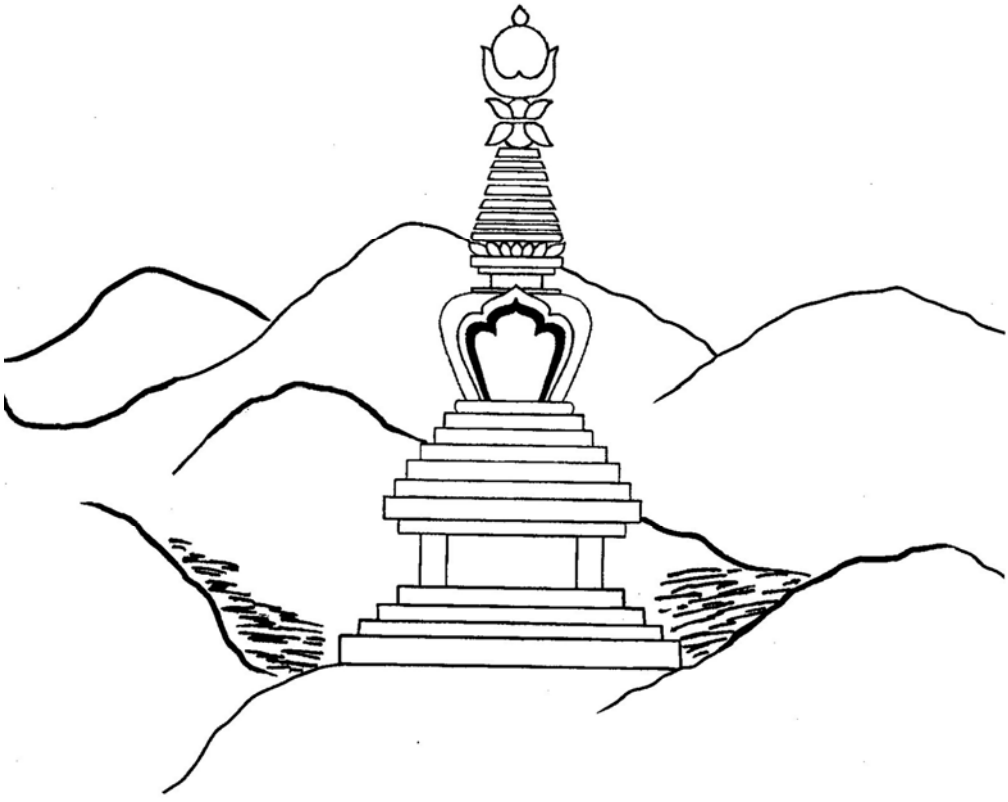
Bulletin of Tibetology



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BULLETIN OF TIBETOLOGY

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BODIC LINGUISTICS

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EDITORIAL

This issue of the *Bulletin of Tibetology* is devoted chiefly to linguistics, but more especially to the field of Tibetology in its quintessence. The contributions are devoted not just to Sikkim and the languages of Sikkim, but together they present the most substantive new collection of studies on Bodish languages and on Bodic as a linguistic subgroup. In detailing the most recent linguistic insights and clarifying the relationship between Tibetan, Drenjongke and Dzongkha, this issue of the *Bulletin* updates our understanding of the Bodish languages. At a higher taxonomic level in the family tree, a new understanding is also presented of Bodic as comprising an important branch within the Trans-Himalayan language family.

The first instalment outlines the sociolinguistic situation of Sikkim's indigenous languages, i.e. Drenjongke, Limbu and Lepcha. Whilst Lepcha constitutes a linguistic subgroup or independent branch in its own right within the Trans-Himalayan language family, Limbu must be discussed in relation to the Kiranti subgroup of which the language either forms part or with which Limbu is closely allied. Similarly, Drenjongke is a Bodish language and its linguistic affinities must be understood within the context of the Bodish subgroup within the larger Bodic branch to which the language belongs.

A sound understanding of modern Tibetan history and recent developments in international Sino-Tibetan relations is indispensable to an appreciation of the language endangerment situation which faces Tibetan and *mutatis mutandis* also the related Bodish languages Drenjongke and Dzongkha. The repercussions of political decisions in recent history have severely impacted the sociolinguistic situation and the prospects of survival of Bodish languages in general. In light of its overwhelming sociolinguistic ramifications, this historical geopolitical elephant in the room can no longer be ignored. Therefore, in this holistic context, the historical sociolinguistic situation of Sikkim's indigenous languages is explained. Subsequently, the phylogenetic positions of Limbu, Lepcha and Drenjongke in the Trans-Himalayan language family are correlated with the phylogeography of Y-chromosomal haplogroups found to be borne my male speakers of the language communities in question in order to shed light on the prehistory and origins of the indigenous peoples of Sikkim.

The second instalment represents a grand opus in historical linguistics by Timotheus Adrianus Bodt. Drenjongke, Dzongkha and Tibetan belong to the Bodish subgroup of the Bodic branch of the Trans-Himalayan language family. Nicolaes Witsen provided the first specimens of written Tibetan published in the West in 1692, and the linguistic study of Tibetan was initiated by Augustinus Antonius Georgius in 1762. Increasingly since the 19th century, much linguistic work has been conducted on Tibetan. Scholars have striven to gain an understanding of the precise phylogenetic position of the language within the family, as well as the exact relationship of Drenjongke, Dzongkha and Tibetan to related languages of the Himalayan region.

Over the course of more than two centuries, progress has been made, but until now no definitive clarity was reached. Now for the first time, in this issue of the *Bulletin of Tibetology*, Tim Bodt's historical linguistic comparison of Bodish and Bodic sound laws sheds a clear light on the position of Drenjongke, Dzongkha, Tibetan and closely related languages within the Trans-Himalayan language family tree, as well as providing a lucid understanding of the relationships of these languages to each other. Bodt redefines the terms Bodish and Bodic so that these old labels are now empirically grounded in historical phonology and linguistic phylogeny, and so presents a new view of the field of Trans-Himalayan linguistics.

A third instalment by Nathan Wayne Hill on the Tibetan passive construction in the Old Tibetan *Rāmāyaṇa* showcases the erudition and linguistic and philological expertise of the author at its best. Hill's prose is always a delight to read. Any reader who happens to have had the pleasure of getting to know the author can imagine hearing the text spoken in Hill's voice whilst relishing his prose. Finally, a lovely book review by Alexander Colin McKay provides some icing on the cake.

George van Driem
Pokharā, 23 April 2023

THE SOCIOLINGUISTIC SITUATION OF SIKKIM'S INDIGENOUS LANGUAGES AND THE ORIGINS OF THE PEOPLES OF SIKKIM

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THE TRANS-HIMALAYAN LANGUAGE FAMILY

One type of evidence about our prehistory comes from languages and linguistic relationships. This type of evidence involves identifiable language families and the branching patterns of language family trees. The indigenous languages of Sikkim all belong to the Trans-Himalayan language family, first identified by Julius von Klaproth (1823) in Paris as the language family comprising Tibetan, Burmese, Chinese, Garo and other 'trans-Gangetic languages', the latter being the Tibeto-Burman languages of Nepal, Sikkim, Bhutan and northeastern India.

In the course of the 19th and 20th centuries, a rival model arose under the name 'Indo-Chinese', later relabelled *sino-tibétain* by Jean Przyluski (1924). Indo-Chinese or 'Sino-Tibetan' encompassed numerous unrelated languages, and so had to be whittled down. This tree model has, moreover, always been defined by a phylogenetic presumption for which no historical linguistic evidence has ever been adduced. The neutral name Trans-Himalayan designates the language family as a whole, whatever model of phylogeny may ultimately emerge from the historical linguistic evidence in due course. The label 'Sino-Tibetan', on the other hand, historically came to denote a specific bifurcate language family tree model that grouped all non-Sinitic languages into a single taxon without supporting historical linguistic evidence (Orlandi 2021).[1]

Today's state of the art in comparative linguistics supports von Klaproth's Trans-Himalayan model,[2] and Sino-Tibetanists, still unable to ad-

[1] In face of the vested interests of certain older scholars in the field and their hold on certain journal referees, Orlandi's moral courage and sense of rectitude despite his vulnerability as a young scholar must be greatly appreciated and respected in contributing such an important piece, for, to use Voltaire's words in reference to the literary career of Bernard le Bouvier de Fontenelle, in the case of this talented scholar it may likewise be observed that: 'Il vit combien il est dangereux d'avoir raison dans des choses où des hommes accrédités ont tort' (1803: 235).

[2] The history of the field is told in van Driem (2014, 2019).

duce historical linguistic evidence for their phylogenetic beliefs, have today sought recourse to lexicostatistics.[3] As previously observed, our conclusion must therefore be: 'There is no such language family as Sino-Tibetan' (van Driem 2011: 30). As a consequence, von Klaproth's original Trans-Himalayan language family model has today prevailed.[4]

As an alternative to any of the empirically unsupported family trees for the language family,[5] I proposed the Fallen Leaves model (van Driem 2001b). The various trees hitherto proposed remain premature until the historical phonology and grammar of the language family have been adequately understood to justify them. In recent years, Nathan Hill has largely single-handedly effectuated a sorely needed 'methodological reorientation of the study of Trans-Himalayan languages towards the paragon of Indo-European historical linguistics' (2019: 257). The work of younger scholars has also begun to contribute towards changing the field (e.g. Gerber & Grollmann 2018, Bodt 2019, 2021, 2023, forthcoming). Fallen Leaves comprises recognised linguistic subgroups, some of which have

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[3] Bayesian models are mathematical tools termed 'phylogenetic' because they generate tree diagrams for any set of data, even if no tree structure obtains between these data. As a tool, Bayesian maths should not be confused with methodology. The methodology employed in the now infamous studies by Zhang *et al.* (2019) and Sagart *et al.* (2019) is lexicostatistics on the basis of precious little lexical material. At a conference on the ancestry of the languages and peoples of China, held at Jìnán University in Canton (Guǎngzhōu) in May 2017, one member of the gang of four who went on to author the lexicostatistical study (Zhang *et al.* 2019) showed me, with what struck me as astonishing candour, how the strategic choice of the limited set of vocabulary items typically used in Bayesian lexicostatistical studies could greatly affect the outcome. In particular, he showed me that a certain selection of lexemes could skew the tree to put Kiranti at the top, since he knew that the result would titillate me, but by the same token another selection could tilt the tree back in another direction and so yield a very different outcome. Elsewhere (van Driem 2021, 2022), I have provided detailed critiques of the new ploy of resorting to lexicostatistics whenever Sino-Tibetanists are confronted with the absence of historical linguistic evidence in support of their tree model.

[4] In sharp contrast to the name 'Trans-Himalayan' for the language family first discerned by Julius von Klaproth, Robbeets' coinage 'Trans-Eurasian' for Altaic essentially designates Poppe's original 1960 phylogenetic model of the Altaic language family, which Robbeets adopted half a century later unchanged, but has ever since striven to rebrand.

[5] I drew one such tree myself (van Driem 1997), based on the archaeological record and linguistic impressionism (cf. van Driem 2005). Though my 1997 tree was supported by the archaeological consensus at the time, this interpretation of the archaeological record now requires revision (cf. van Driem 2021: 152–153). Like my 1997 tree, the similar tripartite trees proposed by Bradley (1997, 2002, 2012) and DeLancey (2021) are essentially based on the same linguistic impressionism as Shafer's tentative divisions, discussed in the following section.

been validated and some of which have not, arranged in a heuristically useful diagram, which can be modified periodically as the historical linguistic study of Trans-Himalayan languages progresses and allows a tree structure to emerge (Figure 1). Each representation of the Fallen Leaves diagram is therefore liable to be updated.

FIGURE 1: The Fallen Leaves model, an agnostic heuristic framework showing the currently recognised Trans-Himalayan linguistic subgroups. As explained in the main text, the label 'Bodish' had been replaced with 'Bodic' (cf. van Driem 2021: 194), whilst West Himalayish and Tamangic are in future likely to vanish from the diagram, being subsumed within Bodic as 'West Bodic' and 'South Bodic' respectively (Bodt 2023).

A LEGACY OF LABELS AND NOMENCLATURE

Nathan Hill's brand of Trans-Himalayan historical linguistics has effectively replaced the methodologically flawed 'Sino-Tibetan' approach and its faulty tree models. Yet the thinking of earlier scholars survives as a legacy which continues to mould today's discourse. Robert Shafer once divided the language family into six divisions, viz. Sinitic, Bodic, Karenic, Burmic, Baric and Daic. In 1938, just months before Paul Benedict joined Alfred Kroeber's 'Sino-Tibetan Philology' project at Berkeley,

Shafer had recognised that Daic was not a member of the language family. Yet his boss Alfred Kroeber and the Parisian sinologist Henri Maspéro compelled him to retain Daic as a sixth division (Shafer 1955: 97–98, van Driem 2001b: 344).[6] As Shafer understood, and as von Klaproth (1823) had recognised long before, Daic represents a distinct language family, today called Kradai. Shafer's Sinitic and Karenic have survived as two out of many Trans-Himalayan subgroups identified in the Fallen Leaves model.

By contrast, Shafer's Bodic, Burmic and Baric each constituted a medley of disparate subgroups (1944, 1953, 1954, 1955, 1966, 1967, 1968, 1974). None of these three exploratory heuristic 'divisions' has yet been borne out by historical linguistic evidence, thus rendering the three terms essentially defunct labels. Yet some of Shafer's working hypotheses persist as labels still in use today, e.g. Bodish, Digarish, Midźuish, West Himalayish. Following the established nomenclatural tradition in Indo-European studies, Shafer proposed 'a logical system of nomenclature', so that 'the ending *-ic* denotes a main division of a family, as Sinitic...', and 'the ending *-ish* indicates a sub-group of one of the main divisions of the family' (1941: 58).

Hill (2019) broke with established nomenclatural tradition, for Hill's Burmish encompasses his Burmic. Hill's Burmish (2019: 51–52) is not equivalent to Shafer's Burmish 'section', but instead roughly equivalent to Shafer's 'Burma Branch' (1955: 103).[7] Within his Burmish group, Hill has repurposed the label 'Burmic' to designate a lower-order subgroup comprising Burmese, Achang and Chintaw (Xiāndǎo).

BODISH AND BODIC

In Shafer's classification, Bodish was one of the subgroups of Bodic. Both coinages are based on the Tibetan word for Tibet, *Bod*. In Shafer's terminology 'Bodish proper' was part of 'Bodish', which in turn was part of 'Bodic'. The way in which Shafer used the terms changed over time, and the use of the terms has continued to morph ever since. For example, today rGyalrongic, Tamangic, Tshangla are regarded as independent subgroups, distinct from 'Bodish'.

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[6] In addition to the occasional autobiographical reference, sometimes buried in a footnote, Shafer (1963) once published a few pages about himself in Louvain.

[7] Shafer's Burmish 'section' comprised Lolo-Burmese and rGyalrongic, whereas his Burmic 'division' encompassed Burmish and a medley of subgroups which Shafer presumed bore close genetic affinity to Burmish, e.g. Nungish, Kachinic, Mru, Luish, Kuki-Chin.

Within Bodish, Shafer distinguished West, Central, South and East Bodish. Shafer had no information about the languages of Bhutan, and his understanding of the languages and the geography of Tawang was deficient. As a consequence, Shafer's 'East Bodish' formed part of his 'Bodish proper', within which he subsumed all languages which he believed to have derived from 'Old Bodish', of which Classical Tibetan is the literary exponent. Shafer's (1954) error with respect to 'East Bodish' was recognised by Michael Aris (1979a, 1979b).

In sequel to Aris' elucidations, Shafer's 'East Bodish' was reinterpreted by van Driem (1998, 2001b), Bielmeier (2004, 2018) and by Hill (2010) as representing a group of related languages that were descendant not from Old Bodish, but from a sister language of Old Bodish. The resultant heuristic model conceived of Shafer's West, Central and South Bodish as constituting 'Bodish proper' or just plain 'Bodish'. The redefined Bodish consisted of Dzongkha, Drenjongke and Tibetan, including all 'Tibetan dialects' or 'Tibetic languages' as far to the west as Baltistan in Pakistan-occupied Kashmir and as far to the northeast as Amdo in Chinese-occupied Tibet.

Long before Shafer, the Bodish languages were traditionally referred to in Tibetology as 'Tibetan dialects' or, in German, as *tibetische Dialekte*. Bielmeier (2004, 2018) followed this well-established convention. Nicolas Tournadre (2014a, 2014b) introduced the term *langues tibétiques* or 'Tibetic languages' in respect of the great linguistic diversity between the often mutually unintelligible languages subsumed under this group. Gawne and Hill (2017) used the term 'Tibetan languages', which as I have pointed out (van Driem 2019), has for historical and political reasons been perceived as problematic by speakers of Dzongkha and by some scholars as well. Most recently, Hill (2019) has sensibly proposed the continued straightforward use of the term 'Bodish' for the languages which derive directly from 'Old Bodish' or Old Tibetan.

Closely related to Bodish or 'Bodish proper' are the languages that have come to be denominated as 'East Bodish', i.e. Mangde, Bumthang, Khengkha, Kurtöp, Dzala, Dakpa, Chali. There are several dialects of Mangde, a language which is consequently often identified by a loconym, such as the dialect of Phobjikha, for example. There are several additional 'East Bodish' or Bodic language communities in the 'Nyamnyang སྣ་ཉམས་རྒྱང་ *mÑam-smyaṅ* river valley,[8] where the Chinese colonial forces infam-

[8] In a map of the area prepared in 1913 by surveyor Henry Treise Morshead and captain Frederick Marshman Bailey, the 'Nyamnyang སྣ་ཉམས་རྒྱང་ *mÑam-smyaṅ* river is anglicised as 'Nyamjang', a spelling retained in some modern maps. Bodt recorded the local pro-

ously made illegal incursions from Chinese-occupied Tibet into Indian territory in 1962.

Whilst the river is named 'Nyamnyang, the valley is locally known as Pangchen སྤང་ཆེན་ *sPaṅ-chen* 'large flatland'. Administratively speaking, Bodt reports that the area used to be called Pangchen Dingdr'û སྤང་ཆེན་སྡིང་དྲུག་ *sPaṅ-chen lDiṅ-drug* 'six divisions of the large flatland' (Bodt 2014: 208),[9] and informally referred to as Chemithang བྱེ་མའི་ཐང་ *Bye-maḥi-thaṅ* 'sand flat' [ʨʰe̱mitʰaŋ], a toponym which now often appears in the misleadingly transmogrified anglicised spelling 'Zemithang'.

This previously unresearched and linguistically complex portion of Tawang and West Kameng in the west of Arunachal Pradesh, which Aris (1979b) called the 'Monyul corridor', was extensively investigated for the first time by Tim Bodt, who published a detailed and highly valuable study on the area (Bodt 2014). In the various settlements of the 'Nyamnyang valley and surrounding hill tracts, a number of distinct languages are spoken. In addition to *Dzala 'mat* 'Dzala language' spoken in Bhutan, *Dakpa ket* 'Dakpa language' is spoken as three distinct lects, viz. Dakpa in Tibet, the Dakpa of Dakpaneng (i.e. the Lumla region and southern Trashiyangtse) and the Dakpa spoken in the Tshosum region of Tawang. Dakpa is usually called *Monket* 'Mon language', and in fact members of the language community do not usually refer to themselves as 'Dakpa', but as 'Monpa'.

The Tibetan term མོན་ *Mon* or Chinese 蠻 *Mán* have historically been used as a cover term to designate various often entirely distinct ethnolinguistic groups whose settlements straddle the Himalayas or lie along the southern flanks of the Himalayas. Despite its pejorative connotation in Tibetan and Chinese, the term is used by the members of many of the language communities thus designated to denote themselves, and this also happens to be the case with the Dakpa language community (van Driem 2001b: 472–473, 914–918). In addition to Dzala and Dakpa, *Pangchenpa 'mat* 'tongue of the people of the large flatland' is spoken in the 'Nyamnyang river valley, with 'Lepo', being spoken across the

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nunciation of the toponym as [ɲammʲaŋ] and [ɲamɲaŋ]. In the Bhutanese Dakpa village of Khinyel, Bodt recorded the pronunciation [ɲamʑaŋ], and it is upon this local Bhutanese Dakpa pronunciation that the spelling in the Morshead and Bailey map was evidently based. The name of the lateral tributary known as the 'Namkha river གནམ་ཁ་ཆུ་ *gNam-kha-chu* today appears in an unsatisfactory Roman spelling on most modern maps. Bodt took me through the 'Nyamnyang valley in October and November 2013.

[9] This language community lies outside of Bhutan. Yet these names are rendered here in Roman Dzongkha because of the proximity to Bhutan and because Roman Dzongkha provides an unambiguous phonological rendering of an actual Bodish pronunciation.

border in Tibet, representing a distinct subvariety. Although this language forms part of the Dzala-Dakpa cluster, *Pangchenpa 'mat* shows incomplete mutual intelligibility with Tawang Dakpa or *Monket*.

Meanwhile, Nathan Hill has stressed that, whereas 'Bodish proper' is defined by numerous unique shared phonological innovations, these 'Tibetan sound changes … do not affect the East Bodish languages' (Hill 2019: 21).[10] To our present state of knowledge, East Bodish therefore does not, in fact, constitute a valid subgroup as defined by shared innovations which unite these languages as a coherent taxon. Rather, 'East Bodish' represents what is left when 'Bodish proper' has split off. Therefore, 'East Bodish' can no longer be taken to designate a linguistic subgroup, but merely labels a set of closely related languages that are not derived directly from Old Tibetan. At this moment, it is therefore defensible to say that there is no such linguistic subgroup as East Bodish. The historical linguistic evidence for this stance is provided and discussed in great detail by Tim Bodt's study of 'East Bodish' or Bodic languages in this issue of the *Bulletin*, in which he presents the most important and well-informed contribution on the topic.

To alleviate the terminological ambiguity, I proposed repurposing Shafer's defunct label 'Bodic' to designate the taxon comprising both Bodish and the medley of languages which has conventionally been called 'East Bodish' (van Driem 2019). In this way, we can refer to all these languages instead simply as Bodic, within which Bodish constitutes a subset defined by well-documented shared innovations. The Bodic languages outside of the Bodish subgroup have until now traditionally been called 'East Bodish', and the label may continue to serve as a term of convenience to designate the Bodic tongues other than the languages of the Bodish subgroup, explicitly without making the implicit claim that East Bodish languages constitute a coherent subgroup within Bodic. Our current state of knowledge is that the East Bodish languages together with 'Bodish proper' represent a polyphyletic set of language subgroups.

