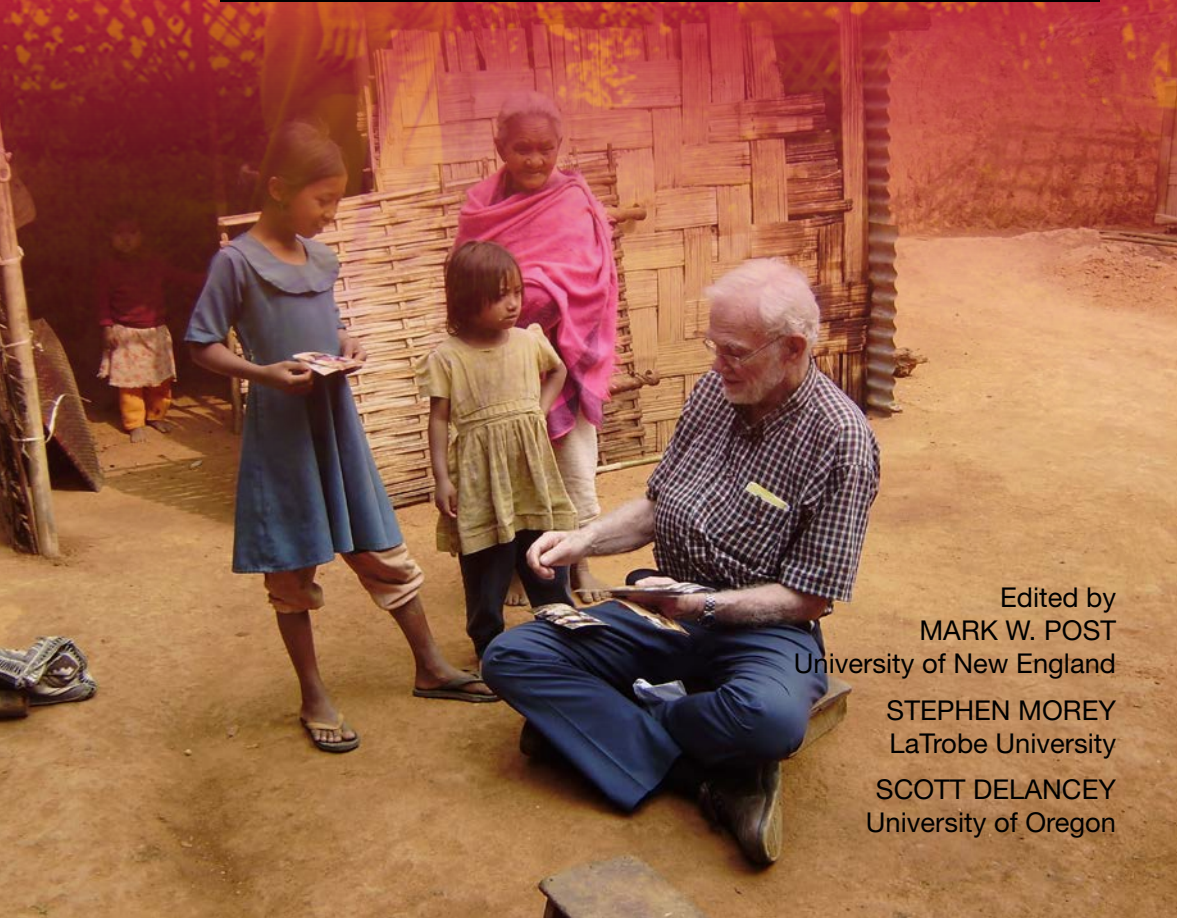


# Language and Culture in Northeast India and Beyond

IN HONOR OF ROBBINS BURLING



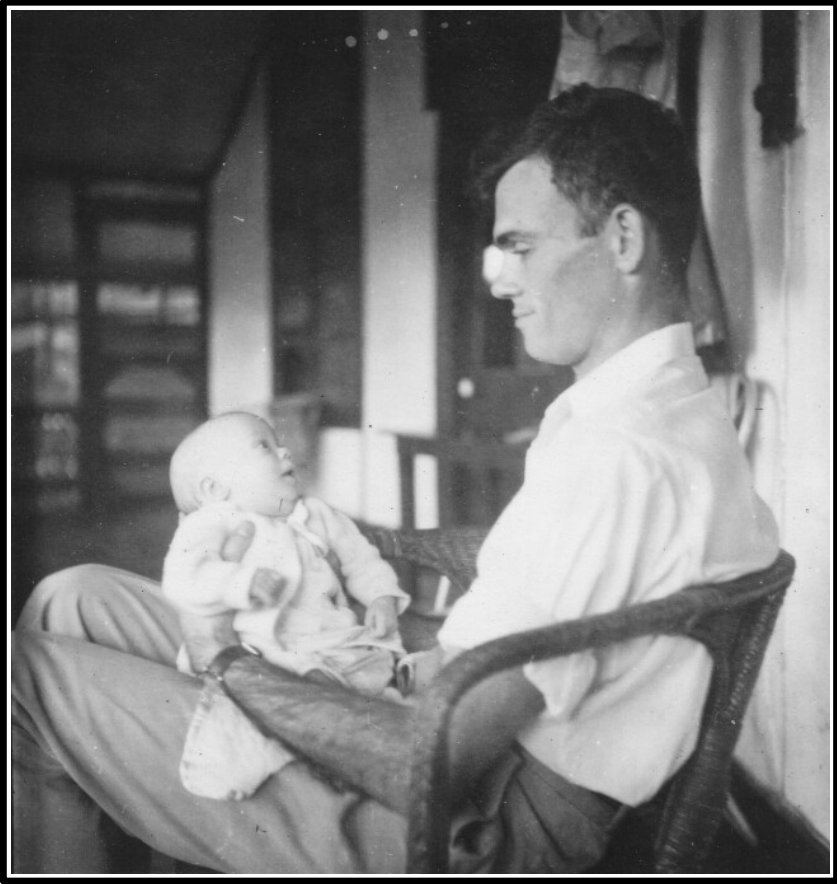
Edited by  
MARK W. POST  
University of New England

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LaTrobe University

SCOTT DELANCEY  
University of Oregon

Language and Culture  
in Northeast India  
and Beyond

IN HONOR OF ROBBINS BURLING



Robbins Burling with daughter Helen (Nono)  
Tura, Meghalaya, 1955

# Language and Culture in Northeast India and Beyond

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MARK W. POST  
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### Cover photographs

Front: Robbins Burling wearing basket in the Garo hills, photograph by Sibyl Burling; Robbins Burling with Garo children in 2009, photograph by Sheila Procter.

Back: Northeast India map (detail) by Roger Blench; people of Asanangri, photograph by Robbins Burling.

Frontispiece photograph by Sibyl Burling, courtesy of the Burling family.

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## Acknowledgements

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The Editors would like to thank the following people and organizations, all of whom assisted in different but equally important ways with the preparation of this volume:

Rob Burling's daughter Helen (Nono) Burling and son Steve Burling helped us plan the volume's organization, discussed several aspects of its content with us, and together with Steve's wife Deborah and Rob's partner Sheila Procter, provided the digitized photographs that appear in the Frontispiece and Appendix. We thank them sincerely for making this volume a far better thing than it might otherwise have been.

We also acknowledge the members of the Editorial and Advisory Boards of Languages and Peoples of the Eastern Himalayan Region, whose early support of this volume got it off the ground. We thank the Editorial Board of Asia-Pacific Linguistics, and especially Paul Sidwell, for their support and assistance, and in particular for their flexibility in enabling this volume to appear simultaneously in print – at cost price – and in ebook format – for free download – so that we may actually serve the diverse set of audiences we hope for this volume to have (we also don't think Rob would have tolerated any other sort of publishing arrangement!). Support was also provided by a grant from the School of Behavioural, Cognitive and Social Sciences at the University of New England, which was used to facilitate copyediting.

We gratefully acknowledge the dedication of our many contributors to this volume, several of whom had to meet the tight deadlines that we imposed under difficult circumstances, whether they were on fieldwork in Nepal or in Northeast India and with less-than-reliable internet connections, or whether they were struggling simultaneously with responsibilities ranging from teaching, to parenting, to completing their PhDs. And we warmly thank the many reviewers of this volume's chapters, who, while they must of course remain anonymous, contributed both their time and their considerable expertise, and improved the volume significantly as a result.

If all goes according to plan, this book will be presented to Rob Burling at the 9<sup>th</sup> International Conference of the North East Indian Linguistics Society (NEILS) at Tezpur University, Assam – the eighth NEILS conference that Rob will have attended. So we thank the secretariat and members of NEILS for doing their part in giving Rob an excuse, as he might put it, to visit Northeast India yet again. In a similar vein, we thank the Mandi (Garo) people, and the many other people of Northeast India who have clearly moved Rob both in his life and in his work.

And finally, the time has come to thank Rob Burling himself, for inspiring us all in so many ways. Rob: for your brilliant scholarship, for the friendship and assistance you have extended to so many people, and for your dedication to



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and palpable love for the people of Northeast India and their languages – we thank you. This one is for you . . .

# Editors' introduction<sup>1</sup>

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University of New England

STEPHEN MOREY  
LaTrobe University

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## 1 Robbins Burling: His life

This volume celebrates the life and work of Robbins Burling, Emeritus Professor of Anthropology and Linguistics at the University of Michigan, giant in the fields of anthropological linguistics, language evolution, and language pedagogy, and pioneer in the ethnography and linguistics of Tibeto-Burman-speaking groups in the Northeast Indian region. We offer it to Professor Burling – Rob – on the occasion of his 90<sup>th</sup> birthday, on the occasion of the 60<sup>th</sup> year of his extraordinary scholarly productivity, and on the occasion of yet another – yet another! – field trip to Northeast India, where his career in anthropology and linguistics effectively began so many decades ago, and where he has amassed so many devoted friends and colleagues – including ourselves.

As Editors, we are aware that this volume is unusual for its type. That is, it is customary for scholars with such a long and illustrious career as Burling's to have left behind a similarly long trail of devoted students, who go on to edit and populate the pages of a volume such as this a great deal sooner than the 60<sup>th</sup> year of a scholar's career. None of the Editors or Contributors are Rob's students, strictly speaking, and many of us did not even meet Rob until relatively late in his career. We have come to understand that the reason for this is that, when serving as graduate advisor in the Michigan Department of Anthropology early in his career, Rob was so sensitive to the perception that he might himself 'poach' the best incoming students, that he foreswore – permanently – advising **any** students at all. What a great loss this has been to the fields of anthropology and linguistics! At the same time, however, what a great illustration of Rob's

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<sup>1</sup> The Editors would like to thank the following members of Rob's family, friends and colleagues for helping us learn more about Rob's life and career over the decades before we met him: Nono (Helen), Steve and Deborah Burling, Sheila Procter and Thomas Trautmann. We also acknowledge Brereton (2006), which provides a much more detailed account of Rob's life and career than we have been able to here, as well as Burling (2010).

simultaneously selfless and yet stubborn disposition, and what a testimony to the fact that, despite not having cultivated the customary train of proteges, Rob has nonetheless won so many friends, and inspired so many people, that this volume came about all the same.

