): 10317–10322.

Sagart, Laurent. 2014. 'A note on Tibeto-Burman bone words and Chinese pitchpipes'. In, Richard VanNess Simmons and Newell Ann Van Auken (eds.) *Studies in Chinese and Sino-Tibetan Linguistics: Dialect, Phonology, Transcription and Text.* Taipei: Institute of Linguistics, Academia Sinica, 179–83.

Nishida, Tatsuo. 2009. Mandebigo shoki chōsa hokōku [A preliminary report on Mendebi-Kha]. 千葉 大学 人文 研究 Chiba Daigaku Jinbun Kenkyū [*Chiba University Humanities Research*] 38: 64–74.

——— 2010. The Mangde language in Bhutan. In, Mitsuaki Endō (ed.). *Papers in Old Chinese and Sino-Tibetan.* Tokyo: Linguistic Circle for the Study of Eastern Eurasian Languages: pp. 21–26.

——— [西田文信]. 2019.《マンデビ語諸方言における音韻の年代差》Mandebi-go sho hōgen ni okeru on'in no nendai-sa [Chronological differences of phonemes in Mangdebi dialects]. ブータン学研究 Būtan-gaku kenkyū (2): 33–47 [*Bhutan Studies* 2: 33–47].

Schuessler, Axel. 1998. Another note on Old Tibetan rje-blas. *Linguistics of the Tibeto-Burman Area* Volume 21.2: 3–4.

Shafer, Robert. 1951. Studies in the morphology of Bodic verbs (continued). *Bulletin of the School of Oriental and African Studies*, University of London 13.4: 1017–31.

—— 1954. The linguistic position of Dwags. *Oriens, Zeitschrift der Internationalen Gesellschaft für Orientforschung* 7: 348–356.

—— 1955. Classification of the Sino-Tibetan languages. *Word, Journal of the Linguistic Circle of New York* 11: 94–111.

—— 1966-1974. *Introduction to Sino-Tibetan* (5 vols). Wiesbaden: Harrassowitz.

Sun, Hongkai et al. 1991.《藏缅语语音和词汇》Cáng miǎn yǔ yǔyīn hé cíhuì [*Tibeto-Burman phonology and lexicon*]. 北京: 中国社会科学出版社 Zhōngguó shèhuì kēxué chūbǎn shè [Peking: Chinese Social Sciences Press].

Sun, Jackson Tianshin. 1993. *A historical-comparative study of the Tani (Mirish) branch in Tibeto-Burman.* Ph.D. Dissertation. Berkeley: University of California.

Suzuki, Hiroyuki and Tashi Nyima. 2016. 'Bo skad, a newly recognised non-Tibetic variety spoken in mDzo sgang, TAR: a brief introduction to its sociolinguistic situation, sounds, and vocabulary. Fourth Workshop on Sino-Tibetan Languages of Southwest China (STLS-2016). University of Washington, Seattle, September 8–10, 2016.

Takeuchi, Tsuguhito. 1995. *Old Tibetan contracts from Central Asia.* Tokyo: Daizo Shuppan.

Thomas, F.W. 1948. *Nam, an Ancient Language of the Sino-Tibetan Borderland.* London: Oxford University Press.

Tournadre, Nicolas. 2014. The Tibetic languages and their classification. In, Nathan W. Hill and Thomas Owen-Smith (eds.) *Trans-Himalayan linguistics, historical and descriptive linguistics of the Himalayan area*. Berlin: Mouton de Gruyter, 105–129.

Turin, Mark. 2012. *A grammar of Thangmi. With an Ethnolinguistic Introduction to the Speakers and Their Culture. Volume One.* Ethnography and Grammar. Brill's Tibetan Studies Library 5; Languages of the Greater Himalayan Region 6. Leiden: Brill.

VanBik, Kenneth. 2009. *Proto-Kuki-Chin: A reconstructed ancestor of the Kuki-Chin languages*. (STEDT Monograph Series #8). Berkeley, CA: STEDT.

Waldo, Ives. 2021. Tibetan glossary compilation. Accessed through Rangjung Yeshey Dictionary http://nitartha.pythonanywhere.com/search

Wangchu, Lhama. 2002. *An introduction to Tawang Monpa language.* Itanagar: Directorate of Research, Department of Cultural Affairs, Government of Arunachal Pradesh.

Watters, David E. 2004a. *A dictionary of Kham (Taka dialect). A Tibeto-Burman language of Nepal.* Kirtipur, Kathmandu: Central Department of Linguistics, Tribhuvan University.

Watters, David E. 2004b. *A grammar of Kham.* Cambridge University Press.

White, John Claude. 1909. *Sikhim & Bhutan: Twenty-one Years on the North-east Frontier, 1887-1908.* London: Edward Arnold Publishers Ltd.

Widmer, Manuel. 2014. *A descriptive grammar of Bunan*. PhD dissertation. Bern: University of Bern.

Wu, Mei-Shin, Timotheus A. Bodt, Tiago Tresoldi. 2022. Bayesian phylogenetics illuminate shallower relationships among Trans-Himalayan languages in the Tibet-Arunachal area. *Linguistics of the Tibeto-Burman Area* 45(2): 171–210.

Yangzom, Deki and Marlen Arkesteijn. 1996. *Khengkha Lessonbook.* Thimphu: SNV Bhutan.

Yìxī 益西 [Ye-śes]. 1992.《试论措那门巴话与藏语关系》Shì lùn Cuònà Ménbā huà yǔ Zàng yǔ guānxì [On the relationship between the Cuònà Ménbā dialect and the Tibetan language]. 西藏研究 1992年, 3期: 108–122 *Xīzàng Yánjiū* 1992 nián, 3 qī: 108–122 [*Tibet Studies* 1992, Issue 3: 108–122].

Zhāng, Yísūn (ed.). 1985.《藏漢大辭典》Cáng-hàn dà cídiǎn = Bod-rgya tshig-mdzod chen-mo [*Tibetan-Chinese Dictionary*]. 北京: 民族出版 社出版发行 Běijīng: Mínzú chūbǎn shè [Peking: Nationalities Press].

Zhang, Menghan, Shi Yan,Wuyun Pan & Li Jin. 2019. Phylogenetic evidence for Sino-Tibetan origin in northern China in the Late Neolithic. *Nature* 569. 112–115.