In the present issue of the *Bulletin*, Bodt (2023) adduces evidence for a redefined Bodic and discusses whether this redefined Bodic can be validated as a linguistic subgroup. Bodt examines and evaluates the evidence to assess whether or not East Bodish can be validated and established as a linguistic subgroup and comes to an assessment empirically based on historical comparative linguistic evidence. Therefore, for the sake of argument, the fallen leaf formerly labelled 'Bodish' has been relabelled

[10] Jacques (2012) has contributed an internal reconstruction of Tibetan stem alternations.

'Bodic' in the Fallen Leaves diagram. Moreover, the repurposed use of the label 'Bodic', *sensu stricto*, as in this updated Fallen Leaves diagram presented here, does not preclude the future use of the term in a sense closer to Shafer's original conception, i.e. *sensu lato* also encompassing West Himalayish and Tamangic (Shafer 1950, 1951, van Driem 2001b). Elaborate evidence for this hypothetical subgrouping is now presented for the first time by Bodt in this issue of the *Bulletin*.

Like Bodic *sensu stricto*, the infelicitously named 'West Himalayish' may represent a polyphyletic set or, in any event, a set of languages the internal phylogeny of which is not understood (Ramirez 2021). Within Shafer's original hypothetical Bodic branch *sensu lato*, a geographically inspired renaming of constituent subgroups could be undertaken, whereby the unaesthetically named 'West Himalayish', which has traditionally been assumed to include the extinct Zhangzhung language (Shafer 1957, Haarh 1968, Takeuchi & Nishida 2009, Jacques 2009, Martin 2010, 2013, 2016) could be given with the more aesthetic label West Bodic.

Tamangic would remain Tamangic, which might encompass languages such as Kaike and Ghale (cf. van Driem 2011). Alternatively, however, Bodt in this issue of the *Bulletin* proposes the term 'South Bodic' for a Tamangic that has been repositioned phylogenetically within a redefined Bodic *sensu lato* within the Trans-Himalayan language family. Based on the historical comparative linguistic evidence which Bodt has mustered, he then repositions the Dzala-Dakpa cluster, which I identified as a coherent subgroup fifteen years ago (van Driem 2007), as a distinct taxon. In other words, Bodt has effectively dismantled 'East Bodish' and replaced this polyphyletic catchall with a redefined 'East Bodic' alongside a separate Dzala-Dakpa cluster. However, these two taxa have now been arranged within Bodt's redefined Bodic *sensu lato* in three different phylogenetic configurations, reflecting his three hypotheses for which he has adduced and discussed the empirical underpinnings.

SOCIOLINGUISTIC SITUATION OF THE BODISH LANGUAGES

The languages which derive from 'Old Bodish' or 'Old Tibetan' spread from the Yarlûng ཡར་ཀླུངས་ [jɑ̲:lṹ][11] *Yar-kluṅs* valley, whence the Tibetans

[11] The pronunciation of Tibetan toponyms in Central Tibet is provided in Roman Tibetan and also between square brackets in the notation of International Phonetic Association, based on the variety of Central Tibetan spoken in Shìkátsé (Haller & Haller 2007). Roman Tibetan is a phonological transcription which phonemically represents spoken Central Tibetan in Roman script.This system of representing the living spoken Tibetan in Roman script forms the topic of a contribution to an upcoming issue of the *Bulletin*

began expanding in the 7th century AD (van Driem 2001b: 829–846). The tumuli housing the tombs of the early historical Yarlûng kings are situated in the ancient horn province of Yórú གཡོ་རུ་ [jōrū] *g.Yo-ru*, in the district of Chóngcê འཕྱོང་རྩེ་ [tɕʰōŋtɕè] *ḥPhyoṅ-rgyas*, where the tomb of king Sóngtsén Kampó སྲོང་བཙན་སྒམ་པོ་ [sōŋtsē̃ kɑ̰mpō] *Sroṅ-btsan sGam-po* is famously located in the grave field of Murá སྨུ་རུ་ [mɯ̰rū] *Mu-ra* in the Yarlûng valley (Tucci 1950, Richardson 1963). According to Tibetan tradition, the ten historical kings of the Yarlûng dynasty were preceded by a lineage of 32 prehistoric Yarlûng chieftains, and indeed the Tibetan tumulus tradition appears to have begun in the 4th century AD. Mapping of the burial mound sites from the Tibetan imperial period has shown the highest concentration of tumuli in the province of Úrú དབུ་རུ་ [ūrū] *dBu-ru*, especially along the Kyícú སྐྱིད་ཆུ་ [kjītɕū] *Skyid-chu*[12] upstream from the Chokáng ཇོ་ཁང་ [tɕʰo̰kɑ̰̃] *Jo-khaṅ*, where Sóngtsén Kàmpó established his capital (Hazod 2007, 2013, Kriz & Hazod 2020).

Tumuli likewise abound in the horn provinces of Yórú གཡོ་རུ་ [jōrū] *g.Yo-ru* and Yérú གཡས་རུ་ [jērū] *g.Yas-ru*, whereas the distribution of burial mounds is sparser in the horn province of Rulâ རུ་ལག་ [rɯ̰lɑ̰̀] *Ru-lag*. Yet the distribution of ancient tumuli extends into adjacent regions beyond the original four Tibetan 'horn' provinces (Kriz & Hazod 2020). Rulâ རུ་ལག་ *Ru-lag*, the youngest of the Tibetan horn provinces, was incorporated into the Tibetan empire in the 8th century AD (Uray 1960) in the aftermath of the conquest and assimilation of the Zhangzhung kingdom in the 7th century AD (van Driem 2001a). For a sense of geographical perspective, the ancestral Tibetan heartland surrounding the tumuli in the district of Chóngcê འཕྱོང་རྩེ་ [tɕʰōŋtɕè] *ḥPhyoṅ-rgyas* lies just 150 km north of the northeastern Bhutanese town of Trashiyangtse.

The zone of the original Rupshí རུ་བཞི་ *Ru-bźi* [rɯ̰pɕī] 'four horn provinces', comprising Phö̀ བོད་ [pʰɵ̰̀] *Bod* or historical Tibet proper before Tibetan imperial expansion, constitutes an elongated region along the Tsángpó གཙང་པོ་ [tsɑ̃ŋpō] *gTsaṅ-po*. This large sliver of territory, consti-

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of Tibetology. In contrast to the first experimental version of Roman Tibetan, in which the low register tone was marked by a grave accent (van Driem 2021: iv), the updated version of Roman Tibetan leaves vowels in low register tone orthographically unmarked, whilst the high register tone is marked by an acute accent, the high falling tone by a circumflex accent and the low falling tone by a grave accent. Sikkimese toponyms are rendered in Roman Drenjongke (Namgyal & van Driem 2022), and place names in the Chumbi Valley, Bhutan and the 'Nyamnyang river valley are rendered in Roman Dzongkha (Tshering & van Driem 2019).

12 also སྐྱིད་ཆུ་ *sKyi-chu*, and ultimately derived from the clan name སྐྱི་ *Kyi* (Sørensen & Hazod 2007: 17–27).

tuting the original Tibet, lay in its entirety to the south of the Heavenly Lake, Námtsó གནམ་མཚོ་ [nāmtsō] *gNam-mtsho*, and was contiguous with the modern territories of Bhutan and Sikkim. In the west, the original Tibet or Phö̀ བོད་ [pʰœ̀] *Bod* extended from the part of the Tibetan plateau north of the Nepalese district of Rasuvā eastward to the portion of the Tibetan plateau that lies to the north of the district of Upper Siang in the Indian state of Arunachal Pradesh (Hazod 2009).

After the era of conquest and martial expansion, Tibet during the imperial period extended for over 2,600 km from Baltistan in the west to the town of Yá-ngá གཡག་རྔ་ [jāŋā] *g.Yag-rña* on the eastern Tibetan frontier, currently known to the Chinese as Yǎ'ān 雅安 in the redrawn province of Sìchuān, which swallowed up a lot of Tibetan territory in the aftermath of the Chinese invasion and colonial occupation of Tibet in 1950 (van Walt van Praag 1987, van Walt van Praag & Boltjes 2020). From the 7th to the 9th century, martial conquest by Tibetan imperial forces likewise disseminated Tibetan language and culture over 1,350 km to the north and northeast of the Yarlûng valley. The languages which denominated by Shafer as 'South Bodish' appear to comprise a coherent cluster within Bodish and include Drenjongke in Sikkim, *J'umbi kha* in the ཇུམ་ J'umo or Thromó སྒྲོམ་ [ʈʂʰo̲mō] *Gro-mo* valley,[13] Dzongkha in western Bhutan and Cho-ca-nga-ca-kha in the Kurichu valley.[14] The

[13] Siiger reported that the Chumbi valley 'used to be Lepcha territory' (1967, I: 44), and a number of native Lepcha toponyms in the Lepcha ritual texts analysed and translated by Siiger & Rischel (1967, II) are located in or near the Chumbi valley. Today a village located at 27°28′04″ N and 88°54′39″ E goes by the name of རྩུ་འཇི་ *Chu-ḥbi*, which the Chinese colonial occupiers have sinicised as Mandarin *Chūnpéi* 春培. Per Kjeld Sørensen has suggested to me that this toponym, if not a new settlement bearing a *post hoc* adaptation of the anglicised 'Chumbi' [< Dz. ཇུམ་པའི་ *J'umbi*, the adjectival form of ཇུམ་ J'umo, the Dzongkha name for the Chumbi valley, known as ཇྱུམ་ Gy'umo in Drenjongke] (Namgyal & van Driem 2022: 22), could be connected to Lepcha ᰛᰩᰮ *cubi* 'abode of high snows' (cf. Mainwaring 1898: 81, 255–256, Tamsang 1994: 306).

[14] Shafer's 'South Bodish Unit' (1955: 101) actually contained 'Upper and Lower Gromo', and he listed both 'Sikkimese' and 'Dandźongka', but not Dzongkha. It appears that Shafer included a reference to Dzongkha as 'Dru', which, however, he listed under his 'Central Bodish Unit' (1955: 100). I added both Dzongkha and Cho-ca-nga-ca-kha to South Bodish (van Driem 1998, 2001b), and this enumeration is followed by Tournadre (2014b) and Bielmeier *et al*. (2018: 44), although Tournadre incorrectly adds Dur Brokkat and Brokpa to his 'Southern section' (2014b: 122). A discussion of South Bodish languages other than Cho-ca-nga-ca-kha is provided by Namgyal & van Driem (2022). Early linguistic work on the development of Dzongkha as a written language is discussed by Nado (1982), van Driem (1998), Tshering & van Driem (2019).

areas where these languages are spoken lie at a distance of just 200 to 400 km from the historical Tibetan homeland.

An understanding of both the modern geopolitical situation of Tibet and adjacent regions where Bodic languages are spoken is immediately germane to the language endangerment position and future prospects of the modern Bodic languages. The great degree of dialectal diversity between the Bodish languages in Sikkim and Bhutan and across the vast expanse of the Tibetan plateau, stretching from the inland sea known as the Blue Lake or Tshó Ngőnpó མཚོ་སྔོན་པོ་ [ʦʰɔ̃ ŋɶ̃pɔ̄][15] *mTsho sÑon-po* in the northeast to Baltistan in Pakistan-occupied Kashmir in the west, reflects centuries of local language evolution since the Tibetan imperial expansion that began in the 7th century. The Bodish linguistic dispersal took place at the height of Tibetan power, at a time when China had been reduced to a Tibetan tributary state. In 763, when the Táng government once had the temerity to withhold tribute to the Tibetan court, the Tibetan imperial army captured the Chinese capital at Cháng'ān, and for a spell even installed the Chinese brother-in-law of king Thrísóng Tetsén ཁྲི་སྲོང་ལྡེ་བཙན་ [ʈʂʰīsɔ̃ tɛ̰ʦɛ̰̃] *Khri-sroṅ lDe-btsan* (*regnabat* 755–797) as the emperor of China.[16]

In 1244, Tibet came under Mongol suzerainty but remained an independent polity preserving its own legal system. Instead, the Mongol state entered into a *mchod-yon* མཆོད་ཡོན་ 'preceptor-patron' relationship with Tibet, in which the clerical leader of Tibet, who during this period was the *Sa-skya Paṇḍi-ta* ས་སྐྱ་པཎ་ཏི་ཏ་, figured as the *mchod-gnas* མཆོད་གནས་ 'object of veneration', i.e. court chaplain or *purohita*, and the secular head of the Mongol state served as the *yon-bdag* ཡོན་བདག་ 'lay patron supporting the propitiation of the preceptor'. This notion of a preceptor-patron relationship would endure for centuries as a modality of international relations in the Tibetan Buddhist world order. Meanwhile, after suffering over four decades of military onslaughts, China definitively fell to the Mongols in 1279. Tibet threw off Mongol suzerainty in 1354, and China threw off the Mongol yoke in 1368.

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[15] The Oirat Mongol name *Köke Nur* 'blue lake', which widely appears in older Western atlases as 'Koko Nor', and the Chinese name *Qīnghǎi* 青海 'blue sea' are both modelled directly after the Tibetan.

[16] Useful accounts of Tibetan history include Richardson (1962), Stein (1959, 1962), van Driem (2001b), Kapstein (2006), van Schaik (2011). In a related vein, Ardussi (1977), Aris (1979a), van Driem (2001b) contain relevant accounts of Bhutanese history and also cite numerous other valuable sources on Bhutanese history in their bibliographies.

China was ruled by the native Míng dynasty, but in 1644 China came under the rule of the Manchu Qīng dynasty. The Qīng government asserted suzerainty over Tibet in 1720, but Manchu hegemony was in practice a loose relationship between the two states. The Manchu government in Peking readopted the *mchod-yon* 'preceptor-patron' relationship with Tibet, that had previously been cultivated under the Mongols, but now with the successive Dalai Lamas functioning as *mchod-gnas* 'objects of veneration', and the Qīng emperors as their *yon-bdag* 'lay propitiators'. Significantly, China declined to come to the aid of Tibet during the first Nepalese invasion of Tibet (1788–1789). In response to the second Nepalese invasion of Tibet (1791–1792), the Qīng government did acquiesce to coming to Tibet's aid, but during the Nepal-Tibetan war (1855–1856) China again neglected to assist Tibet. Consequently, by provision of the peace treaty signed at Kathmandu in March 1856, Nepal officially replaced China as the protector of Tibet, and Nepal subsequently maintained a resident at Lhasa and enjoyed duty-free trade with Tibet.

The Chinese revolution led to the overthrow of the Manchu dynasty in February 1912 and the establishment of the Republic of China. On the 12th of March 1912, the government of sovereign Tibet renounced all ties with imperial China. The complexity of the jostling for control over territory in the Sino-Tibetan borderlands and the power play which unfolded between the Tibetan and Chinese governments at this time is well illustrated by the study of Jagou (2019). After the Second World War, Chinese communist insurgents exploited their country's weakness to overrun the mainland in 1949, at which time the legitimate government of China fled to Taiwan. A communist dictatorship seized control in Peking, and the new polity which designated itself the People's Republic of China emerged as the world's newest and most aggressive colonial power, invading East Turkestan on the 12th of October 1949 and invading sovereign Tibet on the 6th of October 1950. Increasing Chinese interference and belligerence ultimately forced the Dalai Lama, who served both as the head of state and the spiritual leader of Tibet, to flee in March 1959. Since 1959, the legitimate government of Tibet has been headquartered at Dharamsala in the Indian state of Himachal Pradesh, where the Tibetan government in exile maintains its temporary seat to the present day.

A good understanding of modern Tibetan history and recent developments in Sino-Tibetan relations is indispensable to an accurate portrayal of the language endangerment situation of Tibetan and future prospects for the survival of Drenjongke and Dzongkha. After the Dalai Lama was forced into exile, Chinese troops of the 'People's Liberation Army' in

occupied Tibet slaughtered over 87,000 Tibetans, and over 1.2 million Tibetans perished in the years of brutal oppression which followed. Operating from within occupied Tibet, Chinese colonial forces crossed the Indo-Tibetan frontier and invaded India on the 20th of October 1962. In 1965, the Chinese colonial government redrew the so-called provincial boundaries in order to obliterate the international border between Tibet and China in a bid to erase the Tibetan nation from collective memory. The imperialist venture in Tibet orchestrated by the Chinese Communist Party has also unleashed the demographic weapon which McGranahan (2019) calls 'Chinese settler colonialism'.

For seven months, starting from the 2nd of March 1969, the People's Republic of China waged war against the Soviet Union along the border between Chinese-occupied Manchuria and the Soviet Far East. On the 19th of January 1974, China invaded the Paracel Islands, which had for centuries formed part of Vietnamese fishing waters, and on the Southeast Asian mainland the People's Republic of China launched a war against Vietnam on the 17th of February 1979. On the 14th of March 1988, China again assaulted Vietnam, invading the South Johnson Reef. In 2016, China invaded outlying archipelagoes of the Philippines and commenced its illegal occupation of the Spratlys and Scarborough Shoal in violation of international law.

In addition to numerous other such belligerent territorial encroachments by China against neighbouring countries, a few of which are discussed elsewhere (van Driem 2021), within the Chinese-occupied territories the Chinese colonial government has pursued the eradication of Tibetan language and culture in Tibet, Mongolian language and culture in Inner Mongolia and Cantonese language and culture in Hong Kong.[17]

[17] Beginning in 2015 with the kidnapping of the book publisher Guì Mǐnhǎi 桂敏海, a Swedish citizen of Chinese extraction, Peking began systematically to violate all the provisions of the Joint Declaration of 19 December 1984 signed by the United Kingdom and the People's Republic of China. In order to obfuscate their extraterritorial kidnapping on Thai soil and incarceration of a Swedish national, the Chinese police played with the name of the victim, changing 桂敏海 Guì Mǐnhǎi to 桂民海 Guì Mínhǎi, and then contesting the identity of the kidnap victim. The complete breach of trust by the Chinese Communist Party with regard to the Joint Declaration culminated in the ruthless imposition of totalitarian rule over Hong Kong in 2019 and the brutal oppression of the people of Hong Kong, including imprisoning opposition candidates and protesters and the incidental practice of execution by organ procurement in breach of the dead donor rule (Robertson & Lavee 2022, Davies 2022). On the language front, Mandarin has been imposed upon the people of Hong Kong, and Choi Yuk-lin, Secretary of Edu-

Available documentation attests to the planned eradication not only of Uighur culture and language in Chinese-occupied East Turkestan, but even to the gradual government-orchestrated extermination of Uighur people by the Chinese Communist Party dictatorship in Peking in concentration camps the likes of which have not been seen since the days that the German government was led by the National Socialist German Workers' Party (Chin 2021, Pompeo 2021). Whilst seeking systematically to erase the language and cultures of the native populations in its colonies, China also exploits the native populace and extracts lithium, rare earths and mineral resources from occupied Tibet, East Turkestan and Inner Mongolia.

The aim of Chinese Communist Party policies is to expunge Tibetan language and culture from Chinese-occupied Tibet, destroying Tibetan architecture, libraries and ancient writings, institutions and enslaving and humiliating the people. In 1995, the Chinese Communist Party kidnapped the 6-year-old boy who had been recognised as the 11th incarnation of the Paṇ-chen Lama, causing this important figure in Tibetan Buddhism to join the ranks of the Tibetans who continue to vanish without a trace as *desaparecidos* by the hand of the Chinese colonial government. In their Tibetan Political Prisoner Database (TPPD), the Tibetan government in exile has been able to document over one hundred writers, songwriters and artists who have been incarcerated surreptitiously as political prisoners by the Chinese colonial forces. At the time of writing, beginning from the 29th of April 1998, 159 Tibetans in Chinese-occupied Tibet and 10 Tibetans living in exile have individually committed suicide by self-immolation in protest against the brutal oppression of the Chinese occupying forces. Most self-immolations have been committed in eastern Tibet outside of the so-called 'Tibetan Autonomous Region' created by the Chinese colonial administration (ICT 2022). In 2007, the ostensibly secular Chinese Communist Party presumed to legislate 'Management Measures for the Reincarnation of Living Buddhas in Tibetan Buddhism'. Today, the nation of Tibet ranks as the least free country or territory in the world, sharing the spot with South Sudan and Syria, ranking below even China and North Korea (Repucci & Slipowitz 2022).[18]

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cation in Hong Kong, presaged in July 2022 that Cantonese must die out as a language of education, to be replaced by Mandarin.

[18] In the context of the moribund Tibetan culture and a Tibetan language in the throes of death resulting from the sustained colonial onslaught of ruthless Chinese occupiers, Warner (2022) describes Tibetan clothing fashion and trends in Tibetan music today as ultimately futile displacement activities in response to what he calls 'the end of Tibet'.

In sequel to years of measures taken by the Chinese colonial government to discourage the use of the Tibetan language in occupied Tibet, in March 2022 apps in Tibetan language were blocked on phones and handheld devices. At the same time, the Chinese colonial government began kidnapping children between four and six years of age from their parents, and today over one million kidnapped Tibetan children are being held in mandatory boarding pre-schools, where they are made not to speak Tibetan, taught Mandarin and indoctrinated in the belief system of the Chinese Communist Party (Tsomo *et al*. 2022, Campbell 2023, Feng 2023, Office of the High Commissioner for Human Rights 2023). In all government schools at the township and village level, Mandarin, the language of the colonisers, is used as the sole medium of instruction, whilst Tibetan, the native language of the country, is offered only as a subject. Since Mary Robinson's visit in 1998, China has blocked the United Nations High Commissioner for Human Rights from visiting Tibet in order to conceal the gorier details of the gross violations against the human rights of the Tibetan people perpetrated systematically by the Chinese colonial government.

American corporate concerns likewise play a highly destructive role in abetting the illegal occupation of Tibet and obliteration of Bodish language and culture. Looking north from any high point in Dolakhā district in Nepal, Melungtse ཨེ་སྨད་རྩེ *Me-luṅ-rtse* stands at 7181 metres in neighbouring Tibet and can be seen to tower above all other summits of the Rolwaling Himal. The second highest peak Gaurī Śaṅkar, sacred to the goddess Pārvatī and the god Śiva, stands in Dolakhā district at 7134 metres. Between the two peaks, the name of the river valley, Melungchu ཨེ་སྨད་ཆུ་ *Me-luṅ-chu*, preserves the same native toponym. Melung मेलुङ *Meluṅ* is the village council area, known previously as a village *pañcāyat*, on the Nepali side of the border, and the contiguous area on the Tibetan side is likewise named Melung ཨེ་སྨད་ *Me-luṅ*. It is unclear whether the place name is originally a native Tamang toponym or has some now lost etymology in the local variety of Tibetan, but the genuine place name is retained in both these two languages and is also used in Nepali. By contrast, the supposed Mandarin name which Wikipedia and Google Maps promote instead of the genuine mountain name Melungtse ཨེ་སྨད་རྩེ *Me-luṅ-rtse* represents a toponymical fiction that has been newly concocted by the Chinese occupiers. Yet this 7181 metres tall example is but one small case in point.