Rob Burling was born on April 18, 1926 in Minneapolis, Minnesota, his father a psychiatrist and his mother a reportedly tireless homemaker. After graduating from high school in Providence, Rhode Island, Rob had a brief stint as a naval radar technician in 1944. He studied pre-med and eventually sociology at Yale and after what seems to have been a formative year hitchhiking around the world, Rob undertook his graduate studies in anthropology at Harvard. In 1954, Rob was awarded a Ford Foundation fellowship to conduct fieldwork in Northeast India among the Garo over a period of two years. Rob's wife Sibyl joined him on this trip, as well as his son Steve, whose early acquisition of Garo became the subject for a pioneering study of child language acquisition in a non-Western context (Burling 1959). They were later joined by a daughter Helen, who was born in Guwahati in 1955, and whose Garo name Nono ended up staying with her throughout her life. In Burling (2010), Rob recounts some of his experiences during this period, at a time when it was necessary to travel for two days by jeep to reach Tura from Guwahati (nowadays, it takes just a few hours), and when marches through thick jungles of anywhere from several hours to several days were necessary to reach villages in the 'interior' of the Garo country. Rob returned to the United States in 1956, where he taught anthropology at the University of Pennsylvania and where his second daughter and last child Adele was born. In 1959, Rob brought his family east again to spend a year lecturing in anthropology at the University of Yangon (then Rangoon) in Burma on the Fulbright Program. After returning to the United States, Rob spent a year at Stanford University before settling down in 1964 to a long and exceptionally productive career at the University of Michigan, where he retired Emeritus in 1995. But it's probably fair to say that some part of him never really left the Tibeto-Burman area, and kept him returning, and with increasing frequency, over the decades.

## 2 Robbins Burling: His work

Rob Burling is in the truest sense a seminal figure in Tibeto-Burman studies, and especially in the linguistics and ethnography of Northeast India. He wrote the first modern descriptive grammar of a Northeast Indian language (Burling 1961), and his 'Proto-Bodo' (1959) and *Proto-Lolo-Burmese* (1967) represent the first Tibeto-Burman branch-level reconstructions based on fieldwork. Jim Matisoff in his contribution to this volume speaks eloquently of the foundational contribution made by these works to comparative Tibeto-Burman.

Rob is just as important a pioneer in descriptive Tibeto-Burman linguistics. His 1961 *Garo Grammar* is the first grammar of any Tibeto-Burman language to be written in a modern linguistic framework, and for years, as the

only available model of its kind, it was the inspiration for Indian and foreign fieldworkers as they eventually began to follow Rob in the immense task of documenting the linguistic riches of the Northeast. The new and improved model, *The Language of the Modhupur Mandi (Garo)* (2004), whose virtues again are well sung by Jim Matisoff, continues to serve as a model for young scholars and community language workers in the Northeast. It is, of course, an excellent model from a linguistic point of view, but two other factors are important. The first is the accessibility of the writing: the grammar is manifestly written to be read by anyone interested, including readers with little or no linguistic training. And the second is the accessibility of the physical volume: where grammars of Northeast Indian languages published in Europe often cost a month's stipend for a teacher or research scholar in India, Rob went to great lengths to have his grammar published in India, where it can be sold at Indian prices, and thus bought by young linguists who may never in their lives have the opportunity to lay eyes on a Brill or Mouton grammar.

Though none of us are anthropologists, we have learned much about Northeast India and its people through Rob's major contributions to Northeast Indian ethnography, including *Rengsanggri: Family and Kinship in a Garo Village* (1963), *Hill Farms and Padi Fields: Life in Mainland Southeast Asia* (1965), and *The Strong Women of Modhopur* (1997). The reader of any of these will be struck by their scholarly rigor and penetrating observation – in no little part because, like his grammar, they are written to be read and understood – but perhaps even more by the author's deep and palpable love and respect for the people he is writing about.

And, although it is peripheral to the focus of this volume, no account of Rob's scholarly contributions can neglect to mention his work in other areas of linguistics, especially the question of language origin and evolution, culminating in his wonderful *The Talking Ape: How Language Evolved* (2005). And one of us (DeLancey) recalls with nostalgia Rob's magnificent introductory linguistics textbook *Patterns of Language*, and his despair when it finally went out of print and there was no substitute to be had. The beautiful sociolinguistics textbook, *Man's Many Voices*, is likewise unique and precious.

### 3 Robbins Burling: A celebration

A career as full and as productive as Rob Burling's is honoured herein by papers that are as much personal tributes to Rob as they are valuable scholarly works in their own right. Thomas R. Trautmann's long personal and professional association with Rob Burling has involved careful 'first readings' of each other's work, and in this paper we see much of the process of academic writing and hints to how we can all, perhaps, be more successful. James A. Matisoff, a seminal figure in the field of Tibeto-Burman linguistics, pays tribute to Rob by summarizing for a new audience some of Rob's most important historical linguistic work on Proto-Lolo-Burmese, Karen and Bodo-Garo, and whetting

again our appetite for Rob's 2004 grammar *The Language of the Modhupur Mandi (Garo)*.

The next section of the book is on the **Sal languages**, a group established by Rob in his eponymous 1982 paper. It commences with Stephen Morey's report on the Tangsa group, enriching the lexical data presented by Rob in 1982 with morphological data, confirming its general findings while presenting more of the tantalizing diversity of this Northern Naga language. Scott DeLancey brings his broad knowledge of Tibeto-Burman languages to expand our understanding of adjectival constructions in the family, including the \*gV-nominalizing prefix, and illustrating this with high quality data from the Bodo language. The third paper in the section, by two rising scholars who are also native speakers of Bodo, Krishna Boro and Prafulla Basumatary, analyses a range of monosyllabic adverbial suffixes with initial clusters, derived from verbs by a process of initial syllable vowel deletion.

The next section, on **New Directions**, presents an overview by François Jacquesson of the little described Meyor language, with verb paradigms, information on aspect, and a discussion of the story telling style of the language, how the different words for 'speak' or 'say' are employed to convey meaning. Boyd Michailovsky's paper details the forms and function of the five directional/locative markers in Limbu with comprehensive exemplification and cross-linguistic comparison with other Kiranti languages.

**Language Contact**, another area of Rob's deep interest, commences with a paper by Monali Longmailai, a Dimasa native speaker, whose work compares phonological, morphological and lexical similarities between unrelated languages Dimasa and Khasi that have been in close contact for many years. A paper from U. V. Joseph and Linda Konnerth carefully considers borrowings from Indic languages into Tiwa, giving evidence for borrowings that may have occurred at different times in the history of the Indic languages and suggesting the importance of understanding the place of Khasi as a contact language as well. Toni Huber makes a thorough study of a word for 'ancestral deity', perhaps derived from a form *se*, using as its basis examples of the word as found in old literary as well as modern spoken sources, and grounding his study in a wealth of ethnographic information.

**Historical Phonology** is yet another of Rob's specialties, and in this section Mark W. Post gives a fieldworker's guide to one of the thorniest problems for the description of languages of this area – tone. The paper focusses on the Tani subgroup of Tibeto-Burman, giving both the new fieldworker and the seasoned language researcher clear suggestions on both theory and methodology. Martine Mazaudon gives an account of an uncommon feature in Tibeto-Burman languages: vowel length contrasts on open syllables. She shows how those distinctions have been retained, or merged, in a variety of Tamangic languages, relating this to similar processes in the languages of Europe. Sarah Thomason presents a detailed analysis of sound changes involving velars in Montana Salish, a language of North America, giving readers a considered account of a

very common occurrence in comparative linguistics: irregularities that can't easily be explained.

Our final section, **Language in Culture** goes to the heart of yet another key area of Rob's work. Yankee Modi, a native speaker of several languages of Arunachal Pradesh, writes about the importance of social organization to language distributions and language change in the Tani area. Tanka Subba's chapter considers a number of major issues affecting the tribes of the Northeast Indian region today in relation to the wording of the Indian Government policy documents that affect them. Gwendolyn Hyslop's chapter takes a detailed look at terms for grains and dairy and suggests that only some can be reconstructed for Proto East Bodish in Bhutan, specifically the dairy terms and buckwheat and barley. This suggests that before the breakup of the East Bodish, these were the items farmed. Shobhana Chelliah presents a complete narrative in Meitei – a story grounded in agricultural practices – but the focus of the paper is on the rhetorical structures of the story telling and why the study of these is so essential for language documentation. George van Driem's wide-ranging paper places language in a broader context, as part of human evolution. Citing biologists, anthropologists and other scientists as well as linguists and authors of literary note, the paper treats language as life form, constantly growing and changing. To round off the volume, Roger Blench presents a brief overview of the literature from the emerging field of ophresiology, the study of taste and smell, exemplifying it using the wide range of specialised taste terms in the Kman language of Arunachal Pradesh (also known as Miju or Miju Mishmi).

The wide range of Rob's scholarly interests is reflected, albeit incompletely, not only in the diversity of topics covered here, but in the diversity of its authorship. Some of our contributors, such as James Matisoff and Thomas Trautmann, have known Rob for decades, and have worked with him extensively. Others, such as Mark Post and Stephen Morey, came to know Rob only relatively recently, as our areas of scholarly and geographical interest suddenly fell together. Most of our contributors are affiliated with the Western universities in which Rob also spent most of his career. However, nearly half of our contributors are from India, a country on which Rob has focused so much of his scholarly energies, and four of our contributors are themselves native speakers of Northeast Indian languages.

Finally, it will be important for readers of this volume to understand that Rob Burling is not very impressed by the state of academic publishing today, and neither are we. Publication of grammars and other works of linguistics and anthropology with for-profit international publishers whose price tags can exceed three hundred US dollars per volume places such works out of the reach of many academic libraries, and well beyond the reach of almost all ordinary people in a country such as India. Even more to the point, they are placed completely beyond the reach of the ethnolinguistic communities many of their authors had hoped to in some way serve. This is not such a book. Thanks to the wisdom and generosity of our publisher, Asia-Pacific Linguistics, this volume will be downloadable in ebook form at <http://hdl.handle.net/1885/38458> at the

cost of exactly zero dollars and zero cents, and will be available for order in hard copy at the cost of its paper, binding, and distribution only. Copyright pertaining to the chapters in this volume remains vested with the authors themselves, who have licensed their work herein for free distribution without modification. So please: copy this book! Send it to a friend! Donate it to your local library! We are very grateful to Asia-Pacific Linguistics for their flexibility, and for supporting quality not-for-profit scholarly publishing in anthropology and linguistics in the Asia-Pacific region.

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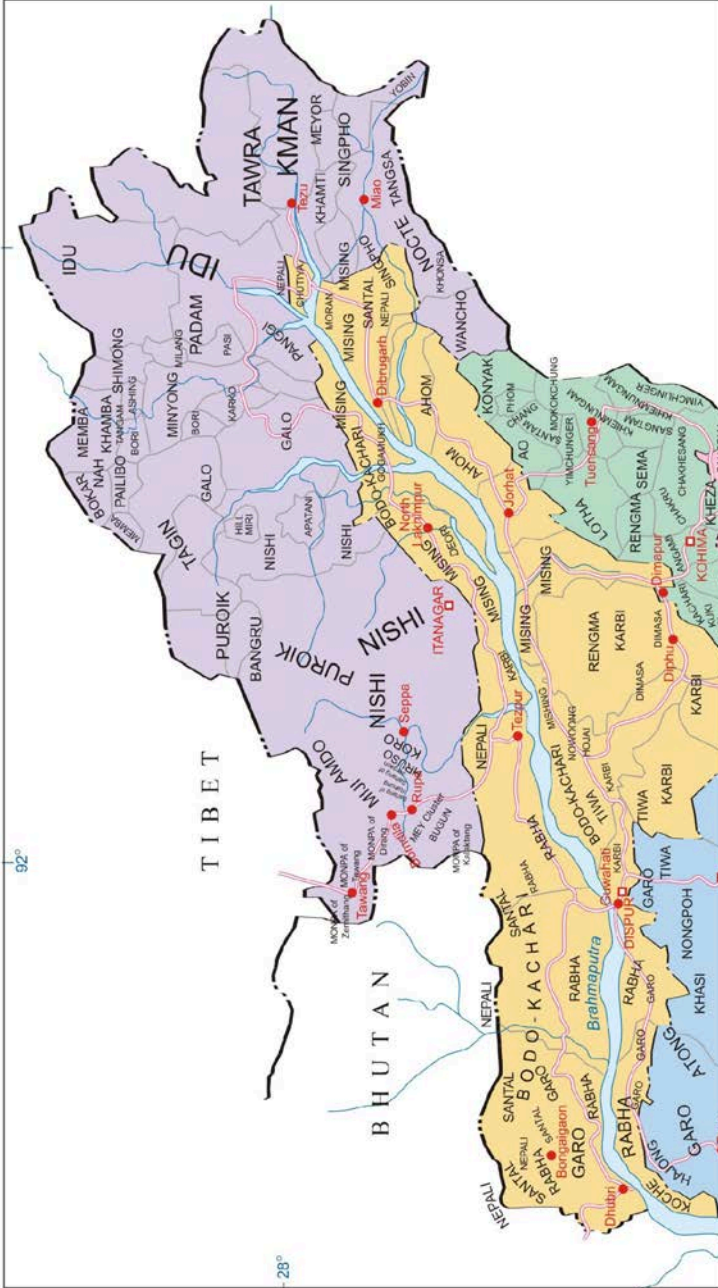
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# Northeast India map



Designed and created by Roger Blench. Under CC (Creative Commons) License 2015.  
 Locations and nomenclature are approximate only.



## 1

## Burling as first reader

THOMAS R. TRAUTMANN  
University of Michigan

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**R**ob Burling and I have been meeting for lunch on Monday at Frank's, a venerable eating establishment on the edge of campus. Our Monday lunch has been a fixture for over a decade. The foundation of it is not the food at Frank's, fine as it is, or the ambiance, which is comfortingly old-fashioned. It has to do with simple friendship, which began some time after my arrival at the University of Michigan in 1968, when Rob was already here. I was in History and India, and he in Anthropology and the Tibeto-Burman-speaking parts of India and Southeast Asia. We got to know each other through the Center for South and Southeast Asian Studies. Both the difference and overlap of our interests were sufficient to draw us together, especially in the anthropology of kinship and the history of language and language study, in those parts of the world. Eventually we became first reader of manuscripts for one another.

A first reader has specific qualifications. Rob expressed it this way in a gift copy of *The Talking Ape* (Burling 2005):

For Tom Trautmann: I had such trust in your tolerance that I selected you as the first reader of the first readable draft of this book. I thank you for your encouragement & for the many helpful comments & suggestions that make this a much better draft than that first one.

The key words are *trust* and *tolerance*.

The second of them illustrates itself. I am *tollerant* of Rob's signature unwillingness to cringe before the authorities who enforce the rules of spelling English. He has felt strongly about it since he first learned his letters. He retains vivid memories, these many years after, of the pain and humiliation which he suffered as a child, a martyr to the irrationality of English orthography. He has now written a whole book about spelling, shortly to appear.

*Trust* is needed, because showing your work at an early state when it is at its most unlovely is similar to bringing someone into the mess of your basement to help fix the plumbing. I do not draw this metaphor out of the air. Rob is seriously skilled in plumbing and other of the building trades, which he learned at Washtenaw Community College, after which he designed and built his house. He built every bit of it except the foundation, with the help of his son Steve.

And so I called him in for a plumbing consultation when my basement drain backed up, and he brought his biggest, baddest plumber's snake and a length of steel pipe with which to get more leverage on the wrench to open the trap. I have complete trust in Rob when it comes to my pipes. And in the same way, we trust one another when it comes to our first readable drafts.

Thus a first reader must be someone the writer trusts for his tolerance of mess. In return, the first reader must be forthright. I tried to capture this in a book of mine, *Arthashastra: The Science of Wealth*, where I wrote:

The first reader of the manuscript was Robbins Burling, a friend who does an author the kindness of giving comments that are intelligent, blunt and uninhibited. (Trautmann 2012a: xxvi)

Rob was mightily pleased by the words *intelligent*, *blunt* and *uninhibited*, and likes to quote them of himself. In another book I put the same sentiment in a slightly different form:

Robbins Burling, my first reader, believes as I do that merciless critique of a piece before its publication is the sincerest form of friendship. (Trautmann 2015: xv)

On the part of the writer, then, trust and tolerance; on the part of the first reader, intelligence, bluntness, holding nothing back, criticism without mercy. Those are the terms of the unwritten contract, and the bedrock of our Mondays at Frank's.

I can show you concretely what Rob is like as first reader. As I was preparing to write this short tribute I went through a pile of draft chapters of mine covered with his comments. I have scanned a page of them to illustrate. They are like chicken tracks in their visual aspect, but in their substance express the best attributes of a first reader. I draw your attention to the sentence at the bottom, which says, “‘Time of onset’ seem[s] a rather pompous way to describe it’. Note especially the stinging phrase, with its free-range spelling, ‘rather pompous’.

An inventory of the descriptors he uses is very revealing, of the vices of my own writing, to be sure, but, more to the point, of what for Rob is the pantheon of the writerly virtues. They capture the peculiar flavor of his own writing, as well as the nature of the benefit conferred upon someone fortunate enough to have Rob as first reader. Here is the list, compiled from a substantial sample: *abrupt*, *ambiguous*, *awkward*, *condescending*, *contradictory*, *cumber-some*, *cute*, *fancy*, *graceful*, *hedge*, *humano-centric* (of elephant ‘lovemaking’), *imprecise*, (*overly*) *intricate*, *jargon*, *murky*, *mushy* (= *hedge*), *odd/oddly word-ed*, (*lacking*) *oomph*, *pompous*, *puzzling*, *redundant*, *relevance*, *repetitious/repetition*, *run-on*, *tangled*, *unclear*, *vague*, *weak*, and, indicating blank incomprehension, the one-word sentence ‘*Hunh?*’

The persistence of the elephants, first revision

Chapter 7

Southeast Asia and China

Version of October 16, 2013

The Indian institution of the war elephant, then, spread westward to lands that had no wild Asian elephants upon which to draw, and was kept going by imports of captive, trained elephants from India, or by the forest race of African elephants in North Africa, captured and trained by applying Indian techniques. This entire formation started in the Achaemenid period, when part of India fell under Persian rule at about the time when elephant warfare had become a universal ideal for kings in North India, c. 500 BCE. Use of war elephants grew rapidly following Alexander, and was perpetuated long after elephant warfare had died out in Asia Minor and North Africa, by the Sassanians in Iran and Ghaznavids in central Asia. This was the development which Armandi captured as long ago as 1843, in his *Histoire militaire des éléphants*. But there is another history of the war elephant beyond India, and it is in Southeast Asia. Armandi could not have known of it, because the early history of the Indianized kingdoms did not begin to be examined by Europeans until after his time, when the French, the Dutch and the British imposed their imperial rule over most of Southeast Asia, except for Thailand. Scullard confined his survey to the Greek and Roman world. It is time to bring Southeast Asia into this history, especially for the comparative possibilities it affords, and also China, which establishes the eastward limit of the phenomenon.

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I think this  
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but still a  
on. No to the  
too "when".

I don't  
think you  
need that.  
You say "most  
And w.o. trained  
was it  
kill?"

You are  
making  
"institution"  
personifying  
"institution"

It is better  
to show its  
significance  
than to  
announce it.

In this chapter I complete that history by turning eastward of India, to Southeast Asia, especially continental Southeast Asia and Sumatra, where wild elephants abound, and where the institution of the war elephant could find its source of supply locally. Despite the natural advantage of wild elephant populations, however, the inhabitants of Southeast Asia began to capture and train elephants for war much later than the countries to westward of India, centuries after the invention of the war elephant in India. There is a reason for this late onset, and it is highly significant. War elephants are completely absent in the thousand-year span of the bronze age in Southeast Asian (Higham 1996), but it comes into view as soon as kingdoms arise, about the first century CE. This time of onset supports my belief that the institution of the war elephant is strongly connected with kingship, that its very invention occurs under kingship. The appearance of the war elephant in Southeast Asia coincides with the rise of kingdoms and its use is found exclusively in kingdoms, confirming the general truth that elephant warfare begins with kingship, and not before.

repetitious?

social like  
a kind of  
work and  
offer flight

You were  
access to  
with elephants,  
don't you?

"Time of onset"  
from a rather poor  
word to describe it.

This reason for  
re for the "war elephants"  
but that is moral

Some of these are words we all use when correcting student papers or commenting on a colleague's work. We all strive to remove *ambiguous*, *awkward*, *imprecise*, *unclear* and *vague* constructions. Rob's own writing succeeds in this in a superlative degree. But the special flavor of it lies in some of the other terms of his critical vocabulary. The words that really smart are *condescending*, *cute*, *fancy* and *pompous*. Ornamentation of any kind is liable to provoke his criticism.

But more than excessive ornamentation he especially dislikes it when the writer pulls rank on the reader to coerce consent. It is for this reason that he is allergic to the use of 'we'. He says in one place,

I am not hugely fond of the editorial 'we'. It often seems to me to be a slightly condescending effort to make the reader a sort of junior associate.

In another passage he likens it to the admonition, 'Now children, we will learn a new song,' perhaps remembering one of those teachers who tried to curb his relaxed spelling practices. The overall aim of his critique is to put the writer and the reader on a level, and in doing so putting the argument itself to the fore.

The drive to promote clarity and directness, the anti-embellishment imperative, does have one aspect that I find surprisingly conservative, namely a resistance to new coinages or words that are in any way unusual. I find in these papers many Burling comments such as, 'I do not think much of that word!' or 'Is that a recognized word?' – this of such innocent and immediately intelligible coinages of mine, for example, as *bigness* (as the salient aspect of an elephant, for Indian kings). I see him scowling now, when he reads this essay and comes across the word *baddest*.

That is not to say that the whole Burling program is towards simple clarity and against embellishment. Writing, for example, should not only be clear, it should be *graceful*, a term that pops up a lot in his scribbles on drafts of mine. Moreover, it should be fun. Here is a piece of advice from his father:

The paragraphs are reasonably clear & pertinent but they remind me of a story that my father told me more than fifty years ago. Jack asked Bill to read a MS. Bill came back to Jack & said, 'It is good & thoughtful, but it lacks your usual effortless flow.' Jack replied, 'Oh, I haven't put that in yet.' Your writing seems *effortful*. I have to bear down on it. I can't just sit back & enjoy it. It is a fascinating subject & should be fun to read.

He told me frankly on one occasion that I did not manage to convince him that the topic of the paper was all that fascinating. I needed somehow to show him that *he* should find it so, as *I* plainly did. Perhaps it my writing was too distant from speaking; in any case he said, 'I guess what I am getting at here, is that this paper seems not to have the oomph that I have learned to expect in your talks.' While his goals as a writer bring the data, analysis and argument to the fore, the program is not austere rational, but includes all the other arts of persuasion that serve to engage readers.



A notable example is his use of the simple word *hedge*. By this he means weakening a strong assertion with a qualifying word or phrase. Rob often attacks a hedge, and what he promotes is views that are strongly and plainly stated. Primary colors, rather than subtle shades.

There is a history to this. To explain it to readers who are not codgers like Rob and me I will have to picture for them the age when the Bobbs-Merrill reprint roamed the earth. Long ago there were no laptops and digitalized articles to assign our students, and we had to rely upon the coursepack and the copy machine. Before they had been invented there was an even more primitive age, when the only way to assign an article for class reading was to put it on reserve in the library, or require students to buy, for 25 cents, the reprint of an article published by the Bobbs-Merrill publishing company. These were the most important articles in a particular field. I made binders of such reprints as a way of being in touch with the most important writings in anthropology, for example. Two of them were by Rob Burling, one an analysis of the relation of economic anthropology to the discipline of economics (Burling 1962), and the other on kinship analysis, called ‘Cognition and componential analysis: God’s truth or hocus-pocus?’ (Burling 1964). In this second article note, please, the unhedged, stark alternative readers are offered. Rob has told me that, to his surprise and delight, the article provoked a flow fan mail and brickbats, strongly for and against his position. It taught him, he said, that it is good to put ones views just slightly more strongly than one really believes.