In terms of surface area, Tibet is the tenth largest country in the world. Yet Google, an American multinational technology company, toponymi-

cally obliterates Tibet from the face of the earth. Google Maps supports the Chinese Communist Party's drive to eradicate Tibetan language and obliterate Tibetan culture by replacing native Tibetan place names with fake Mandarin toponyms dictated by the Chinese colonial administration. In this way, Google not only effaces the entire country of Tibet from the map of Asia but furthermore aids the Chinese occupying forces in Tibet in the eradication of Tibetan cultural identity through the artificial Pīnyīnisation of Tibetan place names at variance with the linguistic facts of Tibetan phonology and in violation of long-standing Tibetological conventions. The entire exercise serves to mask the remaining Tibetan place names that Google and the Chinese colonial administration have not yet managed to expunge completely.

Outside of Chinese-occupied Tibet, the sociolinguistic situation of Bodish languages differs greatly from the dismal reality in Chinese-held territories. Parts of historical Tibet are located in India and Nepal. In the western Indian Himalayas, three distinct phonologically extremely conservative Bodish dialects are spoken in *sBal-ti-yul* སྦལ་ཏི་ཡུལ་, which since the 1840s has been known as Baltistan. This portion of historical Tibet, which currently lies in Pakistan-occupied Jammu and Kashmir, comprises the districts གངས་ཆེ་ *Gaṅs-che*, རོང་མདོ་ *Roṅ-mdo*, མཁར་མང་ *mKhar-maṅ*, སྐར་མདོ་ *sKar-mdo* and ཤིས་གར་ *Śis-gar*,[19] where over 90% of the population are of Tibetan ethnicity. The three Bodic dialects are collectively referred to as Balti སྦལ་ཏི་ *sBal-ti.* The Balti language is used as a medium of instruction in roughly half of the schools in Baltistan, according to Muhammad Raza Ghalib, particularly in the more rural areas where Balti is used only because the teachers are weak in their command of Urdu and English. Balti language itself is not taught as a subject in the schools in Baltistan, and the 'Balti' spoken by teachers in the classroom is described by Raza Ghalib as a 'mixture of Urdu, Persian and English'. The Tibetan script or ཡི་གེ་ *yi-ge* is not taught in any of the schools in Baltistan, but two native Balti scholars organised free classes in Tibetan script during the winter months of 2018 and 2019. The Baltistan Student Federation སྦལ་ཏི་ཡུལ་ལི་སློབ་སྦྱོག་ཀུན་གྱི་མཉམ་འབྲེལ་ *Bal-ti-yul-li Slob-phrug-kun-gyi mÑam-ḥbrel*, which describes itself as 'a socio-educational organisation struggling [to] keep interest of educational, political and constitutional rights of Gilgit', conducts no organised activities to promote the Balti language or the Tibetan script.

[19] The original Balti orthography of Shigar remains uncertain at this time, with several vying orthographies having been suggested. Raza Ghalib reports that the local toponym is a subject of ongoing investigation.

Whereas Islam reached Sindh in the 8th century, Baltistan was converted to Islam only in the 14th century (Iqbal 2018). The nearby region of Nūristān, formerly Kāfiristān, in neighbouring Afghanistan was only forcibly converted to Islam from their ancient native religious tradition in 1895. Pakistan, which was established in 1947, has occupied Baltistan and some adjacent parts of Jammu and Kashmir since 1948. The constitution of Pakistan declares Islam to be the state religion, and, although the document guarantees freedom of religion 'subject to law, public order and morality', mob lynchings of anyone perceived to have offended Islamic sensibilities are common, and people accused of alleged blasphemy are routinely officially executed or mobbed and murdered. Religious oppression and the violent persecution of religious minorities by Islamists are rampant (Office of International Religious Freedom 2022).

Balti advocates of the use of the native Tibetan script in Baltistan are therefore understandably careful to stress that 'there is no link between religion and script' (Raza Ghalib 2015), and in the Balti context today this statement appears to ring true. Rather, the use of the Tibetan script is tied historically with the mother tongue of the people and so experienced by many in Baltistan as a characteristic attribute of their ethnic identity, even though a mastery of the script is not yet common.

Inside India, Nepal, Sikkim and Bhutan, speakers of Bodish language enjoy linguistic rights and basic human freedom. The particulars of the sociolinguistic situation vary from place to place, but many commonalities can be observed. In most schools, the main medium of instruction is usually not a Bodic language, but instead Nepali, Hindi or English. In government schools in Sikkim and Bhutan, and also in private schools in Ladakh and Nepal, Classical Tibetan and the local Bodish language may be taught as subjects, whether this language be Dzongkha, Drenjongke or Ladakhi. Any restrictions tend to be of a socio-economic nature. In order to enhance career prospects, social standing and economic opportunity, of their children, parents and pupils tend to choose English in Bhutan, Nepali, Hindi and English in Sikkim, Nepali and English in Nepal, and Urdu and English in Ladakh.

In Ladakh, schools teach in Ladakhi medium until 5th grade, after which there is a transition to Urdu and English as the medium of instruction, but Ladakhi or *Bhoṭī* may continue to be chosen as an elective subject in higher years (Komissaruk 2021). The term *Bhoṭī* is historically just the Hindi word for Tibetan, *Bhoṭ* merely being the Sanskrit rendering of Phö̀ བོད་ [pʰɶ̀] *Bod* 'Tibet'. Likewise, the Nepali terms *Bhoṭe, Bhoṭiyā* and *Bhuṭiyā* have historically been used to denote the tongue or the mem-

bers of any Tibetan language community, whichever Bodish tongue they happen to speak. The Tibetic lects or *Bhoṭī* languages stretching through the Himalayas from Baltistan to Bhutan and beyond represent distinct tongues with only a limited degree of mutual intelligibility between them. Consequently, the Hindi term *Bhoṭī* as a language designation suffers from all the same problems as the English term 'Tibetan', usually necessitating the use of apt local names such as Ladakhi, Drenjongke, Dzongkha and so forth for the particular language in question. In practice, the language taught as an elective subject in Ladakh is often Chöke ཆོས་སྐད་ *Chos-skad* 'liturgical language', i.e. Classical Tibetan, both because of the importance of the vast body of literature written in Classical Tibetan and because of the dearth of learning materials in Ladakhi. Yet great progress has been made in the development of Ladakhi pedagogical materials thanks to the efforts of the Students' Educational and Cultural Movement of Ladakh (SECMOL) since its establishment in 1988.

In Nepal, Durbar High School was established by Jaṅg Bahādur Rāṇā in 1853 as a school for the elite in Kathmandu. In 1951, the government school system was established by His Majesty's Government of Nepal and expanded on a national scale from 1971. Nepali has always served as the medium of instruction, and English is taught in schools as a mandatory subject. Like Japan, Thailand, Bhutan and Afghanistan, Nepal was never colonised by a foreign power, and consequently, except for in elite and private schools, the level of English instruction has historically not been very high. Indeed, English has not until recently begun to become as important in Nepal as it is, for example, in India. Only in recent years has the popularity of English amongst the younger generation in Nepal become so widespread as to begin to pose a threat, with English actually having replaced Nepali as the medium of instruction in some private schools.

After the abolition of the *pañcāyat* system and the introduction of a multi-party system in April 1990 by His Majesty King Virendra, language rights for all became enshrined in law. In practice, instruction in native mother tongues is limited to private schools and impeded by either a lack or a scarcity of suitable learning materials and a low economic incentive to finance mother tongue education by native language communities. By contrast, Chöke ཆོས་སྐད་ *Chos-skad* 'liturgical language' has always been available as a language of instruction for centuries in Buddhist monasteries throughout Nepal. Today in parts of Nepal where Bodish languages are natively spoken, such as Humla, Mugu, Mustang and Tsum, instructions in Tibetan is in private schools, which sometimes take the form of

boarding schools outside of the native language area, such as the Great Compassion Boarding School and Himalayan Buddhist Academy in Pokharā, where almost all of the youth of Mustang goes to school.

In Sikkim, every government school and Eklavya Model Residential School (EMRS) offers Drenjongke or 'Bhuṭiyā language' as an elective. Officially and also often in practice, the medium of instruction is English in schools. However, most teachers teach in Nepali, which also happens to be one of the official languages of the state and serves *de facto* as the main language of the state since the Kingdom of Sikkim was annexed by India in 1975. Classes in Drenjongke, Lepcha and Limbu are offered as elective subjects in school. The Nepali immigration set into motion by the British in the 19th century led to the descendants of migrants from Nepal outnumbering the native peoples of Sikkim. As a consequence, in addition to Drenjongke, Lepcha and Limbu, school courses are today additionally offered in nine other Tibeto-Burman languages which the migrant ancestors of some young Sikkimese brought with them from Nepal.

FIGURE 2: The distribution of language in Bhutan: The East Bodish language in Bhutan are Mangde, Bumthang, Khengkha, Kurtöp, Dzala, Dakpa, Chali, and East Bodish furthermore includes the languages of Tawang and the 'Nyamnyang valley that have been researched by Tim Bodt and are discussed above.

The three native Sikkimese languages, Drenjongke, Lepcha and Limbu, were introduced in 2000 as major subjects in Bachelor's programmes in Sikkim under the aegis of North Bengal University, each deemed to represent a 'major Indian language'. With the establishment of Sikkim University in 2007, the language programmes were offered as three-year programmes followed by an honours course. Since 2021, the three native Sikkimese languages have been offered up to the Master's level, and in principle Drenjongke, Lepcha and Limbu are available as Ph.D. topics.

Bhutan, like Nepal, was never colonised by a foreign power. Nonetheless, English has by choice of the Royal Government of Bhutan been accorded a paramount role in formal education as the medium of instruction throughout the kingdom. Dzongkha is a mandatory subject, but only in the traditional monastic schools and in Simtokha Rigzhung School, established in Thimphu in 1961, is Dzongkha used as the principal medium of instruction, with English as a mandatory subject. None of the other languages of Bhutan are taught in formal education, but many Bhutanese acquire a rudimentary command of Tshangla, and all Bhutanese tend to have at least some command of Dzongkha, the national language of the kingdom.

Tibetan under the Hindi name *Bhoṭī* is taught in schools in parts of Arunachal Pradesh inhabited by Monpa language communities. Teachers are trained at the Central Institute of Himalayan Culture Studies in West Kameng. These *Bhoṭī* textbooks are based directly on the Tibetan textbooks developed by the Central Tibetan Administration for use in the Tibetan Children's Village (TCV) schools all over India and Nepal. Officials and administrators have only gradually begun to cotton on to the fact that teaching Tibetan, under whatever name, to speakers of Monpa does not constitute mother tongue education any more than would the teaching of the Bengali language to speakers of Konkani. Similarly, Classical Tibetan, which serves as a language of liturgy amongst the Monpa too, and the 'standard' variety of spoken modern Central Tibetan chosen by the legitimate government of Tibet in exile at Dharamsala are likewise two distinct languages. Intentions at all levels are good, but more linguistic information ought to be communicated to the relevant decision makers to obviate simplified understandings of rather complex linguistic realities.

In summary, Bodish languages are less under threat on the southern flank of the Himalayas than on the Tibetan plateau, where a hostile occupying power seeks to stamp out Tibetan culture and ethnic identity and so too even drive the Tibetan language into extinction. Along the south-

ern flank of the Himalayan chain, however, global and local socio-economic factors cause members of the younger generation to seek fluency in English and also to prioritise major regional languages, such as Nepali and Urdu, above their native Bodish tongue. Ironically, a major hurdle for speakers of all Bodish languages is literacy, precisely because of the richness and cultural dominance of the Classical Tibetan literary tradition. The orthography is antiquated and reflects an earlier stage of Bodish, whereas all modern Bodish languages, both on the Tibetan plateau and along the southern flank of the Himalayas, have undergone centuries of independent phonological development and grammatical evolution, each becoming a new language of its own.

Faced with the inordinate difficulty of learning the archaic spelling, voices of the younger generation and within the governments of Bhutan and Sikkim were raised in support of orthographic form. The first wave of orthographic reform in the 1970s in both Sikkim and Bhutan was haphazard in nature, rather than systematic and phonologically based. These efforts consequently led to numerous novel *ad hoc* spellings, creating new inconsistencies, alongside the retention of archaic spellings for most of the vocabulary. The result therefore merely exacerbated the spelling problem from the pedagogical point of view in both Bhutan and Sikkim. At the behest of the Royal Government of Bhutan, both Roman Dzongkha and Phonological Dzongkha were developed and introduced (van Driem 1991, 1992, 1994, 1998, Tshering & van Driem 2019), and under the auspices and sponsorship of the government of Sikkim both Roman Drenjongke and Phonological Drenjongke were developed (Namgyal & van Driem 2022). In Thimphu, Ratru Drukpa has organised workshops to train people in the use of Roman Dzongkha and Phonological Dzongkha, but time will tell whether or not these easy-to-learn and consistent spelling systems become widely adopted in future.[20]

LOCATING THE BODIC, LEPCHA AND LIMBU HOMELANDS

The homelands of the Bodic languages, Lepcha and Limbu present linguistic questions which have not just a spatial but also a temporal dimension. Bodic, as defined here, comprises the languages of the Bodish

[20] At the 1st Tibetan Language Linguistic Forum, organised at Nánkāi University in Tiānjīn in August 2016, young Tibetans from various dialect areas of Tibet shared with me their curiosity about Roman Dzongkha and Phonological Dzongkha because they to were daunted by the difficulty of learning the spelling of the written language. However, each Bodish language or Tibetic lect may require its own regional orthography, just as Dutch, German and Bernese each have their own spelling systems.

subgroup and the languages traditionally subsumed under the label East Bodish, which are likely to form a polyphyletic set or, at least, a set of languages the internal phylogeny of which has not yet been understood. In the opening paragraphs of the preceding section, we situated the geographical locus of Old Bodish in space and time in the Yarlûng valley some time before the 7th century AD, perhaps as early as the beginning of the Christian era or before.[21] As already noted, this historical Bodish linguistic homeland lies just 150 km north of the northeastern Bhutanese town of Trashiyangtse. The next relevant set of information is the geographical distribution of modern East Bodish language communities, as illustrated in the map in Figure 2.

The East Bodish languages in Bhutan are Mangde, Khengkha, Bumthang, Kurtöp, Dzala, Dakpa and Chali. Also subsumed under the label East Bodish are the languages of Tawang and the 'Nyamnyang valley that have been researched by Tim Bodt and that have been discussed above. Bodic, as defined here, comprises both Bodish and the other Bodic languages, designated by the cover term 'East Bodish', and, given the geographical distribution of the Bodic languages in time and space, the most parsimonious hypothesis for their point of origin is that the Bodic linguistic homeland must have lain somewhere in the region between the Yarlûng, Kurichu, Mangde and Tawang river valleys.

The next consideration, however, is the presence of other native language communities in Bhutan, such as the Lhokpu in southwestern Bhutan, the Black Mountain Mönpa in the Black Mountains, the Gongduk in south-central Bhutan and the Tshangla in eastern Bhutan. The range of the Lhokpu formerly extended further north in western Bhutan, and the range of the Black Mountain Mönpa is likewise known to have been greater than it is today. The same applies to the Gongduk, who explicitly identify themselves as the aboriginal གདུན་ *gDun̂* populace of central Bhutan. There is no question that the Tshangla represent a populous native group of eastern Bhutan. Since some of these groups are also thought of historically as representing earlier inhabitants by the speakers of Bodic languages in Bhutan, it is logical to posit a geographical locus for Bodic just north of the southern flanks, and this is where a dot has been placed on the map in Figure 3, representing the locus of Bodic at some indeterminate point in the past that we may conjecturally position at the first half of the 1st or maybe the second half of the 2nd millennium BC.

[21] Chamberlain (2015) has attempted to relate Tibetan dialectal geography to riverine watersheds, but the presumed dispersal of Bodish in his discussion is posterior in time to the points in time and in space posited here.

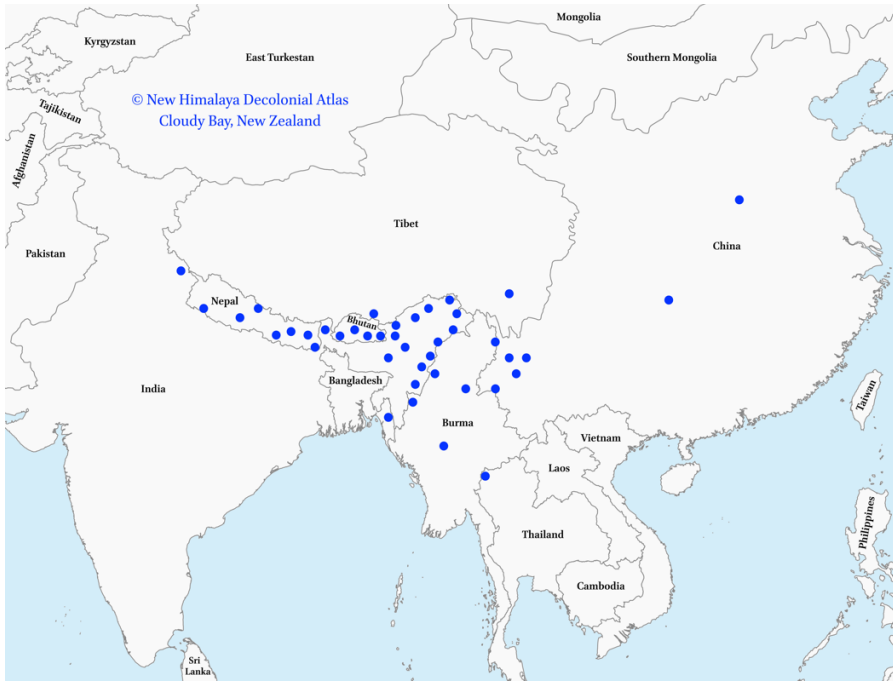

FIGURE 3: Geographical distribution of Trans-Himalayan subgroups, each dot representing the historical centre of one of the 41 linguistic subgroups. Each dot represents not a language but a linguistic subgroup, each of which may comprise between one to several dozen languages. The underlying map has been provided by the New Himalaya Decolonial Atlas at Cloudy Bay or, in Māori, Te Koko a Kupe. According to the cartographers, the borders of Tibet, as shown, represent the historical national frontiers before the illegal occupation of the country by Chinese colonial forces in 1950. The Cloudy Bay map also delineates the borders of East Turkestan, which was an independent republic from 1933 to 1934 and again from 1944 to 1949, before being subjugated again by Chinese colonial forces. The legitimate Tibetan government has been headquartered at Dharamsala since 1959, and the government-in-exile of East Turkestan is headquartered in Washington. Also indicated are the borders of Southern Mongolia, which likewise seeks independence from Chinese rule. The Cloudy Bay cartographers have drawn the northwestern border of Nepal in conformity with the Treaty of Sugaulī of 1816 concluded between the Kingdom of Nepal and the East India Company. British maps drafted in the years after the treaty depicted the Kālī river, which crosses the Tibetan border at Limpiyādhurā, as the border between the Kingdom of Nepal and East India Company territory. The boundaries on this map are representational only and purport neither to be accurate nor to imply endorsement by the author or the publisher.

In Figure 3, the geographical centre of gravity of the language family as a whole can be seen to lie within the arc of the eastern Himalayas and the Indo-Burmese borderlands. Out of 41 Trans-Himalayan subgroups, 29 branches are found either exclusively or predominantly south of the Himalayan divide within the Indian subcontinent, viz. Tamangic, Newaric, Kiranti, Lepcha, Digarish, Lhokpu, Midźuish, Chepangic, Magaric, Tani, Siangic, Raji-Raute, Tshangla, Kho-Bwa, Ao, Zeme, Angami-Pochuri, Karbi, Brahmaputran, Mru, Gongduk, Hrusish, Black Mountain, Dhimalish, Tangkhul, Meithei, Pyu, Karenic and Mizo-Kuki-Chin. Seven Trans-Himalayan linguistic subgroups are found to the north and east of the Himalayas, viz. Bái, Tǔjiā, rGyalrongic, Qiāngic, Ěrsūish, Nàic and Sinitic. Five branches of the Trans-Himalayan family are represented by language communities distributed both along the northern side and on the southern flank of the Himalayas, viz. Bodish, Lolo-Burmese, Nungish, West Himalayish and Kachinic.

Whereas all of the Bodic languages are represented by a single dot in Figure 3, so too the Lepcha language by itself constitutes a Trans-Himalayan linguistic subgroup in its own right and is represented by a dot of its own. As Saul Mullard (2011: 5-9) has argued, even on the basis of the previously prevailing interpretation of the archaeological record, the linguistic ancestors of the Lepcha are likely to have settled in Sikkim by 5,000 BC. Today, the combined evidence of the ethnolinguistic phylogeography of Trans-Himalayan language communities and the genetic phylogeography of Y-chromosomal lineages associated with the Trans-Himalayan populations now push the probable date of Lepcha habitation in Sikkim even further back into the past (van Driem 2021).

By the same token, of course, no population at such a distant time in the past spoke Lepcha. Rather, the ancient population inhabiting Sikkim millennia ago spoke some ancient Trans-Himalayan tongue which over millennia would locally evolve into Lepcha. We may call this ancient tongue proto-Lepcha, and the best hope at arriving at an understanding of this lost tongue lies in historical linguistic comparison in combination with internal linguistic reconstruction of Lepcha. Robert Andrew Dermod Forrest (1962) identified a large number of Austroasiatic cognates in Lepcha, which led to the hypotheses that the Lepcha language may either have arisen when a Trans-Himalayan tongue absorbed many Austroasiatic loans through close contact, or when a Trans-Himalayan language was adopted by an indigenous Austroasiatic population. Sprigg (1982) pointed out that Lepcha is, unsurprisingly, replete with Drenjongke loans after centuries of strong contact influence, leading to Bodish

borrowings having replaced native Lepcha lexical material, which could ultimately have been of either Trans-Himalayan or Austroasiatic provenance. Whilst recognising the Bodish influence on the Lepcha lexicon, Bodman (1988) established that Lepcha itself was genetically a Trans-Himalayan tongue with either an Austroasiatic adstratum or substrate.

Since the dawn of the Holocene, many ancient hunter-forager populations ancestral to modern Trans-Himalayan language communities settled all along the long arc of the eastern Himalayas and sub-Himalayan mountain tracts in the lush jungles of its sparsely populated southern flank. So too the ancient population ancestral to the Lepcha probably inhabited the area that today is Sikkim from this time. The relative frequencies of the Y-chromosomal haplogroup O1b1a1a (M95) in particular Trans-Himalayan language communities of the Indian subcontinent (Sahoo *et al.* 2006, Reddy *et al.* 2007, Gazi *et al.* 2013, van Driem 2021) suggest that a subset of the paternal ancestors of certain Trans-Himalayan populations, e.g. the Lepcha, the Mizo and perhaps certain Bodo-Koch communities, were men who may have spoken antique languages of the Khasian or Palaungic branches of the Austroasiatic language family, and who were absorbed and assimilated into Trans-Himalayan language communities.

Based on the comparison of Lepcha with Karlgren's reconstruction of Old Chinese and the historical phonology of Lepcha, which featured the evolution of the ancient Trans-Himalayan *s-* prefix into post-consonantal palatal offglides, Nicholas Bodman (1973, 1980) argued for a close relationship between Lepcha and Sinitic and even proposed the name 'Sino-Himalayan' to label this relationship. As Bodman explained to me at the conference dedicated to Trans-Himalayan languages held at the University of Lund in October 1988, this term 'Sino-Himalayan' could be used either to label a hypothetical taxon comprising Lepcha and Sinitic or as a label for the entire language family.

In Bodman's prescient view of how the field of Trans-Himalayan linguistics would develop, the eastern Himalayan area represented the centre of gravity of the language family. In 1998, Ilia Peiros (1998: 217) advanced the idea that the Tibeto-Burman homeland lay in the sub-Himalayan regions of the eastern Himalayan arc. When Peiros (2004) expressed this view at an international conference in Geneva, a few of the participants who at the time still adhered to the empirically unsupported and now obsolete Sino-Tibetan paradigm then chiefly propagated from Berkeley and Peking greeted this thesis with incredulity or even scoffed at the idea, but not the eminent Russian scholar Sergeĭ Anatol'evič Starostin,

who was also in attendance in Geneva and who had in fact espoused the same view since 1994.

At an international conference at Sèvres, Starostin (1994) presented a new view of the language family which he termed Sino-Kiranti. Based on the Limbu grammar (van Driem 1987), he stressed the archaic nature of Kiranti and shared commonalities with reconstructed Old Chinese (Starostin 1989). On the blackboard, he drew a trifurcating tree of the Sino-Kiranti family splitting into Sinitic, Kiranti and 'Tibeto-Burman' and an alternative bifurcating model with Sino-Kiranti, splitting into Kiranti and 'Sino-Tibetan'. The two drawings were defiantly presented as a challenge to our thinking.

When I subsequently proposed the subgroup Sino-Bodic (van Driem 1997), the underlying assumptions were that Limbu was a member of the Kiranti group and that the Kiranti languages were somehow part of the nebulous and ponderous construct which Shafer had labelled Bodic. In view of the data adduced, the 1997 subgroup proposal should have been called Sino-Kiranti, rather than Sino-Bodic. However, the denomination 'Sino-Kiranti' had already been taken, with Starostin having used the label three years earlier to designate two alternative proposals for the overall structure of the language family as a whole. Frederik Kortlandt therefore suggested to me that I chose the label 'Sino-Bodic' instead. In retrospect, it would have been more accurate to have repurposed the label 'Sino-Kiranti'.

At the same time, the unity of Kiranti as a valid linguistic subgroup was first called into question by Werner Winter (1986), and these doubts are pursued in my discussion of the isoglosses which separate the Limbu dialects from the Rai languages and the intermediate status of Yakkha, Chɯluɯng and Āṭhpaharīya, which may represent Rai languages which have undergone Limbu influence through their geographical proximity and long-standing ties of intermarriage (van Driem 2001: 664, 719 *et passim*). Gerber & Grollmann (2018) have pursued the issue of whether Kiranti constitutes a valid subgroup. Figure 3 still represents Kiranti with a single dot, that has been situated at a locus between Limbuwan and the region that constitutes the patchwork quilt of diverse Rai language communities. Future research may necessitate the use of two loci on the map to represent two distinct subgroups in this region.

The Limbus view themselves as the original inhabitants of the Tamor watershed, and the Lepchas as the native pre-Bodish denizens of both the Rangit and Teesta watersheds. With the sparse demography of the past times, the ranges of the Limbus and Lepchas could not just have met but also overlapped, as is in fact the case with many language communi-

ties throughout the Himalayas even today. Lepcha settlements have historically been reported as far to the west as in what today is Ilām district, where no extant ancient Lepcha settlements are found today. Some Limbus claim that their range once extended to the Teesta.

Limbu and Lepcha have been residing in their present areas for all of recorded history, and linguistic phylogeography informs us that their immediate linguistic ancestors may have inhabited these same areas for millennia. Recorded history informs us that the ancestors of the Drenjongpa have been settled in Sikkim for centuries, where they have lived in harmony and extensively intermarried with the Lepcha and, to a lesser extent, with the Limbu. At a much more remote point in time, the linguistic ancestors of the Bodic language communities are likely to have lived north of the Himalayas in the area between Sikkim, Bhutan and the Yarlûng valley.

In considering the proposals of a close genetic relationship between Lepcha and Sinitic, proposed by Bodman, or Limbu and Sinitic, as proposed by Starostin, the geographical distribution of Trans-Himalayan linguistic subgroups in Figure 3 prompts some reflection. Hungarian is spoken in the heart of Europe. Yet its closest linguistic relatives are Khanty and Mansi, which together form the Ugric branch of Uralic. Other than Samoyed, Ugric represents the most easterly branch of the Uralic language family. Nonetheless Hungarian happens to be the westernmost Uralic language. Similarly, within the Iranian branch of languages, Ossetic is phylogenetically an Eastern Iranian language, much more closely related to Pashto in eastern Afghanistan than to Western Iranian languages such as Kurdish and Persian. Yet Ossetic, spoken in the north Caucasus, happens to be the westernmost Iranian language. An analogous situation is likely to obtain with respect to Sinitic in light of the close affinity proposed with Lepcha and Limbu.

In Figure 3, the dot representing Sinitic in the far northeast marks an outlier, the result of an ancient population movement of migrants out of the Trans-Himalayan linguistic homeland in the eastern Himalayan arc towards the Yellow River basin, which flourished as a comparatively affluent region in Neolithic times. An intermediate position on the map is marked by the dot representing Tǔjiā, a language community whose linguistic ancestors must have straggled along the same trail eastward from the Trans-Himalayan heartland. As the linguistic ancestors of the Chinese migrated to the remote northeast, this founding Sinitic language community was buttressed by the winds of language change and contact influence. What today is China was already inhabited by language com-

munities speaking tongues belonging to unrelated linguistic phyla, such as Hmong-Mien, Altaic and Yenisseian. The resultant contact situations led Sinitic to acquire creoloid structural traits and undergo extensive lexical replacement of ancestral Trans-Himalayan vocabulary by borrowings from the language communities that were already inhabiting the Neolithic cultures of the Yellow River basin.

Because of the presence of Altaic language communities in modern times, scholars have in the past often conjectured that the inhabitants of the Yellow River basin were speakers of an ancient Altaic language (He *et al.* 2019, Chaubey & van Driem 2020). However, Edwin George Pulleyblank (1962) argued that the early inhabitants of the Yellow River were ethnolinguistically related to the people whom the Chinese called 匈奴 Xiōngnú, recorded historically as living north of the Chinese in the 3rd century BC. Pulleyblank (1962, 1966, 1983, 2000) developed the case for the Yenisseian ethnolinguistic identity of the Xiōngnú, and his theory was adopted by those scholars most knowledgeable of Yenisseian languages, viz. Dul'zon (1964), Krejnovič (1968), Doerfer (1973), Jaxontov (1986) and Vovin (2000).

Subsequently, Vovin *et al*. (2006) identified the historically recorded Xiōngnú autonym 羯 **Kjet* with the Yenisseian ethnonym Ket. Finally, Gāo (2013, 2021) has adduced Sinitic lexemes with possible Yenisseian etymologies. It therefore appears plausible that the earliest Sinitic or Old Chinese arose when the language of Trans-Himalayan immigrants was adopted by resident Yenisseian language communities, leading to creoloid features observed in Chinese as compared with the Tibeto-Burman languages still spoken within the Trans-Himalayan homeland. Similarly, lexical and grammatical traits of the Brahmaputran languages have been interpreted by DeLancey (2014) as evidence that these languages likewise underwent a process of creolisation in the distant past, making their apparent divergence similarly a secondary effect. In terms of ancient contact situations and their linguistic effects, the upheaval of a long migration to the remote Yellow River basin may had a counterpart in the turbulent migratory history of the Brahmaputran alluvial plain. By contrast, the linguistic ancestors of the Limbu and Lepcha enjoyed living in languor, tucked away in the lush refuges of high alpine valleys in a portion of the eastern Himalayan arc which lay well to the lee of migratory upheaval over time.

FROM PHENOTYPICAL IMPRESSIONISM TO MOLECULAR GENETICS

The fascination with the highly divergent phenotypes of our fellow man is attested by the somatological descriptions of various peoples in the writings of Herodotus, Vergil, Strabo, Diodorus, Xenophanes and Manilius. Snowden (1970, 1989) studied the wide range of expressions in Greek and Latin texts to describe the skin colour, physiognomy, stature and physical attributes of Egyptians, Colchians, Ethiopians and other peoples than Greeks and Romans in antiquity, as well as the depictions of other ethnicities in Graeco-Roman art and sculpture.

No doubt the interest in each other's appearance and the penchant for taking note of the phenotypical peculiarities of our conspecifics has been an abiding inclination of human beings from the time of our distant australopithecine ancestors. The first modern scientific attempt to classify humans phenotypically into 'races' was undertaken in 1684 by François Bernier, who published this first classificatory schema of mankind in the *Journal des Sçavans*. The history of the rise of 'race' in scholarly thinking until the demise of the notion of race in the face of molecular genetic findings at the end of the 20th century is told in *Ethnolinguistic Prehistory* (van Driem 2021). The book dissects the history of the very idea of a so-called 'Mongoloid race', tracing the origins of this notion back to Königsberg in the year 1774.

What's in a name? This question is a necessarily rhetorical one because the choice of names and labels does indeed to a large extent shape perceptual reality. In the popular imagination, the idea survives amongst many people in Sikkim and northeastern India that their linguistic or immediate genetic ancestors came from Mongolia. To begin with, the Mongolic languages, being members of the Altaic language family, are unrelated to the Sinitic languages, which, like Limbu, Lepcha and Drenjongke, belong to the Trans-Himalayan language family. Furthermore, we all have numerous ancestral lineages, not just one line of descent, and our linguistic ancestors and our biological forebears need not have been the same people.

The dots in Figure 3 assign conjectural geographical loci to the oldest reconstructible stages of the respective Trans-Himalayan linguistic subgroups at some time in the past, perhaps a few millennia after the dawn of the Holocene. Languages change at a relatively fast pace, and vast stretches of time lie beyond the linguistically reconstructible past. When we go far back enough in time, all of our ancestors came from Africa. Global mitochondrial phylogeography also shows our ancestral emergence from Africa with great clarity (Oppenheimer 2012). Everywhere in

the world, the mitochondrial landscape tends to be much older than the paternal lineages. By contrast, Y-chromosomal phylogeography tends to be younger and often correlates well with the geographical spread of language families except in a number of salient rare cases.

When we take such a long view of time, the question of being indigenous or native to a place in terms of ancestry becomes preposterous, but people more usually define their ethnic identity in historical time or in terms of traceable provenance at shallower time depths. The centre of linguistic diversity of the Trans-Himalayan subgroups, as shown in Figure 3, puts the lie to the notion that the linguistic ancestors haled from China, let alone Mongolia. From the linguistic point of view, Lepcha and Limbu are completely distinct and divergent subgroups. Yet both Lepcha and Limbu share the distinction that scholars such as Bodman and Starostin have perceived close links between them and Sinitic, although the proposed phylogenetic propinquity remains hypothetical in both cases.

When the evidence of Y-chromosomal phylogeography is examined, the language communities yield molecular evidence that provides independent corroboration of the reconstruction of the past already developed on the basis of linguistic evidence. The paternal lineages O2 (M122) and O2a2b1 (M134) are characteristic molecular markers for communities speaking Trans-Himalayan language, where in some cases the paternal haplogroup O2a2b1 (M134) may be borne by up to 100% of the men of a particular Tibeto-Burman language community. As detailed in *Ethnolinguistic Prehistory* (van Driem 2021), ancient DNA studies support the hypothesis bearers of these paternal lineages introduced Trans-Himalayan language to the Yellow River basin, where they met and assimilated bearers of the "Yenisseian" paternal lineages Q1a1 (M120), Q3a (M324) and Q3a3 (P201), although the paternal lineage N (M231) was also found (Zhao *et al.* 2011, 2014, 2015, Huang & Li 2017, Cui *et al.* 2020).

Ancient DNA identified as representing the denizens of the Xiōngnú empire, dating from between 209 and 98 AD, shows an amalgam of lineages, in descending order of frequency, Q1a (F1096), R1a (M420), C2b (F1067) and a medley of other paternal haplogroups, including the earliest case of an O haplogroup this far north. The early and late mediaeval sites from Mongolia likewise show more than a dozen paternal lineages, with the relative proportion of haplogroup Q1a dwindling, and the proportion of "Altaic" C2b increasing before and during the mediaeval period (Jeong *et al*. 2020, Lee *et al*. 2023: s1a). Assuming the applicability of the Father Tongue correlation, the ancient DNA evidence lends support to a Yenisseian linguistic substrate on the North China plain.

ETHNOCENTRISM AND OTHER PITFALLS TO AVOID

In Paris, I once playfully asked my young companion, who had recently won a national beauty pageant, whether he thought that Paris might be the centre of the known universe, as I often contend in jest. The nonplussed male model countered by chastising me for apparently not knowing that there were other planets in the solar system, even other stars and entire solar systems and even other galaxies. With a slightly exasperated edge in his voice, the young Mr. France instructed me that 'Paris est évidemment le centre du monde, mais pas de l'univers entier!' [Paris is obviously the centre of the world, but not of the whole universe!].

In the 1990s at Siem Reap, Gérard Diffloth once showed me an amazing book written in 1892 by Henri-Nicolas Frey, a Corsican colonel of the Infanterie de Marine who served in various French colonies in Africa, Oceania and Asia, including Tonkin, and ultimately attained the rank of major general. Frey (1892) claimed to have proved that all human languages derived from Vietnamese, and on a map in his book he illustrated how the world had been peopled, depicting lines of migration all emanating from Tonkin in French Indochina across the face of the entire planet.

Frey's grand hypothesis formed part of his own eclectic understanding of the many racial theories that were current in his day. In order to explain correspondences between the mammalian fossil records of India and Madagascar, Philip Lutley Sclater (1864: 219), in a carefully worded passage, proposed the name Lemuria to designate a former continent that later broke up into the Indian subcontinent, Madagascar, Africa and part of the Americas. Based on evidence from the natural history of mammalian evolution, Sclater had in 1864 essentially proposed the previous existence of a continent that today, with our modern understanding of tectonic plate theory, is termed Gondwanaland.

Nine years later, Ernst Heinrich Haeckel, though well versed in geological chronology as it was understood in his time, fell prey to anachronism when he imagined that Sclater's Lemuria represented 'die wahrscheinlieche Wiege des Menschengeschlechts, das hier sich vermuthlich zuerst aus anthropoiden Affen hervorbildete' [the probable cradle of the human race, which presumably first developed here from anthropoid apes] (1873: 321). Blundering into even greater anachronisms, which mixed events at vastly different time depths, Frey (1892: 136b) presented his own rendition of Haeckel's map (1873: 689), whilst arguing that the actual site of Lemuria was actually Tonkin, using heterogeneous arguments such as the distribution of the orang utan and random linguistic

chance resemblances, known as 'look alikes', which he, of course, was able to find between the most disparate languages of the world.

Strangely, this very same monogeneticist theory about the peopling of the world from Tonkin is still espoused today by the Vietnamese journalist Hà Văn Thùy, who was born at Thái Bình in 1944, twelve years after the multiply decorated major general Frey died at Menton in the Alpes-Maritimes. Hà's books have newly appeared in English translation (Hà 2020, 2021a, 2021b). Liam Kelley (2020) writes that Hà is merely one of the louder exponents of this ethnocentric view of prehistory, that is currently widespread in Vietnam as well as amongst the Vietnamese diaspora. Contrary to what Kelley supposes, however, the 'centrality' of this ethnocentric view amongst the Vietnamese is not new.

Hà Văn Thùy is, in fact, the principal proponent of this view, and he found his inspiration directly in the writings of colonel Frey, whose 1892 monograph he repeatedly cites. This now popular strand of modern Vietnamese lore therefore stems directly from the Corsican colonel. In his work, Hà Văn Thùy sees Frey's theory as corroborated by the genetic studies of Stephen Oppenheimer, Chuán-Chāo Wáng and Huī Lǐ. Hà Văn Thùy also seeks inspiration and corroboration in the ethnological writings of Nguyễn Đinh Khoa, who sees Vietnam as the cradle of the Mongoloid and Australoid 'races', whose mixed progeny purportedly spread throughout the world.

Like Frey in 1892, Hà Văn Thùy today believes that all languages of the world can be derived from Vietnamese. Famously, the Brabantian scholar Goropius Becanus (1569) propounded the theory that all of the languages of the world derived from Dutch. However, Goropius Becanus was born at Gorp near Hilvarenbeek in 1519, years before Sigismundus Gelenius wrote his *Lexicon Symphonum* in Basel in 1537 and some time before Indo-European historical linguistics was first developed in Leiden between 1597 and 1647.

Now that historical linguistics has grown over centuries into a full-fledged discipline with a sophisticated instrumentarium, it smacks of a certain quaint *ringardise* today to be espousing Frey's linguistic theory of Vietnamese representing the mother of all languages. So compelling can be our inclination toward ethnocentrism. Another common pitfall is anachronism, for the temptation to indulge in an ethnocentric view need not only be linguistic or spatial, but may also be temporal, as when we project our ethnic identity onto the historical past or even into prehistory.

At the time of the Buddha, there were no such languages as English or French, and there were no English or French people. By the same token, when the Buddha walked the earth, there were no such languages

as Limbu, Lepcha, Nepali or Drenjongke, and at that time there were no people who went by names such as Limbu, Lepcha, Nepali or Drenjongpa. To project modern identities onto the past leads to the common error of anachronism. The paintings on the walls of the caverns of Lascaux do not represent early French naïve art, nor was the Buddha born in the Federal Democratic Republic of Nepal. Neither did Pocohontas live in the United States of America.

Modern citizens in England and in Sikkim may feel comfortable with the idea that no Englishmen or Drenjongpas existed at the time of Alexander the Great. Yet in the People's Republic of China, the official scholarly narrative espoused by the Communist Party of China seeks to project a Hàn Chinese identity anachronistically onto the past. When studying the scientific literature, readers should be aware that Chinese scholars fall into this pitfall in their writings, not just because of political doctrine, but also because this is a perennial blind spot. Chinese archaeologist Kwang-chih Chang (1983) therefore knowingly warned his countrymen against the anachronisms that arise from affixing the label 'Chinese' to archaeological cultural assemblages or peoples of the distant past.

Chang stressed that the ancient polities Xià, Shāng and Zhōu in the Yellow river valley are likely to have represented ethnolinguistically distinct populations. The ancient cultures on what today is the North China Plain were not necessarily peopled by populations directly ancestral to today's Hàn Chinese. Modern national and ethnic identities only arose or were invented in the course of recent historical time. In ancestral terms, none of us are fully native to our native countries. Because the past took such an awfully long time, none of us are truly sons of the soil except perhaps in the short term of our lifetime compounded by some number of generations in the past. Pure ethnic groups do not exist.[22]

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[22] Even the Japanese, who rightfully stress their cultural distinctness, and who have also in the past been wont to pride themselves on their 'racial' distinctness, are not sons of the soil. My invited lecture entitled 'Who are the Japanese, and where do the Japanese come from?', given at the workshop 'Human Evolution in Eurasia elucidated through Genetics, Archaeology and Linguistics' hosted by the National Institute of Genetics at Mishima on the 17th of March 2017, detailed the tripartite origins of Japanese populations (van Driem 2017). Gyaneshwer Chaubey and I juxtaposed the substance of the 2017 Mishima talk on the tripartite origins of Japanese to the contrasting case of Munda languages (Chaubey & van Driem 2020). The three waves of peopling that gave rise to the modern Japanese people are elaborate in *Ethnolinguistic Prehistory* (van Driem 2021). A new study on ancient DNA has corroborated our model of the tripartite origins of the Japanese people with some supplementary findings (Cooke *et al*. 2021).

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EAST BODISH REVISITED

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§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).

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[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.

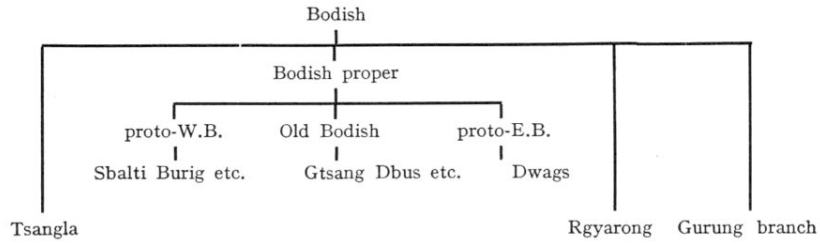

Figure 1. Shafer's classification of the Bodish languages (Shafer 1954: 349; 1966–1974: 113).

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 by China, the lack of accessibility to the North-East Frontier Agency

[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.

(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.

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

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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.

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).

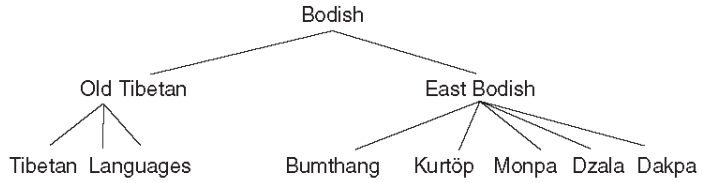

Figure 2. Bodish *Stammbaum* (Hill 2010b: 111 in Hill 2019: 8)

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.

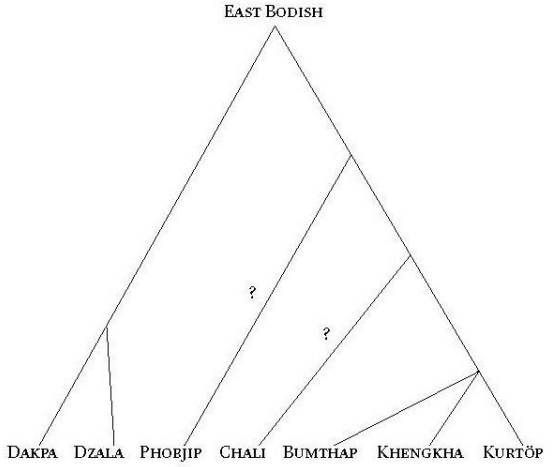

Figure 3. Proposed phylogeny of the East Bodish languages (Hyslop 2013a, in Hyslop 2017)

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.