Rob’s first readings were immensely valuable to me in innumerable ways, and the benefits were not confined to matters of style. His greatest service concerned a piece on kinship analysis, an article called, ‘Crossness and Crow-Omaha’ (Trautman 2012b). I had been lured by Peter Whiteley into contributing to a conference on the classic and technical topic of kinship terminologies called ‘Crow-Omaha.’ By increments Peter got me more deeply involved until I found myself co-editing the volume that came out of the conference. Crossness, or the division of kin into large categories of cross and parallel, and skewing, or the merger of kin categories of different generations, typical of the Crow-Omaha terminologies, had been noticed among American Indian terminologies at the very beginning of anthropological analysis of kinship, by L.H. Morgan, in his great work *Systems of Consanguinity and Affinity of the Human Family* (Morgan 1997 [1871]). As it happens, Tibeto-Burman languages have abundant cases of both.

My paper for the conference was painful to produce, as I had not published on kinship for quite a while, and needed to work hard to get back into it. It took many drafts, each greatly different from the last, to find the right analysis and get the argument up to the mark. Rob patiently read several of those successive versions of the paper and his comments helped in ways no one else’s could have. As it happened, he had published data of direct relevance, in a very scarce series called *Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics*, which had published an article of his reporting kinship terms of the

Maru collected by himself, and Lounsbury's data, correcting that of Leach, on Jinghpaw (Burling 1971). Because this volume is so very hard to find, I was glad to be able to publish these valuable data in my article, to make them accessible to others.

Rob's virtues as first reader are the outward projection of the virtues of his writing. As I prepared to compose this tribute I phoned Bob McKinley at Michigan State University, who had been a graduate student of our Anthropology department and who knows Rob and his writings well, and had taken a course with him. In the course of our conversation about Rob's work Bob said something that is profoundly true. He said, 'You meet him in his work.' For many scholars the person you meet in the work is a fancy-dress version of the author, the official self. Rob is the opposite. Even people who have not had the pleasure of meeting him in person can meet him in his writings: intelligent, blunt, and uninhibited in the expression of his ideas, putting them clearly and gracefully, engaging ones interest, making it fun. If you want to meet the man, read the works. Or you can find him, of a Monday, with me at Frank's.

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## 2

## Burling's contributions to Tibeto-Burman studies: A personal appreciation

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**R**ob Burling and I go back a long way, to the late '60's of the previous century. (He is half a generation older than me, which makes him venerable indeed.) We first met at the 1967 Summer Institute of the Linguistic Society of America in Ann Arbor. I had recently returned from my first fieldtrip in Thailand, where I had begun my study of Lahu, while Rob had just completed his first monograph-length linguistic work, *Proto-Lolo-Burmese* (Burling 1967/68).

Burling is as well known as an anthropologist as he is as a linguist,<sup>1</sup> but I will pass over that aspect of his career in an admiring silence, focusing instead on some of his major contributions to Tibeto-Burman studies, first with respect to particular subgroups of the family – Lolo-Burmese (§1), Karenic (§2), and Bodo-Garo (§3) – then in connection with more general issues of TB subgrouping and nomenclature (§4). Finally, I've chosen the feature of glottalization to illustrate Burling's significant contributions to Southeast Asian areal phonology (§5).

### 1 Burling and Lolo-Burmese

Burling's monograph *Proto-Lolo-Burmese* (1967) marked a milestone in the comparative/historical study of this important subgroup. Basing himself partly on original fieldwork he had carried out in Rangoon, he used data from three Burmish (Modern Burmese, Atsi, Maru)<sup>2</sup> and three Loloish languages (Lahu, Lisu, Akha), which allowed him to make several important discoveries concern-

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<sup>1</sup> Among his influential anthropological works on Southeast Asia, we should at least mention Burling 1965, a pioneering treatment of what later came to be referred to technically as "vertical ecological zonation".

<sup>2</sup> Atsi and Maru are the Jingpho names for the groups that are called Zaiwa and Langsu in Chinese, respectively. The Atsi and Maru are part of the Kachin/Jingpho cultural area, and Chinese linguists and administrators consider them to be subdivisions of the Kachin people. Burling is quite right in assigning them to the Burmish group rather than to Kachinic.

ing all parts of the PLB syllable: initial consonants, vowels, final consonants, and tones.<sup>3</sup> It is fair to say that his monograph was a great impetus for me to devote myself to Lolo-Burmese historical phonology. In fact it is to Burling that I owe the term ‘Lolo-Burmese’ itself, which I adopted and have stuck with despite all proposed alternatives before or since.<sup>4</sup>

Burling’s contributions to PLB reconstruction in this monograph include:

- His discovery of the glottalized syllables in Atsi and Maru, which led him to reconstruct a \*glottalized series of initials for PLB.<sup>5</sup> This led to great advances in the understanding of initial and tonal developments in the family.
- His discovery of the Maru development of secondary final stops in the \*-əy and \*-əw rhymes: \*-əy > Mr. -it; \*-əw > Mr. -uk.<sup>6</sup> This has turned out to be absolutely valid, despite the shrill criticisms of Miller (1968), who had deep reservations about segments arising ‘*ex nihilo*’, making a feeble attempt to show that Chinese cognates to some words with these rhymes ended in stops.
- He figured out many of the basic tonal correspondences among the six languages in his study, demonstrating the connections between initial manners of articulation and tonal developments.<sup>7</sup>
- He correctly followed Lewis’ (1968) analysis of Akha initial manners of articulation,<sup>8</sup> confirming that the \*voiceless series became Akha aspirates in non-checked (= non-laryngealized) syllables, but became Akha voiceless unaspirates in checked syllables. That is, you can’t get both aspiration and glottalization in the same Akha syllable, a phenomenon rather like Grassman’s Law, or my ‘glottal dissimilation’ (Matisoff 1970).
- He discovered a striking case of syntactic conditioning for the Atsi tonal reflexes of PLB Tone \*2. In Atsi, Tone \*2 verbs developed the high short falling tone / ˥ /, while Tone \*2 nouns developed the low falling tone / ˩ /. Burling explains this in terms of a tonal perturbation caused

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<sup>3</sup> In my review of this monograph (Matisoff 1968) I emphasized these positive contributions, but also included several criticisms (see below). My review is to be contrasted with the typically negative hatchet-job produced by the late Roy Andrew Miller (1970).

<sup>4</sup> Burmese-Lolo (Shafer and Benedict), Yi-Burmese (China), Burmese-Yipho (Benedict), Mran-Ni (Bradley), Mran-Ngwi (Bradley), Burmic-Nisoic (Qiu Fuyuan).

<sup>5</sup> See below 5.1. During fieldwork with LaRaw Maran at Berkeley in the summer of 1963, he pointed out to me the existence of previously unrecognized glottalized liquids, semivowels, and tsʔ- in Jingpho. See the outline of Jingpho phonology in Matisoff (2013: 45–46).

<sup>6</sup> Burling had already discussed this phenomenon in a separate article (Burling 1966b).

<sup>7</sup> See especially Table 4 in Burling (1967: 69). Burling neatly figured out the PLB origins of six of the seven Lahu tones, leaving only the high-rising tone unexplained. See Matisoff 1970, 1972.

<sup>8</sup> Rather than the analysis of Nishida 1965/66.

by a suffix, since Atsi verbs 'seem always to require a suffix', while nouns do not (Burling 1967: 57).<sup>9</sup>

Nevertheless, there are a few problems with Burling's monograph.<sup>10</sup>

The most serious of these was his use of Modern instead of Written Burmese, which led to a number of self-inflicted problems, like the failure to distinguish between PLB \*-y- and \*-r-, which are kept quite distinct in WB, but which fell together to -y- in standard modern Burmese. Burling's choice of Modern rather than Written Burmese was perhaps due to an exaggerated respect (anthropological and/or American structuralist) for spoken as opposed to written language.

He correctly distinguished three PLB manner series, but called them \*aspirated, \*voiced, and \*glottalized, a formulation which left no simple series, or in Praguian terms, no 'unmarked member of the opposition'. It would have been preferable to interpret these as \*voiceless,<sup>11</sup> \*voiced, and \*glottalized. Burling did not reconstruct a \*prenasalized series, though subsequent work has shown this to be necessary to explain certain manner developments, especially the voiced series in Lahu.<sup>12</sup>

Burling (1966a) had already discussed an intricate problem in Lahu phonology, to which he returned in *Proto-Lolo-Burmese* (Burling 1967: 26–27). Unfortunately he did not come up with the solution, which involves two cases of mutual complementary distribution between Lahu initials and vowels: (1) Lahu /u/ loses its rounding after labial initials, becoming [u], with the labials /p, ph, b, m/ becoming affricated in this environment to [pf, phf, bv, mv]. (2) Lahu /i/ becomes the superhigh central vowel [ɨ] after palatal initials, with the palatals becoming dentals in this environment: /c, ch, j, š, y/ > [ts, tsh, dz, s, z]. The Baptist missionary orthography wrote both [u] and [ɨ] as 'uh', thus forcing them to recognize nine subphonemic initials. Burling is hardly to be blamed for falling into the same trap on the basis of the inadequate data at his disposal.

All in all, Burling's *Proto-Lolo-Burmese* was a pioneering and highly original work, to which subsequent scholarship in this field will always be indebted.

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<sup>9</sup> This rings true, since verbs in Lahu and Akha are normally cited with a nominalizer (Lahu *ve*, Akha *eu*). Most similar to Atsi is Mpi, a Southern Loloish language, where all the PLB tones (including those in checked syllables) have separate realizations for nouns and verbs, a phenomenon also explainable in terms of a now-vanished verbal suffix (Srinuan 1976; Matisoff 1978).

<sup>10</sup> These were discussed both in my review (1968) and in Matisoff (1969: 131–138; 152–170). The latter article appeared in the same issue of the *Occasional Papers of the Wolfenden Society on Tibeto-Burman Linguistics* as Burling's brilliant reanalysis of Jones' (1961) Karenic reconstructions (see §2).

<sup>11</sup> Aspiration is to be regarded as a redundant feature of the PLB \*voiceless series.

<sup>12</sup> See, e.g. Matisoff (1972).

## 2 Burling and Karenic

Burling's 'Proto-Karen: a reanalysis' (1969) is a polite but devastating 116-page critique of R.B. Jones' *Karen Linguistic Studies* (1961). It comprises several sections, including:

### (1) The internal Stammbaum of Karen

Jones used 6 Karenic languages (two types of Pwo, two types of Sgaw, Palaychi, and Taungthu (Pa-O)). Burling points out that he mis-subgrouped them, putting Taungthu together with Pwo (because they preserve aspirates) vs. Sgaw and Palaychi (which have lost the aspirates under certain conditions). Burling did observe that the correspondences between Taungthu/Pwo aspirates and Palaychi/Sgaw voiceless unaspirates only occur under tones \*1, \*3, and \*ʔ<sup>1</sup>, whereas the correspondences between aspirates in both T/P and P/S occur only under tones \*2, \*4, and \*ʔ<sup>2</sup>. But Burling doesn't go on to say where these tones came from phonetically, saying merely that 'aspiration is lost in Palaychi and Sgaw in syllables under \*1, \*3, and \*ʔ<sup>1</sup>'.<sup>13</sup>

### (2) Jones' theory of 'linguistic bifurcation'

Burling rightly criticizes Jones' overly rigid theory of 'linguistic bifurcation', which insisted on 'pairwise reconstruction', two languages at a time. Jones refused to reconstruct a cognate set backward beyond a single missing or deviant term. If an item was defective in a single one of his six languages, Jones refrained from reconstructing a form from which the other five could be derived. He thus only reconstructed 195 of his 859 sets back to Proto-Karen.