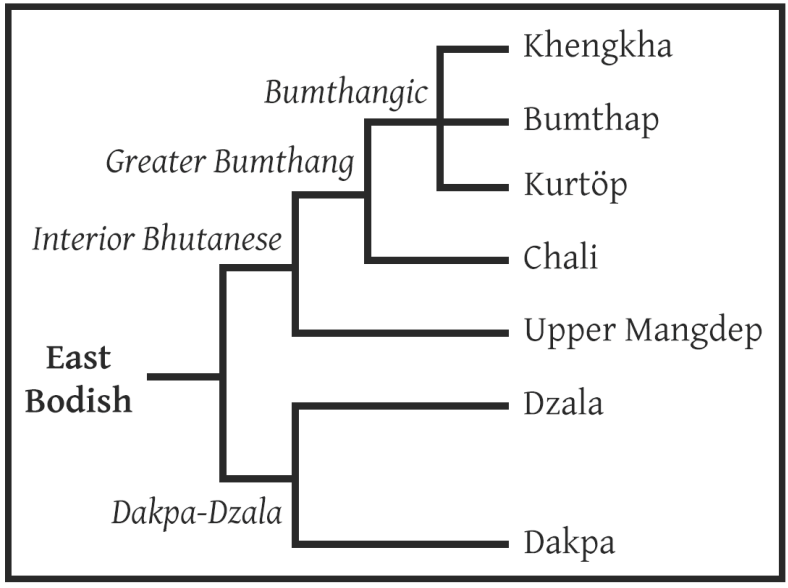

Figure 4. East Bodish phylogeny in Bosch (2016: 27).

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)

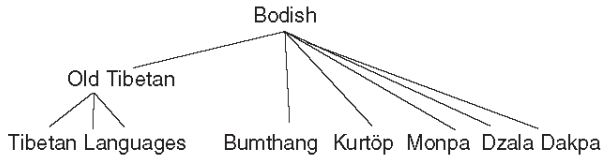

Figure 5. Bodish *Stammbaum* (Hill 2019: 8).

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 subgroup (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 > *-○s* (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 > *-○s* 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 *-ɑ*.

§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 *ŋguX* < *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 *-ərn* for the subgroups of Proto-Bodish, i.e. Bodish *in sənso 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]

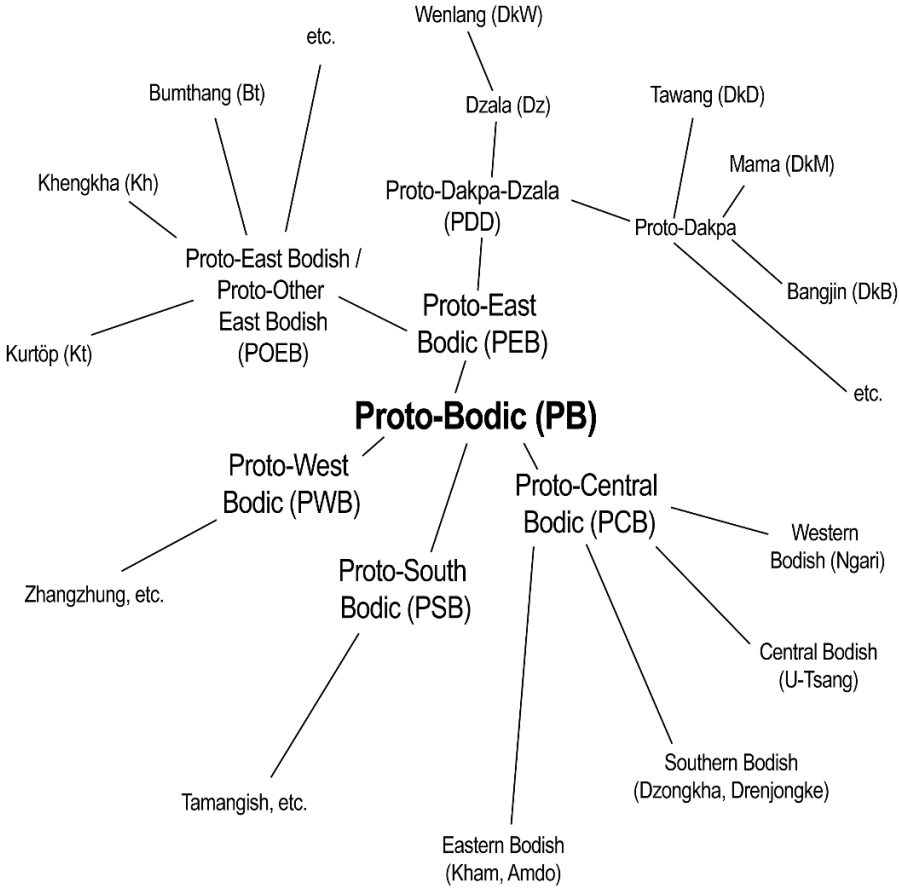

Figure 6. Neighbourhood network with East Bodic as a coherent subgroup (Figure courtesy Yeshy Tempa Sotrug).

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.

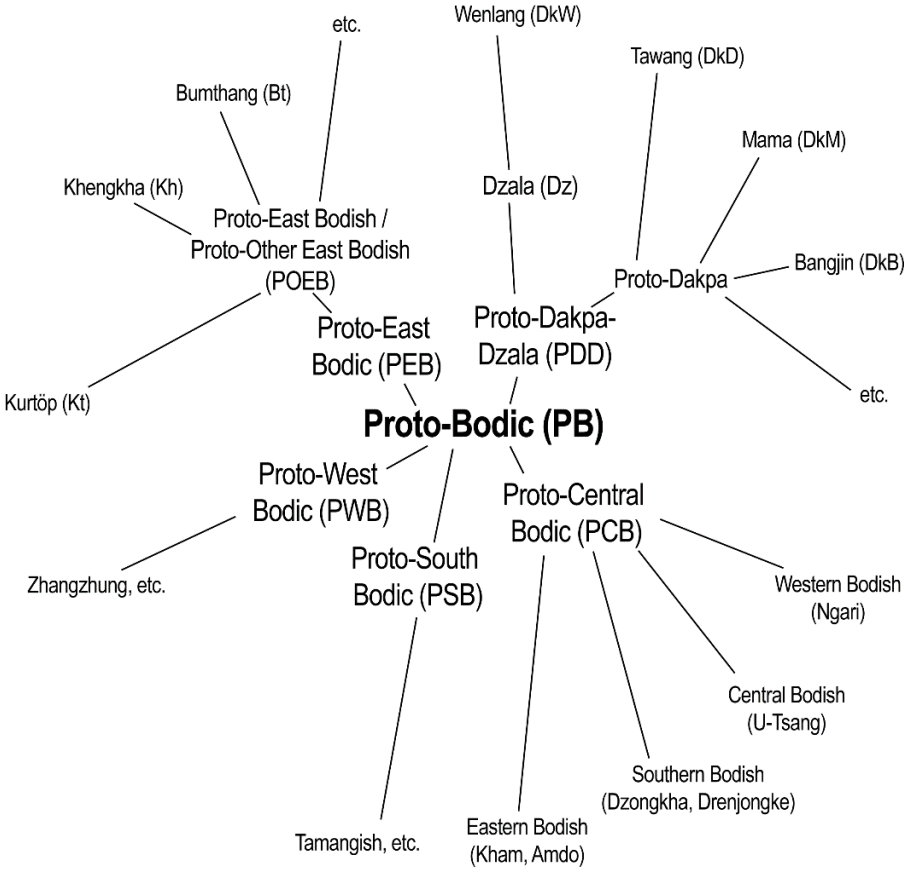

Figure 7. Neighbourhood network with East Bodic versus Dakpa-Dzala versus Central Bodic (Figure courtesy Yeshy Tempa Sotrug).

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.

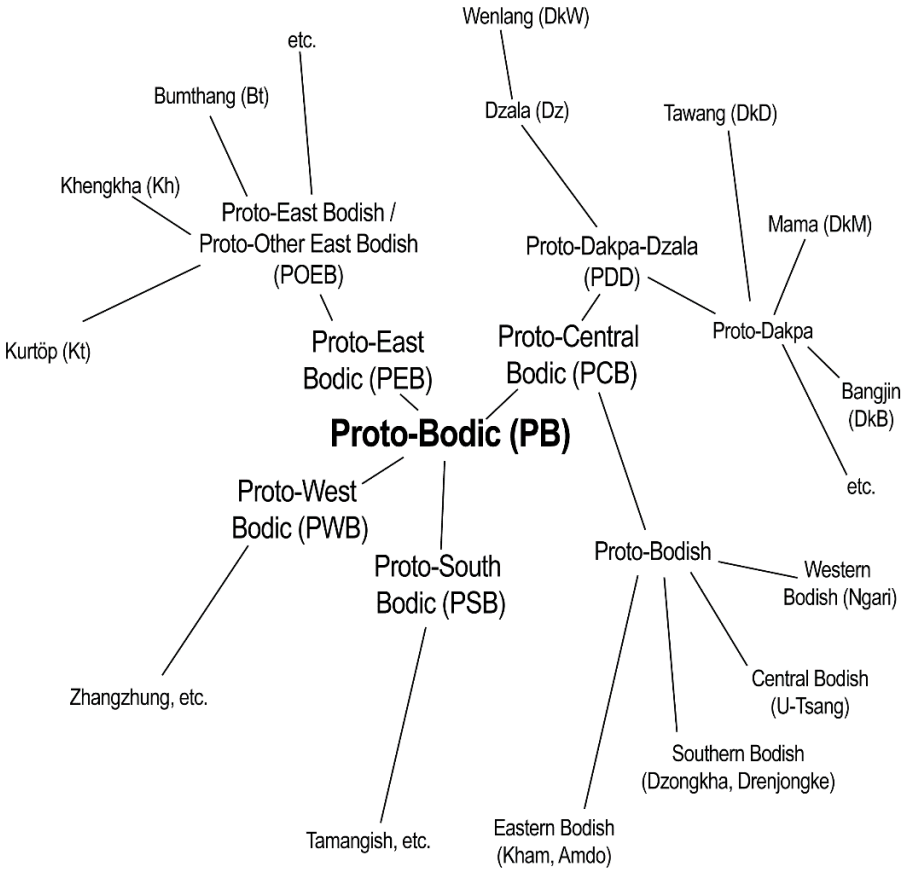

Figure 8. Neighbourhood network with Dakpa and Dzala as Central Bodic languages (Figure courtesy Yeshy Tempa Sotrug).

§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).

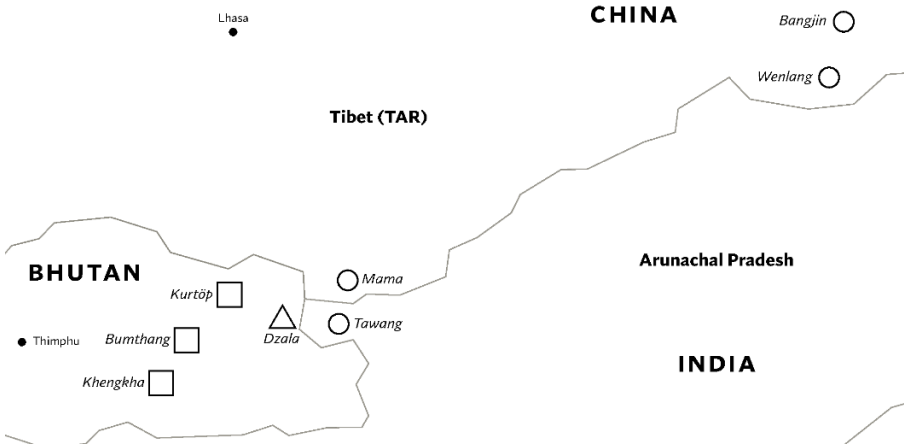

Figure 10. Map with the main linguistic varieties represented in this study (Figure courtesy Yeshy Tempa Sotrug).

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 *-pɔ* has allomorph *-kɔ* 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:*^{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:*^{35}*.pa*^{53} and *pai*^{35}*.po*^{55}, respectively, perhaps these are transcription errors).

(010) 'frog' DkM *be:*^{35}*.pa*^{53}, DkD *pe:*^{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 *tɛa*^{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.

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[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 *ts^{h}(^{w})a

(018) ‘bite’ DkM & DkD *cha?^{53}*, DkB *tɕhak^{53}*, Tib *ḥchaḥ-ba* < PB *tɕ^{h}a ~ Kt *chu*, Tib *ḥco(s)*, PB *(ḥ)tɕos

(019) ‘green’ DkM & DkD *dʑaŋ^{35}.ku^{53}*, DkB *dʑaŋ^{35}.ko^{53}*, Dz *jang.kha*, Kt *jang.ku*, Bt *jang.khu*, Tib *ljaṅ-khu* < *ld^{j}aṅ.k^{h}u < *ldaṅ.k^{h}u < *ḥldaṅ.k^{h}u < *ḥdlaṅ.k^{h}u < *ḥlaṅ.k^{h}u

§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 *ɕa:^{55}*, DkW *ɕa^{55}*, DkB *ɕa^{55}.wa^{53}*, Kt *sha.wa*, Bt *sha.wa*, Kt *sha.wa*, Tib *śa-ba* < PB *s^{j}a

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 *l^{y}, *r^{y}, 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.thɛk* ‘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).

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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 *mɐn*^{53}, DkB *m̥ɐn*^{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’ < *ɦgrʷa (Laufer’s law, Hill 2019: 20) < *ɦɢʷra (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 *blɐ*, Bt *blɐ* ~ *blä* (vD15), Tib *bźi* < PB *b-lʲi

(035) ‘good’ DkM, DkD & DkB *li*$^{35.}$*khu*^{53}, DkW *lɐu*^{35}, Dz *’li.gu* ~ *’le.gu* ~ *li.gu*, Kt *li.mu*, Kh *lɐ.mɔ* ~ *lɐ.mɔng*, Tib *legs-pɔ* < 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 *ḥ* [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* > *-ɔ* 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 *wɔ* ~ Kt *ɔ.kɔ*, Tib *ḥɔg* < PB *ḥʷa(k)

(037) ‘fox’ DkW & DkB *wa*$^{35.}$*mɔ*^{53}, Dz *wam*, Tib *wa.mɔ* ~ 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. *CiiCf > CieCf 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$_{\text{f}}$$^{\text{ʲ}}iC_{\text{f}}$, but the underlying Proto-Bodic forms, from which the Other East Bodish and Dakpa-Dzala forms directly descend, have the general format *C$_{\text{i}}$iC$_{\text{f}}$.

(041) ‘louse’ Kh *ʼse*, Bt *sɐk*, Kt *sɐ* ~ *sɐ̂*, DkM & DkD *ɕɐʔ*^{53}, Dz *shɐ* ~ Tib *śig* < PCB *s$^{\text{ʲ}}$ik < PB *sik, Chi 蝨 *srit* < *sri[k]

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

(043) ‘field’ DkD *leŋ*, Kh *lɐng*, Kt *sɑ.lɐng*, Tib *źiṅ* < PCB *l$^{\text{ʲ}}$iŋ < PB *liŋ, Chi 田 *dɐn* < *l$^{\text{ʕ}}$iŋ

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

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

(046) ‘day’[30] Dz *nyɐn.tɐ*, Kh *nɐn*, Bt *nyɐn*, Kt *nɐn* ~ Tib *ñin* < PCB *n$^{\text{ʲ}}$in < PB *nin

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

(048) ‘ripe’ Bt *men*^{44}*.na*^{43} (IT21), Kh *men*^{44}*.nʌ*^{22} (IT21), Kt *ʼmɐn.pɑ*, DkM *mɐn*^{35} ~ Tib *smin-pa* < PB *(s)min, Bur *mhaññʔ* < *$^{\text{ʔ}}$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 *thɐʔ*^{53}, Dz *thɐ*, Kh *thɐk*, Bt *thɐk*, Kt *thɐk* ~ Tib *gcig* < PCB *(g)tʲik < PB *tik^{31}, Chi 隻 *tsyɐk* < *tek ‘one of a pair’

(050) ‘name’ DkM, DkD, DkW, DKB *meŋ*^{35}, Bt *mɐng* (vD15), Kh *mɐng* ~ Tib *miṅ*, OTib *myiṅ* < PCB *mʲiŋ < PB *miŋ, Chi 名 *mjiɐng* < *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 *zɐk* (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 *ʼneng*, Bt *ʼneng*, Kt *ʼneng* (but DkM, DkD, DkW, DkB *niŋ*^{53}, Dz *ning*) ~ Tib *niṅ* < PB *niŋ, Chi 年 *nɐn* < *C.nˤiŋ

(053) ‘long’ BtC *rɐng.shɐng.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.nɐng* (but Bt *na.ning*, DkM & DkD *na*^{35}.*niŋ*^{35}, DkW & DkB *ŋi*^{35}.*niŋ*^{53}) ~ Tib *na-niṅ* < PB *na.niŋ

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

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

(057) ‘tasty’ DkW & DkB *lɐm*^{35}.*mo*^{53}, Kt *lɐm.to.ka* (but DkM, DkD *lim*^{35}.*po*^{53}, Dz *lim.to.kɐn*) ~ 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 *-ɐk*, 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 *dɐm* < *lˤem ‘sweet’[33]

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

(059) ‘berry’ Dz *mrɐp* (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 *-ɐm* 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 *brań-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. *CɨəCf > CɨiCf 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 *CɨeCf

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

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 *-əg* changed into *-ig*, that examples of Tibetan *-əg* 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*$^{:35}$*.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}*.mʌ*^{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

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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-źim* [läʑim], 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 *tɐp*^{53}, Kt *thɐp*, Tib *(thu-lu) ḥdebs-pa* < PB *(ḥ)deps

(077) ‘press down’ DkM, DkD & DkB *nɐp*^{53}, Dz *neb*, Kt *nɐp* ~ 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 *sɐr*^{55}*.wa*^{53}, DkW *sɐr*^{55}*.ba*^{55}, DkB *sɐr*^{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 *zɐr*^{35}, Kt *zɐr*, Kh *chan.zɐr*, Bt *chan.zɐr*, 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 *krok*^{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 *bzʰoŋ* (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 *ẏop* (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

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[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 Mámǎ 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 *-uCf* 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

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[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-)rˢat ‘rice’, Tib *ḥbras* ‘rice’ < *ḥmras, 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 *ri*$^{:35}$, 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 *ŋ̱ar^{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 *ŋɐr*^{35}, DkW *ŋɐu*^{35} (< *ŋɐ*^{35}), DkB *ŋiu*^{35} (< *ŋi*^{35}) ~ Dz *ngɐ*, 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 *ceʔ*^{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 *tɕɑ*^{35} (but DkM, DkD, DkW & DkB *ri*^{35}*.ɕɑ*^{35} 'pheasant' indicates < *ɕɑ*^{35}) ~ DkW & DkB *ɕɑ*^{35}, DkT *ʑa* (TAB), Dz *zha* ~ Kh *ja*, Bt *jau.ya*, Kt *jaw.ya* ~ *ja* ~ Tib *bya* < PB *bʲa

(127) 'summer' DkM *tɕɑ*^{55}*.rɐ*^{31}, DkD *tɕɑ*^{55}*.tɐ*^{53} ~ DkW *ɕar*^{35}*.tɐ*^{55}, DkB *ɕɑ*^{35}*.tɐ*^{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 *bzʰoŋ* ~ 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}*.thɑm*^{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 *mɐ.shâ.ma* ~ Kt *phi* ~ *phik* < PCB *pʰʲak < PB *pʰak

[51] The morpheme *mai*^{55} in the Dakpa Wénlàng form for 'broom' and the morpheme *mɐ* 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* < *lˤiŋ

(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 *ḷldyim* (Thomas 1948: 331), Chi 甜 *dem* < *lˤem '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 *lɐu*[55], DkW & DkB *liu*[35], Dz *liu* ~ *lɐu* ~ 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 *blɐ*, Bt *blɐ ~ 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-* ~ *dz-*	*c-*	*tɕ-* ~ *dz-*	*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 Mámǎ 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 *kɛ* (but DkW & DkD *ci$^{˧55}$*, Kt *cɛ*)[52] ~ Tib *skyes-pa* < PCB *(s)k^{j}e < PB *(s)ke

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

(139) 'ice' DkM & DkD *chen^{53}* ~ DkT *khɛt* (TAB), Dz *khɛg*, Kh *khɛ*, 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 *cɐr^{35}* ~ DkW & DkB *gɐr^{35}*, Kt (*jan*) *gɛ*, 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 *ɕhɐm*^{53}, DkW & DkB *khɐm*^{53}, Dz *khɐm* ~ Tib *khyim* < PCB *k^{hj}im < *q^{y}im < PB *qim, Bur *im* < *Qim, Chi 寄 *‘imH* < *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 *ɕhe*^{55}*.po*^{53} ~ DkW *khɐu*^{55}, DkB *khe*^{55}*.po*^{53}, Dz *khɐ.tɔg.to*, Kt *khɐ.to.ka*, Tib *khɐ-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 *ɕop*^{53}, DkB *tɕop*^{53}, DkW & DkB *suŋ*^{53}*.tɕop*^{55}, Kt *sung.ɕop*, Tib *sruṅ-skyob, skyob-pa*

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

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

(148) ‘frost’[54] DkW *tɕhak*^{55}, DkB *tɕha*^{53}, BtC *ɕhak.pa*, Kt *ɕhak.pa* ~ *ɕha.wa* ~ *ɕhâ.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 *ɕeʔ*^{35} ~ DkW & DkB *ɡai*^{35}, DkW *ɡa*^{35}, Bt *ɡai* (vD15), Kh *ɡaɐ*, Tib *rgal-ba* ‘cross over, ford’ < PB *(r)gal

(150) ‘white’ DkM & DkD *ɕhɐr*^{55}*.po*^{53} ~ DkW & DkB *khe*^{55}*.ru*^{53}, Dz *khɐ.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 *ɕhe:*^{55} ~ 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 *skɐm*, 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 *cɐm*^{55}*.phɑ*^{53} ~ DkW *kɐm*^{55}*.ŋi*^{55}, DkB *kɐm*^{55}*.mo*^{53}, Tib *skɐm* ~ 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 *cɐʔ*^{53}, Dz *kɐ*, 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}*.kɑ*^{35}, DkW & DkB *tɕɑ*^{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 *dhɐ*, Tib *ḥdrog-pa* and Kt *prɐt*, Tib *brɐd-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.pɑ* '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 *rg^{j}- (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 *rg^{j}uk.pa

(156) 'sweet buckwheat' DkM & DkD *ca:^{55}.pre^{53}* ~ 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* < PB *rg^{j}a.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 *rg^{j}ak.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 *rg^{j}u.ma

(159) 'back(-wards)'[60] DkM *cam^{35}*, DkD *cap^{35}* ~ DkW & DkB *dʑap^{35}*, Dz *gyab ~ jab*, Tib *rgyab* < PB *rg^{j}ap

(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)rg^{j}at

(161) 'victory' DkM & DkD *ce:^{35}.kha^{53}* ~ DkW *dʑe^{35}.kha^{53}*, DkB *dʑe^{35}.kha^{53}* (but Kt *gel.kha*) ~ Tib *rgyal-kha* < PB *rg^{j}al.k^{h}a

(162) 'country' DkM & DkD *ce:^{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 *rg^{j}al.k^{h}ap

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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* (*r^{h}ya), with aspiration non-distinctive, i.e., *rya. Perhaps there is an orthographic reason behind this, with རྒྱ་ in handwritten script easily mistaken for རྱ་.