### (3) Eccentricity of Jones' rules

Burling excoriates with restrained amusement Jones' exceedingly complex and *ad hoc* rules, which he calls 'often downright eccentric'. They rely on weird conditioning factors, and are often meagerly exemplified, forcing Jones to reconstruct a bewildering variety of proto-phonemes, many of which 'fell together' at later stages. This aspect of Jones' work is best illustrated by the array of pKarenic final stops which he reconstructs. Final stops have been much eroded in Karenic (as they have been in Loloish). Pho and Sgaw only have -ʔ. In Jones' analysis, Palaychi has both '-q' (lenis) and the relatively rare '-ʔ' (fortis). Only Taungthu has -p -t -k, in a relatively few words. To handle the 'irregularities' he claims to have found, Jones postulated 13 final stops, including four 'laryngeals' -, -h, -q -ʔ, four aspirates, and five things with capital letters, viz:

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<sup>13</sup> It was Haudricourt (1946, 1953) who had discovered that one source of the aspirates in Taungthu and Pwo was the pKaren \*voiced series, a development identical to what happened in Siamese.

TABLE 1 – Jones' (1961) Proto-Karenic final stops

<i>-t</i>	<i>-k</i>	<i>-ʔ</i>
<i>-th</i>	<i>-Kh</i>	<i>-'</i>
<i>-T</i>	<i>-K</i>	<i>-h</i>
<i>-d</i>	<i>-g</i>	<i>-q</i>
<i>-dh</i>	<i>-gh</i>	
<i>-D</i>	<i>-G</i>	

It goes without saying how typologically alien this scheme is for a TB language, or indeed any language of the Southeast Asian linguistic area.

Burling goes on to criticize Jones' tortured accounts of Karenic vocalic and tonal developments. In particular, Jones did not realize that tones in checked vs. non-checked syllables must be regarded as two separate subsystems, attempting instead to analyze the checked tones as allophones of the non-checked ones. Here Burling is in total agreement with Haudricourt, who bemoans the pernicious influence of neo-Bloomfieldian 'parsimony of inventory'.

Burling's criticisms testify to his anthropological acuity: 'The normal history of any group of languages would include some lexical change and some dialect borrowing, and these are bound to obscure the perfection of the phonological rules.'

Despite the generally negative tone of his critique, Burling feels that Jones' data are 'entirely reliable, even if here and there an error of detail may have crept in.' On the other hand, he is totally convincing when he says that Jones' reconstructions 'are not to be trusted'.

It is quite interesting to compare Burling's review of Jones with that of A.G. Haudricourt (1963),<sup>14</sup> both of whom praise the richness of Jones' lexical data but decry his reconstructions. Haudricourt says that Jones knew of his 1946 article,<sup>15</sup> but remarks sarcastically that 'he either did not read it or did not understand it; in any case he does not honor it with a refutation'. He goes on to attack Jones' Bloomfieldian approach to phonology, and asks rhetorically whether it was a lack of theoretical background, or merely a chauvinist bias against reading or discussing work published outside of the U.S.A.

### 3 Burling and Bodo-Garo

#### 'Proto-Bodo' (Burling 1959)

The important TB subgroup called 'Barish' by Shafer, and 'Bodo-Garo' by Benedict, has always been right in Burling's wheelhouse. His early paper 'Pro-

<sup>14</sup> Recently translated by David Solnit (Haudricourt in press).

<sup>15</sup> Apparently Burling was not aware of Haudricourt's articles.

to-Bodo' (Burling 1959) was the first modern attempt to do reconstruction at the TB subgroup level.<sup>16</sup> He used data from four Bodo-Garo languages: Kachari (Bodo), Garo, Atong, and Wanang, with the latter two branching off from an intermediate group called 'Koch'.

This early paper already showcases Burling's talent for comparative reconstruction. It is a great improvement on Shafer (1953), due especially to the better quality of Burling's data, much of it based on original fieldwork in Assam (especially on Garo), in 1954–1956. Among the interesting points to be gleaned from this study:

- There is 'an old and widespread tendency' in BG for the weakening of stops to affricates or spirants (Burling 1959: 448). A case in point is the development of PBG *\*k-* > Wanang *h-*, as in 'burn' PBG *\*kam* > Wanang *ham-*, 'salt' PBG *\*k(a)ri* > Wanang *ha-ri*, 'tie' PBG *\*ka* > Wanang *ha-*.<sup>17</sup>
- These languages underwent a drag-chain with respect to PTB *\*s-* and *\*ts-*, in a manner very similar to what happened in Kuki-Chin.<sup>18</sup> First PTB *\*s-* became a dental stop in PBG, after which PTB *\*ts-* became PBG *\*s-*:  
     PTB *\*səy* 'die' > PBG *\*təi* > Kachari *təi*, Atong *təi*, Garo *si*, Wanang *ci*.  
     PTB *\*tsyar* 'day/sun' > PBG *\*sal* > Garo *sar*, other *san*<sup>19</sup>
- The rhotic liquid is preserved better than the lateral liquid. *\*r-* and *\*-r* are preserved in all four languages. On the other hand, final *\*-l* is never preserved as such (*\*-l* > Garo *-r*, other *-n*), while initial *\*l-* > *r-* in Garo and Atong, remaining *l-* only in Kachari (Bodo) and Wanang.
- Several glottalized 'final clusters' must be set up for PBG: *\*-ʔm*, *\*-ʔn*, *\*-ʔŋ*, *\*-ʔr*. These glottal clusters behave identically to a final simple glottal stop in inducing the interesting phenomenon of 'echo-vowels' in Garo (Table 2).<sup>20</sup>

Here too, Burling's anthropological sophistication is evident with respect to genetic vs. borrowing relationships:

None of these languages are completely out of contact with each other; there is every reason to believe that they have been influencing each other

<sup>16</sup> In Burling's usage "Proto-Bodo" corresponds to Benedict's "Proto-Bodo-Garo". "Bodic" would not do as a general name for this subgroup, since that term has been reserved for Tibetan-type languages. *Bod* means 'Tibet' in Tibetan.

<sup>17</sup> A similar development is also attested in Asakian (Luish). See Matisoff (2013: 29).

<sup>18</sup> See VanBik (2009: 16–18).

<sup>19</sup> Thus PTB *\*ts-* and *\*s-* merged in Garo to /s/. This root for 'day/sun' is the eponymous etymon that inspired the name of Burling's "Sal" group. See below §4.1.

<sup>20</sup> See § 5.1, below.



throughout their history. Moreover, they have all been borrowing from a common source – Bengali and Assamese – and it is not always easy to tell whether similar words are genuinely cognate or the result of common borrowing from these Indic languages or from another Bodo language. (Burling 1959: 439)

TABLE 2 – ‘Echo-vowels’ in Garo

Gloss	Proto-Bodo-Garo	Garo
‘bamboo’	* <i>waʔ</i>	<i>waʔa</i>
‘bird’	* <i>dauʔ</i>	<i>doʔo</i>
‘earth’	* <i>haʔ</i>	<i>aʔa</i>
‘foot/leg’	* <i>jaʔ</i>	<i>jaʔa</i>
‘mother’	* <i>maʔ</i>	<i>maʔa</i>
‘fire’	* <i>waʔr</i>	<i>waʔar</i>
‘worm’	* <i>joʔŋ</i>	<i>joʔoŋ</i>

The supporting data for Burling's analysis is provided, with modest diffidence, in a list of some 169 apparent Bodo-Garo cognate sets (Burling 1959: 440–445). In a separate list (Burling 1959: 451–453) he presents 62 additional sets that are supported by cognates from TB languages in other groups.

### Modhupur Mandi (Garo) (Burling 2004)

I have already reviewed this remarkable book at length (Matisoff 2008), so I will only touch on a few highlights here. It is as user-friendly as the subject matter allows, with every section marked by (A), (B), or (C), according to the particular audience for which it is intended: the general public (A), curious native speakers (B), or professional linguists (C). A unique way to present a grammar indeed!

It is of particular interest for (C)-category readers to compare and contrast the phenomena so well described in this grammar with what goes on in other TB or Southeast Asian languages. To mention a couple of these in passing:<sup>21</sup>

- As in many SEA'n languages, Mandi passives are rare, and are usually adversative. As Burling remarks (Burling 2004: 342), a language that can omit subjects so easily has less need for a passive than one where a subject is required.
- In a discussion of semantic variation among speakers, Burling mentions a confusion with respect to the names of internal organs of the body, especially between HEART and LIVER. A similar vacillation is characteristic of the Chin languages, where the PKC root \**m-luŋ* has

<sup>21</sup> For more details along these lines, see Matisoff (2008: 156–159).

either meaning, undoubtedly because both of these organs are considered to be the seats of human emotions and thought processes.<sup>22</sup>

- On the other hand, Kuki-Chin languages have thoroughgoing verb-agreement morphology, but this is totally lacking in Mandi.
- Mandi noun compounds, like those in Thai and Vietnamese, frequently begin with a prefix that gives a clue as to the semantic category of the noun (Burling 2004: 168–173). A few examples: *do-* ‘bird’ (cf. Thai *nók-*); *na-* ‘fish’ (cf. Thai *plaa-*); *bol-* ‘tree’ (cf. Thai *má(a)j-*).

I find myself in total sympathy with Burling’s general approach to grammatical description. His primary purpose is to understand the subtleties of the meaning of what people say. He refuses to subordinate the data to somebody else’s linguistic theory. ‘This grammar is a bit thin on formalities’ (Burling 2004: 7). Speaking of the sparing use of pronouns in Mandi, he permits himself a touch of sarcasm:

For what it is worth, the non-native speaker who is writing this paragraph finds the term ‘pro-drop’ to be whimsically misleading as a characterization of Garo. Subjects, whether pronouns, nouns, or NPs, simply never need to be put into the sentence at all, so there is nothing to be ‘dropped’. (Burling 2004: 305)

Burling is highly sensitive to variational phenomena, both those that arise within a language and those due to contact influences from outside. Along with this mindset goes a recognition that grammatical categories are far from mutually exclusive entities. He defines the Garo word as a form that is able to stand alone, choosing to regard the bound functorial morphemes that tend to pile up after the verb as ‘suffixes’ rather than as ‘particles’. He thus comes down on the side of morphology rather than syntax. Yet he freely admits that the question of ‘what is a Garo word?’ is a vexatious one (Burling 2004: 102–104).

Burling finds it impossible to draw a sharp line between ‘case markers’ (there are from 9 to 14 of them, depending on the criteria used) on the one hand, and ‘postpositions’ on the other (Burling 2004: 201–203). As he observes, ‘Most Garo grammatical categories have fuzzy boundaries’ (Burling 2004: 202).<sup>23</sup> Or as others have put it, ‘All grammars leak.’

The Garo language obviously occupies a special place in Burling’s heart, much as Lahu does in mine. His love for the Garo and other TB peoples shines through this book.

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<sup>22</sup> See VanBik (1998).

<sup>23</sup> I have encountered similar wrenching decisions with respect to Lahu, wondering whether I should call a certain class of morphemes nouns or adverbs. My solution was to call them “nadverbs” (Matisoff 1973: 118ff, 265, 306ff).

## 4 Burling and super-grouping

### 4.1 The sal languages (Burling 1983)

The higher-order grouping<sup>24</sup> of the TB subgroups remains extremely controversial, with several different schemas having been proposed. Some sort of special relationship among Jingpho, Northern Naga (=Konyak), and Bodo-Garo has been posited ever since the *Linguistic Survey of India* (Grierson and Konow 1903–1938) lumped them together as ‘Bodo-Naga-Kachin’. This closeness, whether due to genetic or contact factors, was noted in Benedict (1972: 6–7), who went on to give the two most ‘striking’ lexical examples of this special relationship, distinctive roots for SUN and FIRE (Table 3).<sup>25</sup>

TABLE 3 – SUN and FIRE in the Sal languages

	PTB	Kachin (Jingpho)	Namsang (N. Naga)	Moshang (N. Naga)	Garó <sup>26</sup> (Barish)	Chairel (Luish)
‘sun’	* <i>tsyar</i>	<i>džan</i>	<i>san</i>	<i>śar</i>	<i>sal/sar</i>	<i>sal</i>
‘fire’	* <i>b-war</i>	<i>ɽwàn</i>	<i>van</i>	<i>var</i>	<i>waʔl/waʔar</i>	<i>phal</i>

In 1983, Burling developed this idea in detail, generalizing Benedict’s example of the distinctive etymon for SUN by dubbing Bodo-Garo, Northeastern Naga, and Jingpho collectively ‘the Sal languages’. Later, based on classic data on Sak/Cak (Bernot 1967) and Kadu (Brown 1920), he suggested that Luish belongs in the ‘Sal group’ as well, observing that Sak’s ‘special similarities to Jingphaw are obvious (Burling 2003: 178).

However, a close re-examination of Burling’s evidence seems to show that while the Bodo-Garo/Northern Naga relationship seems quite solid, the connection of either of them to Jingpho is much more tenuous and distant.<sup>27</sup> A large proportion of the putative Sal-specific etyma are actually general TB roots. Burling himself was aware that this would someday be demonstrated: ‘I have no doubt that a fair number of the cognate sets that I offer . . . will finally turn out to have cognates outside the Sal group, but the collective weight of the examples I have collected seems to me to demand an explanation’ (Burling 1983: 15).

<sup>24</sup> I’d like to use the term “super-grouping” for these efforts.

<sup>25</sup> These forms actually represent general TB etyma, although their “semantic center of gravity” is elsewhere: reflexes of \**tsyar* usually mean ‘shine’, while those of \**b-war* most often mean ‘burn; roast; warm up’. The most widespread TB etyma for SUN and FIRE are \**nəy* and \**mey*, respectively.

<sup>26</sup> The transcriptions with *-l* are from Benedict (1972); those with *-r* are from Burling (1959).

<sup>27</sup> See the discussion in Matisoff (2013: 16–18, 37–44).

In general, I feel that Burling’s Sal supergroup should be maintained, with some modifications. Modern data (e.g. Huziwara 2012, Sangdong 2012) on two of the Luish languages (Sak and Kadu, respectively) make it clear that Jingpho is closer to Luish (now better called ‘Asakian’) than to any other TB subgroup.<sup>28</sup> I would like to propose a schema like the following Figure 1, from Matisoff (2013: 40).

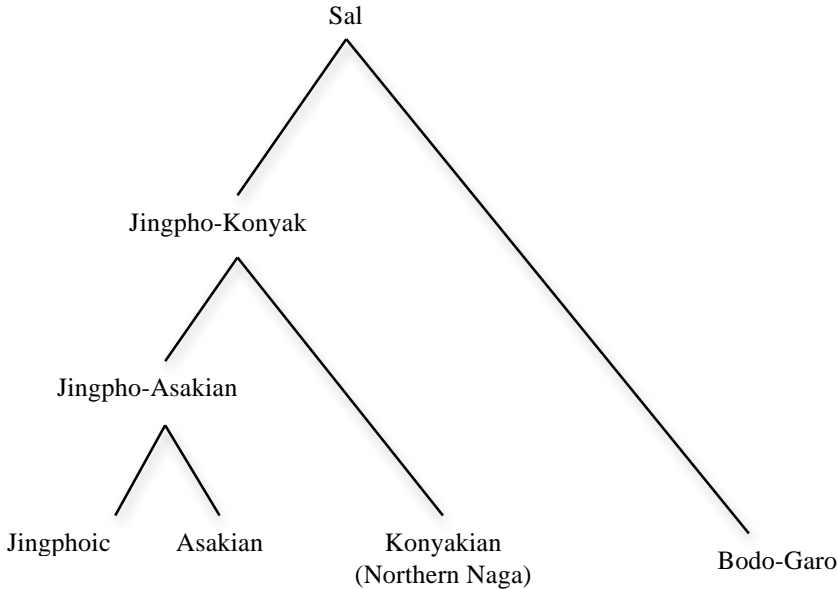


FIGURE 1 – Internal relations of the Sal languages

## 4.2 The Kamarupan kerfuffle

About 15 years ago, seeking a geographical cover-term for the myriad TB languages of Northeast India and adjacent areas, I came up with ‘Kamarupan’, based on *Kāmarūpa*, the Sanskrit name for the region, thinking that it had a charming folk etymology (‘Love Form’, or ‘Form of Love’) that nobody could possibly object to. I proceeded to use this term in my *Handbook of Proto-Tibeto-Burman* (Matisoff 2003), as well as in the database and etymologies of the *Sino-Tibetan Etymological Dictionary and Thesaurus* project (STEDT).

To my surprise, this seemingly anodyne term was vigorously objected to by scholars who had actually carried out fieldwork in the Northeast Indian area,

<sup>28</sup> Contrary to my previous view, I no longer consider Jingpho to be particularly close to Nungish, since the lexical similarities between them seem to be due to borrowing (Matisoff 2013).

including Burling,<sup>29</sup> on the grounds that it has unwelcome Indo-Aryan and even colonialist<sup>30</sup> connotations for the TB groups of the region. I invited Burling to express his views on this matter in *Linguistics of the Tibeto-Burman Area*, which he did (Burling 1999), reserving the right to reply in the same issue, which I did as well (Matisoff 1999).

Burling pointed out that nowadays 'Kamrup' is taken to refer only to the district that contains the important city of Gauhati (Guwahati), the capital of India's Assam Province, where there are very few speakers of TB languages. He found the term both historically and geographically inappropriate.

All this was quite convincing. Unfortunately, however, Burling went on to claim that it is 'just a bit presumptuous for outsiders to give names to other people's languages and language groups' (Burling 1999: 170). In my reply (Matisoff 1999: 176), I took 'a bit of umbrage' at the charge of presumptuousness, pointing out that Burling himself coined the term 'Sal languages', which native speakers would find quite hermetic. My reply brought up notions of political correctness, chauvinism with respect to one's own language, and other general issues: 'nothing . . . is more unstable than the political correctness of glossonyms, loconyms, and ethnonyms' (Matisoff 1999: 177).<sup>31</sup> And, 'scholars should steer a middle course between nomenclatural insensitivity and hypersensitivity' (Matisoff 1999: 178).

In the end I let myself be swayed by arguments from native speakers of TB languages of the region.<sup>32</sup> Kicking and screaming, I have indeed abandoned the term Kamarupan, and have purged it from the STEDT database and etymologies.

All this may seem like something of a tempest in a teapot, but perhaps our back-and-forth is not without interest for the field as a whole.

Meanwhile, we are left with what Burling (1999: 170) calls the 'accurate, though admittedly awkward' circumlocution 'Tibeto-Burman languages of Northeast India'.

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<sup>29</sup> Jacquesson (in personal communication 1999) called Kāmarūpa "the dream of a Moghul", since it never referred to anything like all of Northeast India. van Driem (1999), while conceding that it is a "colourful name", points out that most of the TB languages are spoken outside the territory of the medieval Hindu kingdom of Kāmarūpa (fl. 4<sup>th</sup>–13<sup>th</sup> centuries).

<sup>30</sup> van Driem feels that the term "celebrates the colonization of the Brahmapūtra fluvial plains by an Aryan élite and their continuing socio-economic, political and cultural domination over the native TB peoples of the region."

<sup>31</sup> I have in fact devoted a lot of thought to questions of language names in TB. See Matisoff (1986).

<sup>32</sup> Especially Yankee Modi, whom I had the pleasure of meeting again at ICSTLL #46 (Dartmouth, 2013).

## 5 Burling's contributions to Southeast Asian areal phonology

### 5.1. His treatment of glottalization in three language families

Glottal stop is fundamentally different from oral stops in a number of ways, especially in terms of predictability vs. distinctiveness, suprasegmentality, and tonogenetic potential. It is instructive in this connection to take a look at Mary R. Haas' treatment of glottal stop in standard Thai.<sup>33</sup> Thai short vowels in open syllables end predictably in glottal stop, while long vowels in such syllables do not. There are three possible ways of indicating this (Table 4).

TABLE 4 – Representation of long and short vowels in Thai

	Long	Short
(A)	<i>ca</i>	<i>caʔ</i>
(B)	<i>caa</i>	<i>ca</i>
(C)	<i>caa</i>	<i>caʔ</i>

If solution (A) is chosen, length in the long syllables is taken to be automatic, and can be supplied by rule. If (B) is selected, glottalization in short syllables is taken to be automatic, and can be supplied by rule. Haas opted, however, for the redundant solution (C), where both the length and the glottalization are indicated in the transcription. This is eminently sensible in a learner's dictionary, since it frees the student from constantly having to run through rules in his/her head to come up with the proper pronunciation. Haas also insisted on writing glottal stop before a vowel in word-initial position, where it is automatic (as, e.g., in German), claiming, with some exaggeration, that not writing ʔ- initially would be tantamount to not writing a stop like *t-*.

Burling has shown extraordinary sophistication in his treatment of laryngeal phenomena in the TB subgroups he has worked on:

- We have seen (§1 above) how his discovery of the glottalized syllables in Atsi and Maru enabled him to reconstruct a \*glottalized series of initials for Proto-Lolo-Burmese, thus greatly improving our understanding of LB tonal developments.
- In Karenic (§2 above), Burling surgically demolishes Jones' overblown and meagerly exemplified inventory of Proto-Karen syllable-final laryngeals *-ʔ*, *-h*, *-q* *-ʔ*.
- In Bodo-Garo (§3 above), Burling convincingly reconstructed a series of glottalized 'final clusters' *-ʔm*, *-ʔn*, *-ʔŋ*, *-ʔr*, and showed how Garo

<sup>33</sup> See, e.g., Haas 1964.

has developed 'echo-vowels' where Proto-Bodo-Garo had  $-ʔ$  as word final or as a member of a word-final cluster, e.g. 'bamboo' PTB  $*g-p^wa$  > PBG  $*waʔ$  > Garo  $waʔa$ .

Most impressively, Burling has documented the role of glottal stop in Bodo-Garo tonogenesis:

In Kachari [Bodo] the glottal stop is apparently just one phonetic aspect of a phonemic feature that includes pitch. Morphemes which when used alone end in a glottal stop are followed by a rise in pitch on a following syllable if there is one. The symbol /ʔ/ in Kachari bisyllabic words does not actually denote a phonetic glottal stop, but instead means that the second syllable is spoken with a raised pitch. This is the only feature reminiscent of tone in any of the Bodo languages . . . One may speculate that the Bodo languages are derived from a language with a fully developed tonal system and that in Kachari the glottal stop reflects the last gasp of tone. (Burling 1959: 450)

Joseph and Burling (2001) went on to demonstrate that the contrast between a glottal stop and its absence in Garo is cognate to the two-way tone contrast in several closely related languages (Tiwa, Boro, Rabha).