59 The Dzala and Dakpa Wénlàng forms with a voiced fricative *z-* 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)b^{j}i < PB *bi

(164) 'flour' Dz *phe*, Kh *phi*, Kt *phi* ~Tib *phye* < PCB *p^{hj}e < PB *p^{hw}e, 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)b^{j}in.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 *p^{h}it.ka* (TAB), Dz *phid.ka*, Kh *phi.to*, Kt *bi* (~ *chi*) < PCB *p^{hj}i(s) < PB *p^{h}i(s)

(167) 'open (v)' DkM & DkD *ɕi*^{53}, DkW *ɕi*^{53}, DkB *ɕit*^{53}, Tib *phyi* 'outside'? ~ Kt *phi* ~ *phir* ~ *phis* < PB *p^{h}i(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 *b^{j}e.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 *nɐ*, BtU *nɐ* (but BtC *nyi* and DkM, DkD, DkW & DkB *ŋi*^{35})[65], Kh *nɐ* ~ Tib *ñi-ma* < PCB *n^{j}i < PB *ni, Chi 日 *nyit* < *C.nik, OBur *niy*

(170) ‘day’ Kh *nɐn*, Kt *nɐn* (but Bt *nyɐn* and Dz *nyɐn.tɐ*) ~ Tib *ñin* < PCB *n^{j}in < PB *nin

(171) ‘heart’ DkW & DkB *neŋ*^{53}, Dz *’neng*, Bt *nɐng.ma* (vD15) ~ Tib *sñiṅ* < PCB *(s)n^{j}iŋ < PB *(s)niŋ, Chi 仁 *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 *’nyit* ~ *’nyis* (vD15, DDC18) < *(s)nes

(173) ‘stay, live, reside’ Kt *ni* ~ *nit*, Kh *nik* ~ DkW & DkB *ŋi*^{35} ~ Bt *nyit* (vD15) ~ DkM & DkD *nɐʔ*^{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 *m^{j}-, §4.9, §5.3) or *ŋ^{j}- (§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’ < *ŋ^{j}on ~ Tib *sṅo* ~ *sṅon-po* ‘green, blue’, DkM, DkD & DkB *ŋau*^{55}*.po*^{55} ‘blue’, DkW *ŋau*^{55}, Dz *’ngou* ‘blue’ < PB *(s)ŋon

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[64] The phonological developments in the Other East Bodish varieties are similar to those in Burmese, cf. Old Burmese *niy* vs. modern spoken Burmese ၎ *nɐ*^{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 *ŋɐ*^{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 *ɓkram-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-ɓa* < 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-l̥i < 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 *ʐuk.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 *krɐ*^{35} (but DkW and DkB *dʐe*^{35} and Dz *drɐ*), BtU *griu* (but BtC *riu* and Kt *drɐ*) ~ 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 *krɔ*^{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 *krɐk*^{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

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[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' [ba:.sum], *brag-yib* 'cliff shelter' [ba:.'jiʔ], *sprel-ri* 'monkey mountain' [pi:.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 *mrɐp*, 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 *mrɐ*, DkD *mrui* ~ Tib *sbrul* < *smrul, OBur *mruy*, Chi 虵 *xjwɨjX* < *[m̥r]uj?

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 *mrɐ*^{35}*.phrɐ*^{55}, DkT *mri*^{35}*.brim*^{35} (TAB) ~ Dz *mi.phrɐd ~ mi.brid*, DkM *mi*^{31}*.prɐn*^{55}, DkD *mi*^{35}*.prɐn*^{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-)rˤat ~ Kh *i.pa*, BtC *’i.ba*, Kt *’i.pa* ~ DkM & DkD *dɐm*^{35}, DkW & DkB *dɐp*^{35}, Dz *dɐp*

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 别 *bjɐt* < *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 *thɐʔ*^{53}, DkW & DkB *thi*^{53}, Dz *thɐ*, Kh *thɐk*, Bt *thɐk* (vD15, DDC17), Kt *thɐk* ~ Tib *gcig* < PCB *(g)tʲik < PB *tik, Chi 隻 *tsyɐk* < *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 *thɐn*^{55}*.po*^{53}, DkW *than*^{55}*.bu*^{55}, DkB *than*^{55}*.po*^{53}, Dz *thɐn.bu* ~ Kt *chɐn*, Bt *chɐt.pu* (vD15), Kh *chɐt.po*, Tib *chɐn-po*, OTib *chɐt-po* (Hill p.c. 23/08/2021) < PB *t^{h}en.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 *chɐ*, Bt *chɐ* (vD15, DDC17), Kt *chɐ* ~ DkM, DkD, DkW & DkB *tɐi*^{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- > *mɗ-* (cf. Hill 2019: 17) and palatalisation before vowel /e/ (§4.8). This results in the correspondence DD *ml-* ~ *bl-* ~ OEB *mj-* ~ *ɲ-* ~ Tib *mɗ-* < PB *ml-. Because Conrady's Law does not affect East Bodish, this can be considered a retention.

(234) 'penis' Dz *m.lɐ*, DkT *m.lɐ* (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 *mɗaḥ* < *mldaḥ < *mdlaḥ < *mtlaḥ < PB *mlaḥ, OBur *mlāḥ*, Chi 射 *zyɐk* < *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),

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[75] The Burmese comparative evidence favours rhyme *-i, but then we would have rather predicted Other East Bodish rhyme *-ɐ* 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 *-ɐ*, DD *-ɐ*, 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- > *l̓-*. 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 *lək*^{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}*.tɕaʔ*^{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 *ɟüt* (MM94), Kt *jin* ~ *ɟit* (KD16, MM94), Tib *ljid-po* < *lt^{j}it < *ltit < *ḥltit < *ḥtlit < PB *ḥlit[77], Bur *leḥ* < *liyḥ

[77] Or Hill (2019: 215) < *ɦl^{ʲ}id < *ɦlit.

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

(241) ‘flat’ Dz *lep.tang.tang*, Kt *lep.tang*, BtU *lap.le.ba*, BtC *lap.lep* ~ Tib *lǰab* < *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 *lǰaṅ-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. *-aCf > -eCf if Ci- or -Cf {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) *ḫlʸi-ba > *ḫdlʸi-ba > *ḫldʸi-ba > *lǰi-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 *thɐk*^{55}*.pa*^{53} ~ Kt *thak.pa*, Bt *thak.pa*, Tib *thag-pa* < *PB *t^{h}ak

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

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

(250) ‘mucus’ DkM, DkD, DkW & DkB *nɐp*^{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 *nɐn*^{55}*.tɐn*^{55}, DkW & DkB *tɐn*^{55}*.tɐn*^{55} ~ Kt *tan*, Tib *gtan-gtan* < PB *(g)tan

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

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

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

(257) ‘new’[83] DkM, DkD & DkB *sɐ*^{55}*.ro*^{53}, DkW *sɐ*^{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 *plɐʔ*^{35}, DkW & DkB *blɛ*^{35}, Dz *blɛ*, Tib †*blat*, OTib *blas* ~ Bt *yat* (vD15) < PB *blat[84]

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

(261) 'eight' DkW & DkB *gɐt*^{35} (but Dz *gyad* and DkM & DkD *cɐn*^{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 *thɑm*^{53}, DkW & DkB *tɕa*^{55}*.thɑp*^{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 *tɑm*^{35}, DkW *dam*^{35}, Dz *dam*, Bt *dam*^{23}

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[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 དྭངས *dṅas* (Hill 2006: 89).

(IT21), Kh *dam*^{23} (IT21), Kt *dam*, Tib *bsdam-pa* < PB *(bs)dam

(268) 'steep' DkM & DkD *zar*^{35}*.pho*^{53}, DkW *zar*^{35}*.pu*^{55}, DkB *zar*^{35}*.pa*^{53}, Kt *zar.mu*, Tib *gzar-po* < PB *(g)zar

(269) 'shine; bloom, blossom' DkM, DkD, DkW & DkB *ɛar*^{55}, Dz *shar*, Kt *shar*, Tib *śar-ba* < PB *sʲar

(270) 'light (candle)' DkM & DkD *par*^{35}, DkW *ba*^{35}*.ru*^{55} (< *bar*), DkW *bar*^{35}, 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 *kat*^{35}*.po*^{53}, DkW & DkB *gat*^{35}*.pu*^{53}, 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 *na*^{53}, DkB *n̥a*^{53}, 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 *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

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 *ŋa*^{35}, 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 *p^{h}ak

(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 *s^{j}at ~ 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 *k^{h}ap < *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 *khla:*, Dz *khla* ~ *khlak* ~ Kt *shâ* ~ *shak* < PB *k^{h}lak

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 *k^{h}ap* (and Dakpa Mámă *k^{h}am*). The comparative Chinese evidence for ‘needle’, with a coda *-m*, may indicate that this is a typical *Wanderwort*.

rhyme *-â*, and rhyme *-a:* or *-aʔ* in Dzala, Dakpa Mámă and Dakpa Dáwàng: OEB *-ɑs* (~ *-ɑt* ~ *-â*), Tib *-as* ~ DD *-a(:/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 *-ɐ*, 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 *-ɐ* as reflex of rhyme *-as.

(288) 'cloth' BtU *ras*, BtC *rat*, Tib *ras* ~ DkM & DkD *ra:*^{35} (but DkW & DkB *rɐ*^{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 > *-ɐ* 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 *ngɐ* ~ Kh *ngat* ~*nga*, Bt *ngat* (vD15), Tib *ṅa* < PB *ŋas

The fact that in 'forget' Dakpa-Dzala has rhyme *-at*, not predicted rhyme *-a:* ~ *-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 *-ɐn*, not *-a:* ~ *-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 *gɐn*^{35}*.dʑɐ*^{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(:)*, in addition to the Dakpa Wénlàng and Dakpa Bāngxīn rhyme *-ɐ*, 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 *-ɐ* ~ 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 *brɐ*^{35}*.mo*^{55}, Dz *brɐ.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. *Ciu > Cio*

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(Cf) > -o(Cf)* (§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 *ʣu*^{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.

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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 *nɔ*, Bt *nɔ* (vD15, DDC18), Kt *nɔ* ~ Tib *nu-bɔ* < 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 *rɔ.wa, rô*, BtC *rɔ* ~ 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. *Cɔ(Cf) > Cu(Cf)*

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(Cf)* ~ Tib *-ɔ(Cf)* and DD *-ɔ(Cf)*. The individual rhyme correspondences are summarised in Table 9.

Table 9. Rhyme correspondences *C$_{i}$o(C$_{f}$)

PB	Tib	OEB	DD
*o	*-ɔ*	*-u*	*-ɔ*
*-ok	*-ɔg*	*-u(k)*	*-ɔ(k/ʔ/t)*
*-oŋ	*-ɔŋ*	*-uŋ*	*-oŋ*
*-op	*-ɔp*	*-up*	*-ɔp*
*-om	*(-ɔm)*	*(-ɔm)*	*(-ɔm)*
*-ot	*-ɔd*	*-ɔt*	*-ɔt ~ øt ~ øʔ*
*-on	*-ɔn?*	*-un*	*-øn*
*-os	*?*	*?*	*?*
*-or	*-ɔr*	*-ur*	*-ɔr*
*-ol	*-ɔl*	*-ui ~ -y*	*-ɐ(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 *kɔʔ^{53}*, DkW & DkB *kɔ^{55}.pu^{55}*, Dz *kɔ*, Tib *rkɔ-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*^{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’

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[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 *sɐn*, Dakpa Tawang *sɐnth* (< *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 *tshɐi*[53], DkW *tshɐu*[55] (< *tshɐ*[55]), DkB *tshɐt*[53], Dz *tshɐ*[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.sɐ*, BtU *’ngun ruk*, DkW *ʂu*[55], DkB *ʂru*[55].*mɑ*[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 *ʂuk.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 *bɑ*[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 *tɛhøn*[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

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[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 *ɳom*^{55}, DkW *ɳo*^{55}*.mu*^{55} (< *ɳom*^{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 ཉོས་ ḥchos, 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)(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. *Cii > Cie*

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 *nɐ*, BtU *nɐ* (but BtC *nyi*), Kh *nɐ* (but DkM, DkD, DkW, DkB *ɳi*^{35})[101] ~ Tib *ñi-ma* < PCB *n^{j}i < PB *ni, Chi 日 *nyit* < *C.nik, OBur *niy*

(349) ‘four’ Kh *blɐ*, Bt *blɐ* ~ *blä* (vD15) ~ DkM & DkD *pli*^{53}, DkW & DkB *bli*^{35}, Dz *bli*, Tib *bźi* < PCB *b-l^{j}i < PB *b-li

(350) ‘die’ Kh *sɐ*, Bt *sɐ* (vD15), Kt *sɐ* ~ DkM & DkD *ɕi*^{55}, DkW & DkB *ɕiu*^{55} (< *ɕi*^{55}), Dz *shi*, Tib *śi* < PCB *s^{j}i < PB *si, OBur *siy* < *śi

(351) ‘ten’ Kh *chɐ*, Bt *chɐ* (vD15, DDC17), Kt *chɐ* ~ 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* < *gl^{y}i (but Tib *gźu* < *gl^{y}u) < PCB *(g)l^{j}i < 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. *k^{h}wi*)) ~ Tib *khyi* < PB *k^{hw}i

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

(354) ‘smell (n)’ DkM, DkD, DkB *ɕi*^{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 *cɐn*^{35}, DkW & DkB *gɐ*^{35} ~ Tib *gyon-pa* < PB *gʲon

(356) ‘cold, be cold’ Kh *khik* ~ *khî*, Kt *khik* ~ DkM & DkD *chɐk*^{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 *ŋuŋ*^{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 *phɐ*, 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 *mɐ*^{35}, Dz. *mɐ*, Tib *mɐ*, OTib *mye* < PB *mʲe, Chi 焜 *xjw+jX* < *m̥əjʔ ‘burn’

(361) ‘wet’ Kt *shir.wa*, BtC *shir.phan* ~ DkM & DkD *ɕɐr*^{55}*.pa*^{53}, Dz *shɐr.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 †*yɐg*.

(363) ‘hang up’ DkM, DkD, DkW & DkB *jɐk*^{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 *thuŋ.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}*.łam*^{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 *ło*^{53}, Dz *lho*, Bt *lho*, Kt *lho*, Tib *lho*

(368) ‘deity, god’ Kh *la* ~ DkM, DkD, DkW & DkB *ła*^{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 *laʔ*^{53}, DkW & DkB *la*^{55}, Dz *ʼla* < 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 *lɛ:*^{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* ~ *klɛ* ~ 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 *kɛ.ling*, Tib *gliṅ-bu* ~ Bt *zheng*, Kt *zheng* < < PCB *glʲiŋ < PB *gliŋ

(390) ‘lungs’ DkM & DkD *lo:*^{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 *khla:*, Dz *khla* ~ *khlak* ~ Kt *shâ* ~ *shak* < PEB *kʰlak

*§6.9. *pl- > dʑ- if V = {a, ɛ, 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 *plɐʔ*^{53}, DKW & DKB *plɐ*^{53} ~ Kt *jɐk* < PEB *plek[108]

In ‘slip’, the alternation between Kurtöp *pjak* ~ *pɕak* 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 *plɐk*^{53}, Dz *blɐg* ~ Kt *pɕak* ~ *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 *-oɔ̀f* (§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 *’brud*) ~ Kt *pat* < PEB *plut?

*§6.10. *bl- > (b)dʑ-*

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- > *dʑ-*, 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 *rl^{y}- > *rǰ-* (= *rd^{y}*) while Bodman (1980: 127) suggests *rl^{y} > *rź- > *rǰ-*, both comparing Tibetan *rǰe* < *rl^{y}e ‘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 *plɐʔ*^{35}, DkW & DkB *blɐ*^{35}, Dz *blɐ,* 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 *wɐn*, Bt *wɐn* (vD15), Kt *wɐn* ~ 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 *yɐ*, DkT *jɐs* (TAB), Tib *yos* < PB *wos

This correspondence also seems to hold when the Dakpa-Dzala evidence is absent.

(404) ‘weed (v)’ Kh *wɐr*, Kt *wɐr* ~ Tib *(yur-ma) yur-ba* < PB *wur

(405) ‘weed (n)’ Kh *wɐr.za*, Kt *wɐr.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 *Cʲw*- 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 *Cʲj*- (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 *Cʲw*-, the Tibetan and Other East Bodish forms for ‘water’ are likely cognate, and perhaps the Dakpa-Dzala forms, too.

(406) ‘water’ Kt *khwɐ*, Bt *khwɐ* (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 *gwɐ(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 *səng* (vD15), Kh *səng* ~ 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 *sək*, Kt *sɛ* ~ *sɛ̂* ~ DkM & DkD *ɕəʔ*^{53}, Dz *shɛ*, DkW & DkB *ɕi*^{53}, Tib *śig* < PCB *sʲik < PB *sik, Chi 蝨 *srit* < *sri[k]

(414) 'die' Kh *sɛ*, Bt *sɛ* (vD15), Kt *sɛ* ~ 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.nyɛ* (vD15), DkM & DkD *zin*^{35}*.po*^{53}, DkB *zin*^{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 *bra-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 [ɻ̊] or fricative / raised trill [ɻ̝] 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 *ʈʂam*^{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 (*ɲi-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. *ʈʂam*^{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 ʂ-, Bumthang Ura ʃ-, Bumthang Chume and Bumthang Ura ʂ^{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/ [ʂr] 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 *ʔkjaŋ* Hill 2019: 63).

The aspirated apical trilled fricative [ʂʳʰ][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 [ʂʰ].

(DDC18: 76); *hram* [r̥ʰam] ‘break down’ (vD15: 22) vs. *ram.shing* ‘beam’ (DDC18: 76); and *hri.ɗi-shing* ‘rolling pin’ (DDC18: 85) vs. *ri.ɓung* ‘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 *ʼri.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 ɾ̥- ~ 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 [r̥ʰ]. It occurs only in a limited number of lexemes, where in some cases, it alternates with a high register onset trill *ʼr-*, for example, in *ʼrap ~ hrap* ‘beeswax, wax’ (DDC17: 57), *ʼru ~ hru* ‘spinach’ (DDC17: 57), *ʼro.sheng ~ hro.sheng* ‘pine tree’, *ʼrog.po ~ hrog.po* ‘ant’ (DDC17: 58), *ʼrot ~ 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 *ʼrang* ‘balance, scales’ (DDC17: 58), *ʼrau* ‘hard’ (DDC17: 58), and *ʼrung.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 *ʐiʔ*^{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 鋃 *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 *neʔ*^{35}, DkW & DkB *ŋi*^{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 *khaʔ*^{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.

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[116] Cf. also Chinese 卵 *lwanX* < *k.r^{ʕ}orʔ ‘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.gər* ‘heart’ with ‘heart’ a compound including ‘stone’.

(446) ‘sweet’ DkM & DkD *ŋuk^{35}.po^{53}*, DkW & DkB *ŋok^{35}.pu^{53}*, Kt *nyok*, Kh *nyog.ba*, Tib *ñog-pa* ~ Tib *mṅar-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* < *mˤraj?, 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}.dze^{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.sʲi ~ Kh *da.sum*, Bt *du.sum* (vD15, DDC18) < POEB *da.sum ~ Tib *da-naṅ* ~ *de-riṅ*

(455) ‘day before yesterday’ DkM *thɐk^{35}.ɕim^{53}*, DkD *thɐk^{55}.ɕɐm^{53}*, DkW & DkB *thɐk^{55}.ɕom^{53}* ~ Kh *thɐn.la*, BtU *thɐ.ngɐr.ma*, BtC *thɐr.ma* ~ Tib *kha-ñin* ~ *kha.saṅ*

(456) ‘next year’ DkW & DkB *mrɐn^{35}*, Dz *mrɐn* (DDC17:65) < PDD *mren ~ Bt *na.mung*, Kt *na.mung* < POEB *na.muŋ ~ Tib *saṅ-phod*, *phyi-lo*

(457) ‘autumn’ DkM & DkW *to^{55}.nɐ^{31}*, DkD & DkB *tɔn^{55}.tɐ^{53}*, Dz *tɔn* < PDD *ton ~ Bt *gwan*, Kt *gwan* < POEB *g^{w}an ~ Tib *sɐr-kha*

(458) ‘leg’ DkM & DkD *lɐ^{35}.mɐʔ^{53}*, DkW *li^{35}.min^{55}*, DkB *li^{35}.mɐn^{53}*, Dz *le.mɐ ~ le.mɐn* < 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 *khaʔ^{53}.lum^{53}*, DkW & DkB *kha^{53}.lum^{53}*, Dz *kha.lum*[117] < PDD *k^{h}a.lum ~ Kt *khau.ti*, BtU *tɐ*, BtC *khau.tɐ*[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.gɐ* < POEB *jo ~ DkM, DkD, DkW & DkB *jeŋ^{35}*, Dz *yɐng*, Tib *g.yaṅ-mo ~ g.yaṅ-dkar*, Japhug rGy *qɑzo* < *(qa-)jaŋ < PB *g-jaŋ, Chi 羊 *yang* < *ɢaŋ ~ Tib *lug*[119]

(462) ‘tail’ DkM & DkD *khlɛʔ^{53}*, DkW & DkB *khrɐk^{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}.thɐʔ^{53}*, DkD *kok^{35}.tɐ^{53}*, DKW & DKB *go^{35}.tɐ^{55}*, Dz *gog.tɐ*, 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 *pɐ^{35}*, DkW *bi^{35}*, DkB *bɐ^{35}*, Dz *bɐ* < PDD *be (cf. POEB (467) *bot ‘they (3pl)’) ~ Kh *gon*, Kt *gon*,

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[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}*jo:ʔ* (MM92) and Kt ^{L}*jo:ʔ* (MM92), but DDC18 does have Bt *yok* ‘ewe’.

Bt *gon* (vD15) < POEB *gon[120] ~ Bt *khit* [kʰjit] (vD15:27), Kh *khit*, Kt *khit*, Tib *khyod* 'you (2sg)' < PB *kʰjot[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].raʔ[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].raʔ[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 *kʰit* 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 *kʰjot '3sg (anaphoric)' > POEB *kʰit '3sg (anaphoric)' but Tib *khyod* '2sg'; PB *kʰwet '3pl (regular)' > Kh *gwe(h)* '3pl (regular)' but Tib *khyed* '2pl'.

[122] Cf. the plural pronoun marker (inclusive) DkM & DkD *-raʔ[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 *kʰit* is an anaphoric third person singular pronoun. While *kʰit* (< Proto-Bodic *kʰjot '3sg (anaphoric)') and *gwe* (< Proto-Bodic *kʰwet '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 *zus.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-śed*?), 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 *ɻuk.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 *nɐ*, Kh *nɐ*, Kt *nɐ*, BtC *nyi*, Tib *nyi-ma* < PCB *nʲi < PB *ni, Chi 日 *nyit* < *C.nik, OBur *niy* (Hill 2019:202)

(492) ‘black’ Dz *mlɐŋ.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 *nɐ*^{35}*.wa*^{53} ~ DkW & DkB *ŋo*^{35}*.ɕuɒ*^{55} ~ Dz *nom.shɐng* ~ BtU *mik.pa*, BtC *mik.pat* ~ *’mik.pat*, Kt *’muk.pa*, Tib *rmig-pa* < PB *(r)mik.pa

(495) ‘hungry’ DkM & DkD *prɐm*^{35}, Dz *brɐm nɐ* < 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 *ŋɐr*^{35} ‘buy’ (< *ŋɐ*^{35}), DkW *ŋɐu*^{35} ‘buy’ (< *ŋɐ*^{35}), DkB *ŋiu*^{35} ‘buy’ (< *ŋɐ*^{35}), Dz *ngɐ* ‘buy’, Tib *brña* < *brṅʸa ‘borrow’ ~ Kh *ngi*, Bt *’ngüi* (vD15), Kt *ngui*, Tib *dṅul* < 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:*^{35}*.mo*^{53}, DkW & DkB *ʑo*^{35}*.mo*^{53}, Dz *zhok.mo* ~ Kt *no.mɐ* ~ *no.mi* ~ Kh *no.mɐt*, Bt *no.mɐt* (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 *mlɐ̂n-kya* (Hildebrandt 2004: 84).

(504) ‘small’ DkM & DkD *priu*^{53}, DkW *ɓrɐu*^{55}.*ɣu*^{55}, DkB *ɓriu*^{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.ɓu*, DkT *krai.ɓu* < PDD *krai.bu ~ Kt *khɐ.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 *ɻot* (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 *phrɑ*^{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 *tɕhɑ*^{55}.*tɕu*^{55}, DkB *tɕɑ*^{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-kiṅu*, 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 *ɐ ~ 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 ɐ thɐs* ‘Are you tired?’ (Liljenberg 2006: 7), *ja ḥthuṅ-lɐ ɐ yin* ‘Will you drink tea?’ (Liljenberg 2006: 5), *ɓdɐ-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 *ʣur*^{35}, Tib *ḥphyur-ba* ~ Kt *ju*, Tib *rgyun*

(519) ‘dry’ DkM & DkD *cem*^{55}*.pha*^{53}, DkW *kɐm*^{55}*.ŋi*^{55}, DkB *kɐm*^{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 *ŋɐʔ*^{53}, Dz *nge.pa ~ ngi.pa*, Tib *rṅul* ~ Bt *tshat.pa*, Kt *tshat.pa*, Tib *tshad-pa*

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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 *’ne*, Tib *mñe-ba*

(524) ‘front’ DkM & DkD *ŋeʔ*^{35}, DkB *ŋ̊en*^{55}, DkW *ŋ̊i*^{55}*.ka*^{55}, Dz *nyi.kha* ~ *’nyi.ka*, Tib *sṅon* ~ 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 *ɛat*^{53}, Dz *shad*, Tib *bśad-pa* ~ Kh *lap*, Kt *lap*, Bt *lap* (vD15), Tib *lab-pa,* Chi 諶 *dep* < *l$^{\varsigma}$ap ‘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 *’mat*, BtC *’mat*, Tib *smad*

(531) ‘shake’ DkM, DkD & DkB *phrik*^{53}, Tib *sprug-pa* ~ Kt *’yu*, 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 *ŋa* 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 *tu-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 *ŋo̤ŋ⁴².tɛ²².la²²* ‘black’ ~ *ŋuŋ²²ti²²* ‘black’ (IT21, but Kh *ŋun²⁴.ti⁴⁴.lʌ²¹* ‘green’ IT21) < PB *ŋʲon, WBur *ñ̃ñui* < *ṅyuiw, Lashi *ŋja:uV* ‘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 *ŋ̊uŋ³⁵.po⁵³*, DkB *ŋ̊uŋ³⁵.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 *zi:³⁵.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 *zɐʔ*^{35}, DkW *zɐ*^{35}*.do*^{35}, DkB *zɐt*^{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 *zʲ- as source of Bodish *ź-*, in addition to *lʲ, *rʲ, 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 *h̥-* precedes a fricative, lateral, or *r*, a dental stop is inserted between *h̥* 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 *-ɘ*, 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 *-ɘ* (§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 -*ɐ* 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 *sjɐn* < *ser ‘fresh’ (= ‘new’) and 八 *pɐat* < *pˤret ‘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 *-ɐ*, for example, Kyirong has [pɛj.bá] ‘frog’ (Hedlin 2011: 23), Lhasa [p^{h}ɛ̱ː] ‘wool’ and Lhasa [kɛ̱ː] ‘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]ʿuk ‘poison’ and 篤 *towk* < *tʿuk ‘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, *rɐk* ‘louse’, *thɐng* ‘tree’, *nɐng* ‘heart’, *hɐm* ‘house’, *nɐr.lo* ‘year’, *mɐk* ‘eye’, *mɐn* ‘ripe’, and *a.mɐn* ‘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 *-ɐn* 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 *lɐ^{35}.ŋe^{53}*, DkW & DkB *lɐ^{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, ལྟོབ་ཆ་ *ʈop.cʰa* 'food' (DDC05: 55), Dakpa Tawang *top.chay* (W02: 77) and དཀ་མ་ལེང་ *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., ཙམ་ *tsham* 'hair (on the head)' (DDC05: 10), Tshangla *tsʰam* and བི་དག་ *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་ *ʈa.də* 'kill' (DDC05: 84), Tib *bsad-pa*; ད་ *də* 'salt' (DDC05: 57), Tib *tshwa*; ཏོ་ཁ་

[129] Note that the oldest reference has the spelling *guṅ-duṅ* (Bodt 2012: 79, 331).

to.wə ‘three’ (DDC05: 65), Tib *gsum*; དབེན་ *də.men* ‘sister’ (DDC05: 67), Tshangla *za.min*; and སྐེ་ *ʼde.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, ཚར་ཀ་ *tsʰir.kə.lə* ‘yellow’ (DDC05: 77), Tib *ser.po*; ཚེར་བ་ *tsʰer.ba* ‘hail’ (DDC05: 88), Tib *ser.ba*; ཚད་ ‘weighting scale’ (DDC05: 53), Tib *sraṅ*; and ཚིར་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, ཀྲད་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*; པི་ཡ་ *pi.jə* ‘give’ (DDC05: 50), Dzala *bi*, Kurtöp *bi* but Tibetan *sbyin-pa* ~ *byin-pa*; པི་ *pi* ‘flour’, Dzala *phe*, Kurtöp *phi* but Tibetan *phye*; བིན་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 ཁྲད་ *kʰat* ‘go’ (DDC05: 113), Tibetan *ḥgal-ba* ‘cross over’; ལ་བྲད་ *la.bat* ‘cotton’ (DDC05: 35), Tibetan *kha.bal*; and ཀྲད་ *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 them, whether they speak Dakpa 'proper' or another variety, they all

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[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*).

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 [paŋtɛʰɛn], 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 *tɕʰɐ.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.rɐ*

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* < *hmras, Chi 糲 *lat* < *(mə-)rˁat ~ Kh *i.pa*, BtC *'i.ba*, Kt *'i.pa* 'food, cooked rice' ~ DkM & DkD *dɐm*^{35}, DkW & DkB *dɐp*^{35}, Dz *dɐp*

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 *rɐ* (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 *prɐ*$^{.35}$, DkW & DkB *brɐ*^{35}*.mo*^{55}, Dz *brɐ.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:^{55}.pre^{55}*, DkW *tɕa^{55}.bre^{55}* DkB *dza^{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 *nɐ*^{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 (黄牛)', DkB *pa*^{35}*.ri*^{53} 'yellow cattle (黄牛)', 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 *qazo* < *(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.

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[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) *ᴸjok* (MM92) or Bt (Ck) *ᴸjo:ʔ* (MM92) and Kt *ᴸjo:ʔ* (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 *ɦjo-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* ~ *ɦthud*

(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 *jɐw.zom*, Dz *yo.zhɐ* ~ *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.zhɐ* ~ *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'.

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A TIBETAN PASSIVE CONSTRUCTION IN THE OLD TIBETAN *RĀMĀYAṆA*

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INTRODUCTION

In noting that the Tibetan grammatical tradition lacks a notion corresponding to the 'subject' of Occidental grammar, Tournadre remarks that this is appropriate, since the notion of the subject "est particulièrement inadéquat pour décrire la structure de leur langue" (1996, 74). Nonetheless, by treating the sole arguments of intransitive clauses and the agents of transitive clauses alike, the converb ནས་ *-nas* vindicates the use of the term 'subject' in this part of Tibetan grammar (Hill 2022).[1] Since a more detailed argument for this pattern is already available, it here suffices to provide one example each for the cross-clausal identification of a transitive agent with an intransitive sole argument (example 1) and of a sole argument with an agent (example 2).

In example 1, the agent of འཇུས་ *ḫǰus* 'take hold' is coreferenced with the sole argument of འཛེགས་སྟེ་སོང་ *ḫdzegs-ste soṅ* 'ascend' (literally 'climb and go') and the sole argument of ཕྱིན་ *pyin* 'arrive'.

(1) ཉར་པ་སོང་བ་འི་ཕྱི་བཞིན། གཅིག་གི་མཇུག་མ་ལ་གཅིག་འཇུས་ནས། ཐག་ལ་འཛེགས་སྟེ་སོང་ནས། ཕྱགས་ཕྱིན་ན།

ṅur-pa soṅ-baḫǐ pyi-bźin /
duck go away-NMLZ.GEN approach-CONT /

gčhig-gǐ mǰug-ma-la gčhig
one-GEN tail-ALL one

[1] The converb ནས་ *-nas* to mark subject continuity pairs with the verbal noun པ་དང་ *-pa-daṅ* to mark a change of subject. Studies of this switch reference pattern include Andersen 1987, Zadoks 2000, Zadoks 2002, Haller 2009 and Beer 2019. The discussion here relies in particular on Zadoks 2002.

ɦǰus-nas / brag-la ɦdzegs-ste
grab-CVB.ELA / rocky.pass climb-CVB.SF

soṅ-nas / pugsu pyin-na /
go.away-CVB.ELA / extreme.TRM approach-CVB.LOC /

[The three monkeys] followed the ducks, each one taking hold of the tail of one [bird] and (ནས་ *-nas*), they ascended the rock and (ནས་ *-nas*) arrived at its extreme end. (Rama A 220-221)

Example 2 is somewhat complex, but for our purpose the essential is that ཁྲོས་ *khros* 'be angry' is intransitive, and སྐྱེ་ *bor* 'caste' is transitive, and that Prahasti is both the one enraged—the sole argument of a transitive clause—and the one who curses—the agent of a transitive clause.

(2) ཐུ་ཧ་སྟེ་ཁྲོས་ནས། « ང་ཡང་ཁན་བར་དགའ་སྟེ་དངོས་གྲུབ་ཐོབ་ན་སྐྱེ་འདོད་ན « རྒྱ་འདོད་ » ཅེས་བྱས་པས་ཆོག་མོད།། « བན་ད་སྨིའུ་དང་འདྲའ་བ » ཞེས་སྨྲོན་བརྗོད་ཏེ་དགོས།། ཁྱེད་ནས་ཆེག་ན་སྨིའུ་ཀྱིས་བརླག་པར་སྣུར་ཆིག! » ཅེས་དཔོད་པ་བོར་རོ།།

Pra-ha-ste khros-nas /
Prahasti be.angry-CVB.ELA /

« ṅa yaṅ phan-bar
« me ...FOC assist-NMLZ.TRM

« myǐ ɦdod » dgaɦ-ste
« NEG want » be.delighted-CVB.SF

dṅos-grub byin-na
siddhi give-CVB.LOC

myi ɦdod-na čhes byas-pas čhog mod //
NEG want-CVB.LOC QUOT do-NMLZ.AGN may necessary //

« ṅan-pa spreɦu-daṅ ɦdraɦ-ba »
« villainous monkey-ASS seem-NMLZ »

źes *skyon brǰod* *ǰi* *dgos* *? //*
QUOT criticise what reason ? //

// khyed *nam* *čhig-na* *spreḫu-gyǐs*
you when ART-LOC monkey-AGN

brlag-par *gyur-čhig ! »* *čhes*
destroy-NMLZ.TRM will-IMP ! » QUOT

dmod-pa *bor-ro //*
curse cast-FIN //

Prahasti became angry and (ནས་ *-nas*) said, ‘Even with me happy to assist, if I give the siddhi, if you don’t want it, it suffices to say that you don’t want it. Why is it necessary to speak ill, saying “villainous monkey” and such? May you once be destroyed by a monkey!’ So he cursed them. (Rāma A 45-47)

Although the pattern in which ནས་ *-nas* marks cross-clausal subject continuity appears robust, there are examples that seem to contradict this hypothesis. In example 3, there is an explicitly marked agent on either side of ནས་ *-nas*. In the first clause, the agent is ‘a great sea’, and in the second clause king Rāma is the agent.

(3) ཡུལ་ལང་ཀ་དུ་རར་མཆིས་ན།། ཤུལ་དུ་རྒྱ་མཚོ་ཆེད་པོ་ཞིག་གིས་ཁུམས་ནས།
« སྤྲེ་ཧུ་མ་ཀུ་དང་། དམ་སི་གཉིས་ཟམ་པ་ཐོག་ཤིག་ »ཅེས། རྒྱལ་པོ་ར་མ་ནས་བཀའ་སྩལ་པ་དང་།

yul *Laṅ-ka-pu-rar rgya-mtsho* *mčhis-na // śul-du*
land Laṅkāpura.TRM come-LOC // tracks-TRM

rgyam-tsho *čhed-po źig-gis* *khums-nas /*
sea big ART-AGN obstruct-CVB.ELA /

« spreḫu Ma-ku-daṅ /
« monkey Maku-ASS /

Dam-sǐ *gñis* *zam-pa* *thog-śig »*
Damsi two bridge set.up-CVB.IMP »

čhes */ rgyal-po* *Ra-ma-nas*
QUOT / king Ramaṇa.AGN

bkaḫ *stsald-pa-daṅ* /
order command-NMLZ-ASS /

When they went to Laṅkāpura, en route a great sea obstructed them and (ནས་ *-nas*) king Ramaṇa ordered: 'Monkeys Maku and Damsi, build a bridge!' (Rāma A 287-288)

The goal of the present article is to establish that such passages are not true but only apparent counter-examples to the claim that ནས་ *-nas* marks cross-clausal subjecthood. The approach of this argument is to break down the categorical opposition between a clear example of subject continuity like example 1 and a clear counter-example like example 3, by filling in a range of intermediate phenomena. Section 2 presents the first step of this journey, ནས་ *-nas* following *verba sentiendi*. These cases confirm the pattern of cross-clausal subjecthood, but also provide us with the machinery necessary to explain the apparent exceptions. In section 3 we take the next step, viz. examples that can be understood as free indirect discourse. In essence, the examples are the same type as seen in section 2, but with the *verbum sentiendi* suppressed. Next, in section 4 we explore an inverse construction. Even if syntactically speaking it is not possible to regard a *verbum sentiendi* as having been omitted, it remains nonetheless the case that ནས་ *-nas* tracks the 'subject', that is the protagonist of the happening, even if this protagonist is the syntactic patient or adjunct rather than the agent. Finally, in section 5 we are able to recognise that even the most glaring apparent counter-examples to the pattern of cross-clausal subject marking, because they can be analysed as passives—a subtype of the inverse construction—do not violate but rather elaborate the overall pattern.

In order to ensure that we investigate a single linguistic system, the evidence examined here comes exclusively from manuscript A of the Old Tibetan *Rāmāyaṇa* (Jong 1989).[2]

[2] Manuscript A has the shelf mark IOL Tib J 0737-1.

ནས་ -*NAS* FOLLOWING *VERBA SENTIENDI*

We begin with the innocuous and unsurprising observation that ནས་ -*nas* may follow *verba sentiendi*. In examples 4 and 5, the subject perceives something and then remarks on it, in speech or thought.

(4) ཟུ་ཧ་སྟེས་མཐོན་ནས། ལྷ་འི་བུ་རྣམས་ལ་སྨྲས་པ།།

Pra-ha-stes mthoṅ-nas // lhaḥĭ bu rnams-la smras-pa //
Prahaste.AGN see-CVB.ELA // god.GEN son PL-ALL say-NMLZ //

Prahasti saw it and (ནས་ -*nas*) said to the Devaputras ... (Rāma A 42)

(5) རྒྱལ་པོ་ར་མ་ནས། གསན་ནས ། དགོངས་པ་དགོངས་པ།།

rgyal-po Ra-ma-nas / gsan-nas //
king Ramana.AGN / hear.HON-CVB.ELA //

thugs-la dgoṅs pa //
mind.HON-ALL think.HON-NMLZ //

King Rāma heard it and (ནས་ -*nas*) thought to himself... (Rāma A 376-378)

Verba sentiendi before ནས་ -*nas* also occur in a certain three clause pattern in which an occasion is marked with ན་ -*na*, a perception on the part of the subject with ནས་ -*nas*, followed by the subject's reaction in consequence of this observation. In example 6, the occasion marked with ན་ -*na* is the three monkeys growing thirsty after running about. Their perception, marked with ནས་ -*nas*, is of two ducks flying. As a consequence of their perception, they conclude that by following the ducks they will find water to drink.

(6) སྤྲེའུ་གསུམ་གྱིས་མ་ཡིན་དགུང་ཡིན་ན།...དྲུར་པ་གཉིས་འཕུར་ཏེ་སོང་བ་མཐོང་ནས། ཆུ་ཡོད་པ་ན་ཚུ་ཡོད་པར་དཔྱད་དེ།།

spreḥu gsuṃ-gyis ma pyin dguṅ pyin-na / …
monkey three-AGN low attain high attain-CVB.LOC / …

ṅur-pa gñis ḫpur-te

duck two fly-CVB.SF

soṅ-ba mthoṅ-nas / bya yod-pa-na čhu
go-NMLZ see-CVB.ELA / bird exist-NMLZ-LOC water

yod-par dpyad-de //
exist-NMLZ.TRM figure-CVB.SF //

When (ན་ -*na*) the three monkeys went everywhere [and got thirsty] ... they saw two ducks fly away (ནས་ -*nas*) and they figured that where there are birds, there is water. (Rāma A 218-220)

The three monkeys are the subject of སྤྱིན་ *pyin* 'go', མཐོང་ *mthoṅ* 'see', and དཔྱད་ *dpyad* 'figure'. As such, the example fully conforms to our understanding of ནས་ -*nas* as a marker of cross-clausal subject continuity.

In example 7, the occasion marked with ན་ -*na* is Vālin's wife looking on at her husband's battle with Sugrīva. Her perception, marked with ནས་ -*nas*, is of her husband 'going boom' when he is (unbeknownst to her) struck by Rama's arrow. In reaction to her perception, she draws near to her husband to investigate.

(7) འབའ་ལི་ཆུང་མས་བལྟས་ན། བདག་གི་ཁྱོ་རྡུད་ཅེས་སོང་བར་མཐོང་ནས། དྲུང་དུ་སྤྱིན་ཏེ་

Ḫbaḫ-lĭ čhuṅ-mas bltas-na /
Vālin wife.AGN look-CVB.LOC /

bdagĭ khyo rdud čhes soṅ-bar
me.GEN husband boom QUOT go-NMLZ.TRM

mthoṅ-nas / druṅ-du pyin-te
see-ELA / near-TRM go-CVB.SF

When (ན་ -*na*) Vālin's wife looked on, she saw that my husband went boom and (ནས་ -*nas*) she drew near ... (Rāma A 204)

Vālin's wife is the subject of བལྟས་ *bltas* 'look', མཐོང་ *mthoṅ* 'see', and སྤྱིན་ *pyin* 'go'. The example again fully conforms to our understanding of ནས་ -*nas* as a marker of cross-clausal subject continuity.

OMISSION OF THE VERBUM SENTIENDI BEFORE ནས་ *-NAS: FREE INDIRECT DISCOURSE*

The same three clause pattern—occasion marked with ན་ *-na*, perception marked with ནས་ *-nas*, followed by the subject's reaction—can occur with the *verbum sentiendi* omitted from the second clause. By presenting the perspective of a particular character, but without a verb directly signalling that this is happening, such examples are instances of free indirect discourse.

In example 8, the first clause presents the occasion, the brothers' arrival at the river. The second clause indicates what the subjects perceived on this occasion, the black river. The third clause gives the subject's reaction to their perception, in this case Lakṣmaṇa'ṣ attempt to drink.

(8) ལུང་པ་གཅིག་གི་མདོར་ཕྱིན་ནས། ཆུ་ནག་པོ་ཞིག་བབ་ནས།། གཉུང་སྐྱེམས་ཏེ་བཐུང་ཞེས་བགྱིས་པ་དང་།

luṅ-pa gčhig-gi mdor pyin-naḥ / čhab nag-po źig
valley one-GEN confluence.TRM arrive-CVB.LOC / river black ART

ḥbab-nas // gčuṅ skyem-ste bthuṅ źes
fall.PRS-CVB.ELA // younger.brother be.thirsty-CVB.SF drink QUOT

bgyis-pa-daṅ /
do-NMLZ-ASS /

When (ན་ *-na*) they arrived at the confluence of a valley, a black river fell [there] and (ནས་ *-nas*) the younger brother, being thirsty, made as to drink. (Rāma A 171-173)

Because the river, the sole argument of བབ་ *ḥbab* 'fall' and Lakṣmaṇa, the agent of བཐུང་ *bthuṅ* 'drink', are not the same, such an example appears to contradict the generalisation that ནས་ *-nas* encodes subject continuity. In fact, this case illustrates a subtle manifestation of this pattern. The converb ནས་ *-nas* indicates coreference of the perceiver in the second clause, i.e. the brothers, with the agent of the third clause.