\* \* \*

It has been a pleasure to have had Rob Burling as a colleague in TB studies for so many years and decades. While we may have had our differences here and there, our approaches to linguistics are basically very similar.<sup>34</sup> We both mistrust formalism for its own sake, and try to understand languages on their own often messy terms. We recognize that all languages are rife with synchronic variation, and are rule-governed only up to a point. We realize that contact phenomena are basic to language history, and are responsible for much of the complication and imperfection of our phonological, grammatical, and semantic descriptions.

Among Burling's endearing personal qualities are:

- The empathy and affection he feels for the peoples whose language and culture he studies, and his concern that his work actually be useful to them.
- The fact that he is a terrible speller, and rather proud of it. He has just written a book bemoaning the vagaries of English orthography, and has developed his own off-beat proposals as to how spelling ought to be taught in the schools (Burling 2015).

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<sup>34</sup> We have reviewed each other's work sympathetically (Burling 1980; Matisoff 2008a).

Robbins Burling is a true original, and the fields of Southeast Asian linguistics and anthropology have richly benefited from his life's work.

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## 3

# The internal diversity of Tangsa: vocabulary and morphosyntax<sup>1</sup>

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## 1 Introduction

**R**obbins' Burling's substantial research over several generations, particularly the documentation and description of the Garo language, taken together with his wide range of comparative and anthropological publications makes him one of the giants of the field of Sino-Tibetan languages and an inspiration to all of us who have been working in the Northeast of India and bordering areas.

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My contribution to this celebration of his achievements is to revisit some of the information in his seminal paper establishing, by well-motivated linguistic principles, the group of languages that is termed either Sal, based on the word for ‘sun’ (Burling 1982), or sometimes Bodo-Konyak-Jinghpaw.

This 1982 paper posited a clear genetic relationship between three groups of languages – (1) Boro-Garo, on which Burling has done substantial research, (2) Jinghpaw, for which his long contact with the linguist-native speaker La Raw Maran was of great significance, and (3) a group of other languages, which he variously called *northeastern* or *eastern* Naga and is now more usually termed Northern Naga. The Northern Naga data was taken from some local Indian publications from the 1970s and Burling (1982: 5) had cause to regret the quality of the transcriptions in some of those sources. This paper will endeavour to improve on those sources and offer an insight into the somewhat more substantial internal variation within part of this group than was apparent in earlier times.

The sophistication of Burling’s approach was underlined by his careful observation that while the genetic similarity between Jinghpaw and Northern Naga was clear, there was also substantial borrowing by some Northern Naga groups, specifically the Tangsa and Nocte, because of their proximity to Jinghpaw/Singpho (1982: 17).

Another of Burling’s substantial contributions is the 2003 overview of the languages of North East India, clearly indicating the close connection between Tangsa and Nocte within Northern Naga. What is now called Northern Naga had probably been first suggested in Damant (1880: 249–250) and then further developed by Sten Konow in Grierson (1903: 329), where the group is called the ‘Eastern Subgroup of Naga’. The most substantial comparative work on this group is French (1983).

This paper will present recent data on some of the ‘most convincing’ examples that demonstrated the ‘Sal’ group (Burling 1982: 8), as well as presenting information on the morpho-syntax of some of these Northern Naga languages and suggesting some criteria for sub-grouping the varieties.

## 2 The Tangsa languages

The language referred to as Tangsa in Burling (1982, 2003), is in fact a large number of distinct varieties, grouped together under the names Tangsa in India and Tangshang in Myanmar.<sup>2</sup> In general these are groups that have lived in the Patkai range that forms the India-Myanmar border for a long period, with migration from the Myanmar side into India ongoing over hundreds of years.

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<sup>2</sup> The group names Tangsa and Tangshang are of relatively recent coinage – 1950s for Tangsa and 2003 for Tangshang – and are not cognate. Tangshang includes groups that would be called Nocte, Tutsa and Wancho in India. See Statezni (2013) and Morey (in press) for a more detailed discussion of these names.

Within Tangsa/Tangshang, there are around 80 subtribes<sup>3</sup>. Each of these subtribes speaks a distinct linguistic form, some of which are almost identical and fully mutually intelligible (for example Ngaimong and Haqcheng, or Chamchang and Shecyü), while others are completely mutually unintelligible, as for example Yasawa and Tikhak. Each of these subtribes has an autonym, for example Shecyü /ʃe<sup>2</sup>təu<sup>2</sup>/, as well as exonyms, the pronunciation of the name in each one of the other varieties, so that, for example, the Cholim word for Shecyü is /k<sup>h</sup>ai<sup>2</sup>k<sup>h</sup>ja<sup>2</sup>/ and the Joglei word is /ʃakeŋ/. In addition to these, each group has what is termed a ‘general name’, apparently an outsiders’ name from an unknown linguistic variety. The ‘general name’ for Shecyü is Shangke. In this paper I use the autononyms.

Since the Tangsa varieties are so diverse, it is desirable to group them, in order to understand the level of mutual intelligibility and relatedness. Statezni (2013) employs interviews and literacy testing to conclude that the level of mutually intelligibility within Tangsa/Tangshang is quite low, suggesting, for example, that only 5 out of 55 subtribes in Myanmar would easily understand the Shecyü variety, although it is a lingua franca in some areas (see Morey in progress).

Within India, the main division of Tangsa groups is between those often termed *Pangwa*, mostly of relatively recent arrival from the Myanmar side, and other groups that have been in India for much longer. The Tangsa groups that have been in India for some time can be categorised as follows:

- (1) Tikhak group (Tikhak, Yongkuk, Longchang, Kato, Nokja)
- Muklom group (Muklom, Hawoi)
- Phong (also known as Ponthai)
- Pangwa varieties

The first three groups listed in ((1) have been in India for a long time. The Tikhak group is relatively homogenous, with mutually intelligibility probably between all the varieties, though Tikhak and Yongkuk are the most similar. Muklom and Hawoi also form a group, and Phong is quite distinct from all other varieties. Pangwa, on the other hand is a much larger and much more diverse group, with perhaps 30 subtribes, of which there is data presented 16 or 17 in Table 2 and Table 4 below. As will be discussed below, clear linguistic criteria for defining Pangwa still elude us, but one feature the Pangwa varieties have in common is the singing of the Wihu song (see Barkataki-Ruscheweyh and Morey 2013).

Study of more recently arrived groups in India, such as the Hakhun and Champang, combined with the work of the Linguistic Society Naga Survey Team in Myanmar, some of the findings of which are published in Statezni

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<sup>3</sup> A full list of these is available on the Wikipedia site, ‘Tangsa people’ (accessed 2015-08-05), [http://en.wikipedia.org/wiki/Tangsa\\_people](http://en.wikipedia.org/wiki/Tangsa_people); a similar list is in Statezni (2013: 9).

(2013), and some of my own preliminary observations in Myanmar, can add to this two other groupings for which data is presented here, Olay and Hakhun, as well as two varieties spoken only in Myanmar, Pinkhu and Yasawa.

### 3 The ‘most convincing’ examples that established ‘Sal’

Burling (1982: 8) discusses a number of words that were ‘the most convincing’ examples established ‘Sal’ as a subgroup. There are altogether 24 words lists in Table 1a (1982: 19–20), and in this section I will discuss some of those and present more recently collected data for them. This new data, collected between 2007 and 2015, is presented in Table 2,<sup>4</sup> which also includes the proto forms suggested by French (1983). Where tone is marked, it has been checked with native speakers who have a clear intuition for the tone categories; where this was not possible, tone is not marked. Nevertheless there are some inconsistencies of tone categories across the varieties. The realisation of these tone categories varies considerably from variety to variety, so that for example Tone category 1 is a high tone in Rera and a low tone in Chamchang (see Morey in print for further details).

Also, in the tables the semivowels are often in variation with fricatives or affricates, as [j] ~ [ʒ] ~ [dʒ] or [w] ~ [β] ~ [v]. I have not found any variety in which these distinctions are contrastive, but between the varieties there is variation in their realization.

#### ‘sun’ and ‘sky’

The first word listed in Table 2, not surprisingly, is ‘sun’, which in most cases also combines the form for ‘sky’. Burling (1982: 8) said that ‘the words for ‘sun’ in these languages – *san*, *sal* or *jan* . . . have been widely cited as offering the clearest evidence for the special status of this group. The correspondences . . . are reassuringly regular, except that the *hi* of the Konyak term is not an ideal cognate’.

Of ‘sky’, Burling observed ‘the syllable *rang* crops up in most of these languages as the first syllable of compounds that refer to celestial phenomena . . . When *rang* occurs by itself, it seems always to have the meaning “sky”’ (1982: 8).

Table 2 shows that there is considerable diversity in the realisation of the final of \**sal*, with finals /-al/, /-ai/, /-e/, and /-i/ in the Pangwa varieties, as well as /-ən/ in the Olay varieties, and /-a/ in Tikhak and Phong. A group of Southern Pangwa varieties (Yvngban Wvng, Shangthi, Gaqlun, Rinkhu, Rera) do not have a reflex of \**sal* in the word for ‘sun’, but a variety of tokens probably based on the form for ‘eye’

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<sup>4</sup> I am very grateful to Krishna Boro and Karen Parker for the data on Hakhun and Tikhak respectively.

The word for ‘sky’ is regularly /r-/ initial in Pangwa, with significant changes to the final Chamchang and Shecyü (to /-a/) and in Mungre (to /-ɔ/). In some non-Pangwa varieties, however, the initial of this word undergoes sound change, to /z-/ ~ /j-/ in Olay and Yasawa and being dropped (\*r- → Ø-) in Pinkhu.

#### ‘father’

Burling (1982: 9) said that ‘terms for “father” beginning with *w* are rare enough in the world’s languages to invite notice. Within Tibeto-Burman, these seem to be unique.’ This is found with initial /w-/ , /β-/ or /v-/ throughout the Tangsa varieties. This word also provides us examples of sound changes within the Pangwa group for the \*-a final, going to /-e/ in Cholim and Shangthi, to /-i/ in Lauchang and to /-əi/ in Mungre. The change of the final in Chamchang/Shecyü to /-e/ here is irregular for a reflex of \*-a, which in those varieties is usually /-i/ (see ‘leg’), but is /-e/ in ‘father’ and also ‘son’.

#### ‘fire’

Burling (1982: 10) said of this that ‘except for the word “sun” this has probably the second most widely cited example of a unique Sal language innovation’. These two words are discussed by Matisoff (this volume), where the reconstruction of ‘fire’ and ‘sun’ to Proto Tibeto-Burman are respectively \**b-war* and \**tsyar*. French (1983) reconstructs them for Northern Naga to \**ʔ-wa r*, and \**cər* respectively. This distinction between final /-a r/ and /-ər/ is reflected in Ngaimong, Joglei and Muklom by the longer /-al/ final in ‘sun’ and the shorter /-əl/ in ‘fire’, while in Mueshaung and Mungre it is reflected by final /-l/ for ‘sun’ and final /-r/ for ‘fire’. This information is presented in Table 1, which also includes Haqcheng, the variety closest to Ngaimong where the distinction between these two finals has been lost.