In example 9, the first clause presents the occasion, the Indian farmer, having discovered a copper pot in his field and having opened it, looks inside. The second clause indicates what the subject perceived on this occasion, that the beautiful baby Sīta was there inside the pot. The third

clause gives the subject's reaction to his perception, in this case that the farmer raised the abandoned child whom he had found.

(9) རྒྱ་གར་གྱི་ཞིང་པས། [...] བའི་ནང་ནས་སྡུད་ནས། བཟུས་ན། བུ་མོ་བཟང་ཞིང་མཛེས་ལ་སྡུག་པ་ཞིག །
དཔྱིད་བཀྲའ་ཞིང་འདུག་ནས། གསོས་ཏེ།

Rgya-gar-gyĭ źiṅ-pas/ [---] baḫi
India-GEN farmer.AGN / [---] NMLZ-GEN

naṅ-nas pyuṅ-nas //
inside-ELA remove-CVB.ELA //

bltas-na / bu-mo bzaṅ-źiṅ
look-CVB.LOC / girl good-CVB.CONT

mdzes-la sdug-pa źig /
beautiful-CVB.ALL fair-NMLZ ART /

dmyĭg bkraḫ-źiṅ ḫdug-nas / gsos-te /
eye radiant-CVB.CONT sit-CVB.ELA / raise-CVB.SF /

An Indian farmer, having opened [the copper pot], when (ན་ *-na*) he looked, there was a girl, good, beautiful and fair, her eyes sparkling, and (ནས་ *-nas*) he raised her. (Rāma A 63-64)

Because baby Sīta, the sole argument of འདུག་ *ḫdug* 'sit' and the farmer, the agent of གསོས་ *gsos* 'raise' are not the same, this example again appears to contradict the generalisation that ནས་ *-nas* encodes subject continuity. In fact, the converb ནས་ *-nas* indicates coreference of the perceiver in the second clause, i.e. the farmer, with the agent of the third clause.

In example 10, the first clause presents the occasion, Hanumān looking for the queen. The second clause indicates what the subject perceived on this occasion, that Sīta was in a castle guarded by an army. The third clause gives the subject's reaction to his perception, in this case that Hanumān jumped in through the window.

(10) ལྷ་མོ་གང་ན་འདུག་པ་བརྟགས་ན།…སྡུད་ཏེ་།་དམགིས་འཚོ་ཞིན་འདུག་ནས།།
ཏ་ནུ་མན་ཏ་འཕར་ཨཕབ་ནས་།་མཐོངས་ནས་མཆོང་སྟེ།

lha-mo gaṅ-na ɦdug-pa brtags-na /
queen where-LOC reside-NMLZ examine-CVB.LOC /

… stsal-te / dmagis ɦtsho-źiṅ ɦdug-nas /
… put-CVB.SF / army.AGN. guard-CVB.CONT reside-CVB.ELA /

Ha-nu-man-ta ɦjab ɦjab-nas / mthoṅs-nas
Hanumān sneak-CVB.ELA / window-ELA

mčhoṅ-ste /
jump-CVB.SF /

When (ན་ *-na*) [Hanumān] spied where the queen was, having been put [in a castle], she sat with an army that was guarding her, and (ནས་ *-nas*) Hanumān approached secretly and jumped in through the window. (Rāma A 243-245)

Because Sīta, the sole argument of འདུག་ *ɦdug* ‘sit’ and Hanumān, the agent of both འཕར་ *ɦjab* ‘sneak’ and མཆོང་ *mčhoṅ* ‘jump’, are not the same, this example again appears to contradict the generalisation that ནས་ *-nas* encodes subject continuity. In fact, the converb ནས་ *-nas* indicates coreference of the perceiver in the second clause, i.e. Hanumān, with the agent of the third clause.

In example 11, which continues the narrative from example 7 above, Vālin’s wife investigates what had befallen her husband.

(11) དྲུང་དུ་ཕྱིན་ཏེ་བལྟས་ན། རྒྱལ་པོ་ར་མ་ན་འི་མདའས་ཐེག་པར་ ུར་ནས། « སྨྲས་པ།… » ཞེས་མཆི་འོ།

druṅ-du pyin-te bltas-na /
near-TRM go-CVB.SF look-CVB.LOC /

rgyal-po Ra-ma-na-ɦĭ mdaḥs
king Ramana-GEN arrow.AGN

phog-par gyur-nas /
hit.PST-NMLZ.TRM become-CVB.ELA /

smras-pa / «…» źes mchi-ḫo /
say-NMLZ / «…» QUOT come-FIN /

When (ནས་ *-na*) [Vālin's wife] drew near, taking another look, it turned out he had been hit by king Rāma's arrow and (ནས་ *-nas*) she said: '...' (Rāma A 204-207)

The first clause presents the occasion: Vālin's wife draws near to her husband. The second clause indicates what the subject perceived on this occasion: his wife perceives that Vālin had been hit by Rāma's arrow. The third clause gives the subject's reaction to her perception: in this case, Vālin's wife admonishes her dying husband. In terms of case marking, the subject of the clause preceding ནས་ *-nas* appears to be Rāma's arrow, whereas the subject of སྨྲས་ *smras* 'say' in context must be Vālin's wife herself. Even if Vālin, rather than the arrow that hits him, is understood as the subject of the second clause, there is still a discontinuity between Vālin as the subject of the second clause and his wife as the subject of the third clause. Here again, the converb ནས་ *-nas* indicates co-reference of the perceiver in the second clause, i.e. Vālin's wife, with the agent of the third clause.

THE INVERSE CONSTRUCTION

Typically, more animate beings act on the less animate. People kill and eat animals more often than animals kill and eat people. The grammars of many languages reflect these natural asymmetries (Dahl 2008). I propose that in the examples treated in this section the converb ནས་ *-nas* indexes that a less animate being has acted upon a more animate being. These atypical events are termed 'inverse'.[3]

In example 12, the subject of འོངས་ *ḫoṅs*, immediately prior to the marker ནས་ *-nas*, is a letter and Sugrīva is the subject of the verb that follows ནས་ *-nas*. As such, ནས་ *-nas* does not appear to mark a continuity of subject. Unlike in examples 8-11, the second clause cannot be considered as a verbatim record of of Sugrīva's perception, since, if it were, it would say 'my' (as in example 7) rather than 'Sugrīva's'.

[3] Within Trans-Himalayan linguistics, such inverse situations are best known because of the special morphological marking that they receive in both Kiranti and rGyalrongic languages (Jacques and Antonov 2014).

(12) མདའ་ལ་ཡི་གེར་ཐེས་ཏེ་འཕངས་པ། མཐིན་བཟངས་ཀྱི་དྲུང་དུ་འོངས་ནས།།

རྒྱལ་པོ་ར་མ་ན་འི་མདའ་ཡིན་བར་ངོ་ཤེས་ནས།།

mdaḫ-la *yĭ-ger* *bris-te*
arrow-ALL letter.TRM write-CVB.SF

ḫphaṅs-pa / *Mgrin-bzaṅs-kyĭ*
shoot.PST-NMLZ / Sugrīva-GEN

druṅ-du *ḫoṅs-nas //* *rgyal-po Ra-ma-na-ḫĭ*
near-TRM come\PST-CVB.ELA // king Ramana-GEN

mdaḫ *yĭn-bar* *ṅo* *śes-nas/*
arrow be-NMLZ.TRM face know-CVB.ELA /

[Rama] wrote a letter on an arrow and shot it, it came down at Sugrīva's feet and (ནས་ *nas*) he recognised that it was king Rama's arrow. (Rama A 209-210)

The first clause presents the occasion; Rama shoots an arrow with a letter attached to it. The second clause indicates how the subject is affected by this occurrence; the letter lands near Sugrīva. The third clause gives the subject's reaction to the situation; here Sugrīva notes that the arrow is one of Rama's. The converb ནས་ *-nas* indicates coreference of the affected party in the second clause, i.e. Sugrīva, with the agent of the third clause.

Thus, the free indirect discourse construction described in section 3 shades into an inverse construction. The mechanics are like this—our sympathies as a human reader are immediately drawn to the animate party in any scenario. So, even if syntactically speaking it is not possible to regard a *verbum sentiendi* as having been omitted, it remains nonetheless the case that ནས་ *-nas* tracks the 'subject', that is the protagonist of the happening, even if this protagonist is the patient or adjunct rather than an agent.

In the first clause of example 13 Daśagrīva is affected by the arrival of news. In the second clause he reacts to this news.

(13) « སྤྲེ་ཧུ་མ་རུངས་པ་ཞིག་འོངས་སོ་ » ཞེས།

མདའ་ཕྲི་བ་ནི་སྐན་དུ་གདའས་ནས། འབངས་ལས་མང་མོ་ཞིག་འཛིན་དུ་བཏང་ན།

spreḫu ma ruṅs-pa źig ḫoṅs-so źes /
monkey NEG suitable-NMLZ ART come\PST-FIN QUOT /

Mdaḫ-śa-grĭ-ba-ḫi sñan-du gdaḫs-nas /
Daśagrīva-GEN ear-TRM is-CVB.ELA /

ḫbaṅs-las maṅ-mo źig ḫdzin-du
subjects-ABL many ART apprehend-CVB.TRM

btaṅ-na /
send\PST-CVB.LOC /

It came to the ears of Daśagrīva that an evil monkey had come and (ནས་ *-nas*) he sent many of his subjects to capture him. (Rāma A 259-260)

The news, the sole agent of གདའས་ *gdaḫs* 'be', and Daśagrīva, the agent of བཏང་ *btaṅ-na* 'send', are distinct, so ནས་ *-nas* appears not to indicate a continuity of subject, but what it does indicate is a coreference of the affected party in the first clause, Daśagrīva, with the agent of the second clause.

The first clause of example 14 presents the occasion, Śūrpanakhā speaks to her brother Daśagrīva. The second clause indicates what has affected the subject, her advice to abduct Sīta. The third clause gives the subject's reaction to circumstance, he is delighted and assents to the suggestion.

(14) ཕྱིང་པོ་མདའ་ཕྲི་བ་ལ་གསོལ་བ།།… ར་མ་ན་ལས་དབྱོག་པ་འི་རིགས་པར། རྒོལ་བཏབ་ནས།།

མདའ་ཕྲི་བ་དགའ་སྟེ།། « ཐོག་ཏོ་ » སྐམ་ནས།། ཟློན་པོ་མ་རུ་ཅོ་ལ་ཕོ་ཉར་ཐོག་པ་དྲིས་པ་ལས།།

myĭṅ po Mdaḫ-śa-grĭ-ba-la gsol-pa //
brother Daśagrīva-ALL submit.PST-NMLZ //

… Ra-ma-na-las dprog-paḫĭ
… Ramaṇa-ABL rob.FUT-NMLZ.GEN

rigs-par / *gros* *btab-nas*
suitable-NMLZ.TRM / advice fix.PST-CVB.ELA //

Mdaḫ-śa-gri-ba dgaḫ-ste // *« prog-go »*
Daśagrīva pleased-CVB.SF // rob-FIN

sñam-nas *// blon-po*
think-CVB.ELA // minister

Ma-ru-tse-la jĭ *ltar* *prog-pa* *dris-pa-las* *//*
Marīcī-ALL what way.TRM rob-NMLZ ask-NMLZ-ABL //

[Śūrpanakhā] advised her brother that he ought to rob [the queen] from king Ramaṇa and (ནས་ *-nas*) Daśagrīva was delighted and thought: 'I shall steal her.'He asked his minister Marīcī how to rob her. (Rāma A 131-135)

Śūrpanakhā is the agent of སྒྲོས་བཏབ་ *gros btab-nas* 'advise' and Daśagrīva is the sole agent of དགའ་ *dgaḫ* 'be delighted'. The two are distinct, so ནས་ *-nas* appears not to mark cross-clausal subject continuity, but ནས་ *-nas* indicates coreference of the affected party in the second clause, i.e. Daśagrīva, with the sole argument of the third clause.

A *Leitmotiv* of the Rāma story is the goddess of speech sneakily ensuring that those evildoers who are entitled to a boon from the gods inevitably misstate their requests; example 15 is a case in point.

(15) རེ་ཤིག་ན་སྲིན་པོ་བུམ་རྣ་ཞེས་བྱ་བ། སྤུན་སེམས་ཐམས་ཅད་ལ་ཟ་བར་དངོས་གྲུབ་བསྒྲུབས་པ་ལས།།
ཪྻ་འི་དབང་པོས། ཚོག་ལ་དབང་བ་འི་ཪྻ་མོ་གཅིག་ཕྱིའི་ཐོར་ཏོ་ལ་ ུལ་ཏོ། གཉིད་ལོག་པར་ཕོ་གནང་ཞེས་བསྒྲུར་ནས། དུས་ཐམས་ཅད་དུ་གཉིད་ལོག་པ།

re śig-na *srin-po Bum-rna* *źes* *bya-ba //*
while-ART-LOC demon Many-Eared QUOT do-NMLZ //

spun sems-śan *thams-čhad-la*
fellow creatures all-ALL

za-bar *dṅos grub bsgrubs-pa-las* *// lhaḫĭ*
eat-NMLZ.TRM siddhi achieve-NMLZ-ABL // god.GEN

lhaḫĭ dbaṅ pos // *tshĭg-la* *dbaṅ-baḫi*
god.GEN power.AGN // speech-ALL have power.NMLZ.GEN

lha-mo gčhig *lceḫi*
goddess ART tongue.GEN

thor to-la sprul-to */ gñid log-par* *jĭ* *gnaṅ* *źes*
tip-ALL transform-FIN / sleep-NMLZ.TRM what grant\HON QUOT

bsgyur-nas */* *dus thams-śad-du gñid log-pa /*
change-CVB.ELA / time all-TRM sleep-NMLZ /

Once there was a demon named 'Many-Eared', who practised to acquire the power to eat all fellow creatures, but, by the power of the gods, a goddess of speech transformed onto his tongue tip and changed [his request] into 'would you allow me to sleep', whence he would sleep all the time.' (Rāma A 301-303)

The agent of the transitive verb བསྒྱུར་ *bsgyur* 'change' is the goddess of speech, but the sole argument of གཉིད་ལོག་ *gñid log* 'sleep' is the demon 'Many-eared'. So, there appears not to be a continuity in subject across the converb ནས་ *-nas*. Nonetheless, we can again analyse this example as an inverse situation. The demon 'Many-eared' is the affected party in the transformation of his words, and thus ནས་ *-nas* cross-references him as the affected party of the transformation and him as the sole agent of the sleeping.

Looking at the foregoing examples, the reader might object that in examples 14 and 15 both subjects of the supposedly inverse clause are not less animate than the affected party. Why should Śūrpanakhā be less animate than Daśagrīva or the goddess of speech less animate than the narcoleptic demon? These examples pose no problem for an inverse analysis, since even in a language with explicit inverse marking, such as Tshobdun rGyalrong, the inverse can be used to maintain 'topic continuity' by tracking the perspective of one character in a narrative (Sun & Shidanluo 2002: 89).

PASSIVES

We are now in a better position to understand example 3, repeated below with a revised translation as example 16. A subtype of the inverse construction can be regarded as a passive. Example 16 shows ནས་ *-nas* as marking the coreference of a patient and a sole argument.

(16) ཡུལ་ལང་ཀ་ཀུ་རར་མཆིས་ན།། ཤུལ་དུ་རྒྱ་མཚོ་ཆེད་པོ་ཞིག་གིས་ཐུམས་ནས།

« སྤྲེ་ཧུ་མ་ཀུ་དང་། དམ་སི་གཉིས་ཟམ་པ་ཐོག་ཤིག་ » ཅེས། རྒྱལ་པོ་ར་མ་ནས་བཀའ་སྩལ་པ་དང་།

yul Laṅ-ka-pu-rar mčhis-na //
land Laṅkāpura.TRM come-LOC //

śul-du rgya mtsho čhed-po źig-gis
tracks-TRM sea big ART-AGN

khums-nas / « spreḥu Ma-ku-daṅ /
obstruct-CVB.ELA / « monkey Maku-ASS /

Dam-sĭ gñis zam-pa thog-śig »
Damsi two bridge set.up-CVB.IMP »

čhes / rgyal-po Ra-ma-nas bkaḥ stsald-pa-daṅ /
QUOT / king Ramaṇa.AGN order command-NMLZ-ASS /

When they went to Laṅkāpura, they were obstructed en route by a great sea, so king Ramaṇa ordered: ‘Monkeys Maku and Damsi, build a bridge!’ (Rāma A 287-288)

Here, the sea is the overt agent of the second clause, clearly marked with the agentive case. If ནས་ *-nas* marks subject coreference, we expect that the ocean will be the subject of the verb in the following clause, but the ocean does not give the orders—not only would such an interpretation be absurd, the subject of the third clause is again overtly present and explicitly marked with the agentive case. The second clause is an inverse situation. An inanimate ocean is agent acting upon the animate army. The converb ནས་ *-nas* marks coreference of the patient as the affected party in the second clause with the agent in the third clause. The coreference marker ནས་ *-nas*, by treating the patient of the second clause as if it were the subject, here acts as a passive marker (Dixon 1994, 146).

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BOOK REVIEW

Travers, Alice. 2022. *Marching into View: The Tibetan Army in Historic Photographs* (1895–1959). Edition tethys, Potasdam, ISBN 978-3-942527-14-9

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Alice Travers, who readers of this *Bulletin* will recall for her seminal article on the marriage strategies of the Sikkimese elites,[1] has recently published another highly original work, a study of the Tibetan army through the archive medium of historical photographs. This is, in some senses, a long-overdue work. There are far more academic studies of, for example, the burial grounds of the Yarlung kings or the lives of 11–12th century founders of sectarian Buddhist lineages than there are about the Tibetan army. Indeed, even the fact that Tibet had an army has not always been clear to many outsiders, or even to modern inhabitants of the Tibetan plateau. That is in many ways, as Carole McGranahan has discussed,[2] due to the need for the exile community to emphasise particular aspects of their history at the expense of others. What Toni Huber called the "Green Tibetan" discourse,[3] and the exile government's strategy of claiming the moral high ground vis-à-vis China,[4] has meant that studies of Tibet have largely excluded, or at least glossed over, the role of the military in Tibetan history and society. But as this work illustrates, the Tibetan army created under the 5th Dalai Lama in order to protect the Buddhist government, enjoyed a

1 Alice Travers, "Les femmes dans le jeu diplomatique. Notes préliminaires sur les relations matrimoniales de la famille royale du Sikkim avec le Tibet (19e-20e siècles)". *Bulletin of Tibetology*, 2006, 42, pp.93-136.

2 Carole McGranahan, *Arrested Histories: Tibet, the CIA, and Memories of a Forgotten War*. Duke University press: Durham / London; 2010.

3 Toni Huber, "Green Tibetans: A Brief Social History". In F. J. Korom (ed.), *Tibetan Culture in the Diaspora*, Verlag der österreichischen Akademie der Wissenschaften: Wien; 1997, pp.103-119

4 Alex McKay, *Tibet and the British Raj: The Frontier Cadre 1904-1947*. Curzon Press: Richmond; 1997, p.182.

"high level of integration into Tibetan society" [p.194], even during the period of Qing suzerainty.

Travers has, over the last decade located and examined over 700 photographs depicting the Tibetan army and *Marching into View* reproduces 168 of these, including a small number in colour. Only a handful of them have previously been published. The reproduction quality is generally very good, which makes this a valuable resource for identifying various individuals and no doubt relatives and descendants of Tibetan soldiers will be among those keen to examine the portraits.

As it intends, this work draws attention to the value of archival photographs as an important historical source. But while visual anthropology and the study of the representation of Tibet have flourished in recent decades, it is clear that photography is not necessarily a neutral archive. Sir Charles Bell, the "Tibet cadre" officer most responsible for British Indian policy on the Tibetan frontier during his service as the Political Officer Sikkim (1908–1921), was, for example, probably responsible for choosing the best-known photograph of the 13th Dalai Lama for dissemination and publication. But in doing so, two other photographs taken at the same time were rejected, in at least one of which the prelate unfortunately appears almost demonic. With Bell and his government supporting the Tibetan leader, the most flattering photograph was chosen. But had they been hostile to him, it is not hard to imagine that the least flattering portrait would have been preferred.

However, while many of the photographers whose work is included here were associated with the British colonial project, a wide of range of nationalities are represented among the photographers. Thus while there is a colonial gaze, there are also photographs taken not only by Tibetans, but by Japanese travellers, Americans, Russians, Chinese, and various Europeans. The history is ordered into four periods; pre-1913 (with the earliest photo dating to 1890); the 1913-38 period of British influenced modernisation; the 1939-50 years that are termed a "re-Tibetanisation"; and the 1951-59 period in which Chinese influence is clear.

Marching into View discusses both regular troops and regional militia. The latter usually served as part of their state tax contribution, and while much light is shed here on this aspect of Tibet's military forces, future research on such aspects as the regional character and identity of the militias will be of interest. It is notable that the uniforms and emblems of the various military entitites were never entirely

homogenised. Indeed there was considerable variation and the author has managed to compile a substantial body of information on such almost universal martial characteristics as Tibet's military flags, bands, decorations and medals. Much of the delight of this work is in such details that the author and her project team have uncovered and there is a wealth of relevant information in the notes.

This work is thus a significant and original contribution to our understanding of the history and character of the Ganden Phodrang. It locates the army as an essential aspect of the Buddhist state and its military leadership as firmly integrated with the elite religious and secular stratas of Tibetan society. It also draws academic attention to the fact that while our contemporary theoretical models tend to emphasise the paramountcy of frontiers over borders and the blurred sovereignties of the "mandala" or "ritual" state, "the fact [is] that there existed a clear geographical knowledge of where the border was, as well as visible signs to mark it."[5] The Tibetan military forces could thus be deployed at any time by the central government to defend the territory within those borders. Thus, we may need to consider that in moving away from earlier models of a centralised state, we may perhaps have moved too far from a balanced understanding.

Marching into View is thus a stimulating and original work, well-written and with no obvious errors. It lacks only a simple index of the photographs that would enable one to quickly locate a particular image. It is not intended as the final word − or photograph − on the subject. More photographs of the Tibetan military will certainly emerge in due course. Now unknown private collections are held by families in the Himalayas and by the descendants of colonial officials, while those held in China proper mostly remain to be revealed. But this work opens many new lines of enquiry and will remain a fundamental source for future research. In that it demands consideration by anyone in the field of regional history and society, it also ranks among the most significant works on Tibet published in the 21st century.

[5] Email correspondence with the author: 22 September 2022

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