TABLE 1 – Final liquids in Tangsa varieties

	sun	fire	monkey
Ngaimong	<i>rəŋ<sup>2</sup>sal<sup>2</sup></i>	<i>vəl<sup>1</sup></i>	<i>vui<sup>2</sup></i>
Haqcheng	<i>rəŋ<sup>2</sup>sai<sup>2</sup></i>	<i>vai<sup>1</sup></i>	<i>vui<sup>2</sup></i>
Joglei	<i>rəŋ<sup>3</sup>fal<sup>2</sup></i>	<i>vəl<sup>1</sup></i>	<i>voi<sup>2</sup></i>
Mueshaung	<i>raŋ<sup>2</sup>fal<sup>2</sup></i>	<i>βər<sup>1</sup></i>	<i>βir<sup>2</sup> sul<sup>2</sup></i>
Mungre	<i>rɔ<sup>2</sup>fəl<sup>2</sup></i>	<i>var<sup>1</sup></i>	<i>vi<sup>2</sup>səl<sup>2</sup></i>
Muklom	<i>raŋsal</i>	<i>vəl</i>	<i>vi</i>

I assume that the presence of final liquids is a retention of an earlier feature. Its loss in Haqcheng must be very recent indeed, since one of the few significant differences between Ngaimong and Haqcheng is in the /-l/ final codas which are

realised as /-ai/ in Haqcheng, without any length distinction noted between the coda of ‘sun’ and ‘fire’. My Ngaimong consultant, on the other hand, was clear that there was a shorter, more back and central vowel in ‘fire’, which I write with schwa /ə/ and a longer, lower more front vowel in ‘sun’ which I write /a/. This length-quality distinction was also confirmed by speakers in Joglei and Mueshaung but in Mungre the reverse is true.

The word for ‘**monkey**’ was also included in Table 2 showing the retention of a final liquid only in Mueshaung. The words for ‘monkey’ vary between those have the \*/w-/ initial syllable first, and others that have an initial syllable similar to /juk/.

### ‘leg’ and ‘moon’

Burling (1982: 10) mentions that the group of words for ‘insect-arm-foot-moon’ have the ‘peculiar pattern of initial correspondences: Garo *j-*, Atong, Wanang *c-*, Konyak *y-*, Nocte *d-*, Tangsa *j-*’. In Table 2 below, the words for ‘leg’ and ‘moon’ are exemplified. They have initials varying between /j-/ and /ʒ-/ for most of the varieties, including all of the Pangwa varieties, but /d-/ initials for Hakhun, Phong, Champang and Yasawa. The first two of these are included under ‘Nocte’ when speakers are living in the Tirap district of Arunachal Pradesh, so the initial /d-/ accords with Burling’s observation. The other two varieties with initial /d-, Champang and Yasawa are mostly spoken in Myanmar, though some Champang people now live in Tirap district as well as those who live in Assam, with whom I worked. Note that the word for ‘monkey’ in Champang, /ʒukku/ is cognate with the /j-/ ~ /ʒ-/ initial in a number of Pangwa varieties, perhaps suggesting that this word is a later borrowing in Champang otherwise /d-/ initial would be expected (something not seen for the cognate word in Yasawa). The word for ‘worm’ is not included in the Table 2, but is typically /jun/ ~ /ʒun/ in most varieties for which it has been recorded, but /kupku/ in Champang.

### ‘burn’

Burling pointed out that ‘words such as *kam* with the meaning “burn”, appear to be unique to the Sal languages [within Sino-Tibetan]’ (Burling 1982: 9). Table 2 shows that forms such as /k<sup>h</sup>am/ (the initial is usually aspirated) are found throughout the Tangsa varieties, with very little variation of the form. One example worth noting is that in Lauchang, where there is a regular process of \*-am → /-e/, the form is /k<sup>h</sup>e<sup>3</sup>/.

### ‘drink’

Burling lists *ling* for Tangsa and *ying* for Konyak (1982: 19), saying that ‘the Konyak *y* is unexplained . . . Still the Tangsa term seems unarguably related to the general Bodo term’ (1982: 9) (examples given were Bodo /lɛŋ/, Garo /riŋ/). The Tangsa data presented here shows that the forms in the Pangwa varieties



have a coda that is presumably cognate with the ‘general Bodo term’, but the initial is usually /n-/ or /ɲ-/. Only in Muklom is there a form /liŋ/. A second etymon /juk/ is found in most non-Pangwa varieties, save Pinkhu where there is an unrelated word.

#### ‘mother’

Pointing out the most Tibeto-Burman languages have a form for ‘mother’ with initial /m-/, Burling (1982: 11) suggested that forms ‘with initial *n-* invite notice’. Most of the varieties in Table 2 have initial /n-/ or /ɲ-/, with several having a form /po/ (Yvngban Wvng, Rera, Champang, Pinkhu).

#### ‘long’

Burling (1982: 11) observed that outside of Sal words meaning ‘long’ were rarely cognate with /lu/. Table 2 shows that this word has /l-/ initial throughout. In most of the Pangwa varieties, it means both ‘long’ and ‘far’, and there is verb stem alternation as seen in Ngaimong, where the verbal form, given first, is *lu'* and the nominalized form is *əloəl*<sup>3</sup>. This stem alternation in Mungre is taken one step further, where only the alternate form *loi*<sup>3</sup> is now used to mean ‘long’, and the underived form *lu'* now means ‘far’.

#### ‘earth’

There is a set of words, ‘body’, ‘dog’, ‘earth/ground’, and ‘steal’, which typically have /h-/ initials in Ngaimong, Haqcheng, Joglei, Maitai, Jiingi, Mungre, Chamchang, Shecyü, Champang, Haqchum, Hakhun, Haidley, Tikhak, Muklom and /g-/ ~ /ɣ-/ initials in Mueshaung, Yvngban Wvng, Shangthi, Gaqlun, Lungkhi, Cholim, Lauchang, Rinkhu, Rera, Pingku and Yasawa. Burling (1982: 6) wrote of ‘earth’ and ‘mother’s brother’ that they ‘have initial *h-* throughout the eastern Naga languages and Bodo, except in Garo where the initial is lost. The word for “dog” also suggests that initial *h-* in eastern Naga may correspond to an initial velar in Jinghpaw, but the evidence is by no means decisive.’ Where a cognate word is found in the Turung variety of Singpho, they have initial /g-/ as *gui*<sup>2</sup> ‘dog’ *ɲ'gaa'* ‘earth/ground’, *ləguu'* ‘steal’ (Morey 2010). The presence of the initial velar in many Tangsa varieties suggests that Burling’s speculation is correct and can be confirmed.

#### ‘blood’

There are other words with the initial /h-/ ~ /g-/ variation, such as ‘blood’ that have a different cognate set. This word has a sibilant initial in Turung, as *sai*<sup>2</sup> ‘blood’, the same initial being found in Haidley and Phong. Maitai and Jiingi have initial /tɕ<sup>h</sup>-/ for this word, as seen in Table 2.

TABLE 2 – Comparative word lists in Tangsa varieties (1)

	sun	father	fire	monkey	leg	moon
<b>Pangwa</b>						
Ngaimong	<i>rəŋ<sup>2</sup>sal<sup>2</sup></i>	<i>va<sup>1</sup>, əva<sup>4</sup></i>	<i>vəl<sup>1</sup></i>	<i>vui<sup>2</sup></i>	<i>za<sup>1</sup></i>	<i>za<sup>3</sup>pui<sup>2</sup></i>
Haqcheng	<i>rəŋ<sup>2</sup>sai<sup>2</sup></i>	<i>va<sup>1</sup></i>	<i>vai<sup>1</sup></i>	<i>vui<sup>2</sup></i>	<i>za<sup>1</sup></i>	<i>za<sup>3</sup>pui<sup>2</sup></i>
Joglei	<i>rəŋ<sup>3</sup>fal<sup>2</sup></i>	<i>ava<sup>1</sup></i>	<i>vəl<sup>1</sup></i>	<i>voi<sup>2</sup></i>	<i>za<sup>1</sup></i>	<i>zapoi</i>
Mueshaung	<i>rauŋ<sup>2</sup>fal<sup>2</sup></i>	<i>əβa<sup>1</sup></i>	<i>βər<sup>1</sup></i>	<i>βir<sup>2</sup> sul<sup>2</sup></i>	<i>ja<sup>1</sup></i>	<i>ja<sup>3</sup>pi<sup>2</sup></i>
Mungre	<i>ro<sup>2</sup>əl<sup>2</sup></i>	<i>vei<sup>1</sup></i>	<i>var<sup>1</sup></i>	<i>vi<sup>2</sup>səl<sup>2</sup></i>	<i>xəuk</i>	<i>jɔ<sup>3</sup>pi<sup>2</sup></i>
Maitai	<i>raŋse</i>	<i>a-βa<sup>1</sup></i>	<i>βai<sup>1</sup></i>	<i>βai<sup>2</sup></i>	<i>je<sup>1</sup></i>	<i>jepai</i>
Jiingi	<i>rəŋ<sup>2</sup>fai<sup>2</sup></i>	<i>ɪβa<sup>1</sup></i>	<i>βəi<sup>1</sup></i>	<i>βo<sup>2</sup></i>	<i>za<sup>1</sup>hok</i>	<i>za<sup>3</sup>pɔ<sup>2</sup></i>
Cholim	<i>raŋ<sup>2</sup>xai<sup>2</sup></i>	<i>βe<sup>1</sup></i>	<i>βai<sup>1</sup></i>	<i>βo<sup>2</sup></i>	<i>zjɔ<sup>1</sup></i>	<i>zjɔ<sup>3</sup>pɔ<sup>2</sup></i>
Chamchang	<i>ra<sup>2</sup>ʃe<sup>2</sup></i>	<i>βe<sup>1</sup></i>	<i>βa<sup>1</sup></i>	<i>jokβi<sup>2</sup></i>	<i>hok</i>	<i>zi<sup>3</sup>pu<sup>2</sup></i>
Shecyü	<i>ra<sup>2</sup>ʃe<sup>2</sup></i>	<i>ve<sup>1</sup></i>	<i>va<sup>1</sup></i>	<i>jokvi<sup>2</sup></i>	<i>ji<sup>1</sup></i>	<i>ji<sup>3</sup>pi<sup>2</sup></i>
Lauchang	<i>ra<sup>2</sup>si<sup>2</sup></i>	<i>vi<sup>1</sup></i>	<i>ve<sup>1</sup></i>	<i>γu<sup>1</sup>ʃai<sup>2</sup></i>	<i>zi<sup>1</sup></i>	<i>zi<sup>3</sup>pu<sup>2</sup></i>
Lungkhi	<i>rəŋ<sup>2</sup>ʃəi<sup>2</sup></i>	<i>əva<sup>1</sup></i>	<i>vən<sup>1</sup></i>	<i>jokvi<sup>2</sup></i>	<i>ja<sup>1</sup></i>	<i>ja<sup>3</sup>pi<sup>2</sup></i>
Yvngban Wvng	<i>rəŋ<sup>2</sup>mik</i>	<i>iwa<sup>1</sup>, owa<sup>2</sup></i>	<i>wən<sup>1</sup></i>	<i>jukbe<sup>2</sup></i>	<i>ja<sup>1</sup></i>	<i>ja<sup>4</sup>pe<sup>2</sup></i>
Shangthi	<i>rəŋ<sup>2</sup>lik</i>	<i>əve<sup>1</sup></i>	<i>vɔn<sup>1</sup></i>	<i>jukvi<sup>2</sup></i>	<i>je<sup>1</sup></i>	<i>je<sup>3</sup>p<sup>hi</sup>i<sup>2</sup></i>
Gaqlun	<i>raŋ<sup>2</sup>mik</i>	<i>a<sup>3</sup>va<sup>2</sup></i>	<i>vən<sup>1</sup></i>	<i>zukvi<sup>1</sup></i>	<i>za<sup>1</sup></i>	<i>za<sup>3</sup>p<sup>hi</sup>i<sup>2</sup></i>
Rinkhu	<i>raŋ<sup>2</sup>mek</i>	<i>awa<sup>1</sup></i>	<i>wɔn<sup>1</sup></i>	<i>jukwi<sup>2</sup></i>	<i>ja<sup>1</sup>pa<sup>3</sup></i>	<i>ja<sup>3</sup>pi<sup>2</sup></i>
Rera	<i>raŋ<sup>2</sup>mit</i>	<i>awa<sup>1</sup></i>	<i>wan<sup>1</sup></i>	<i>jokwi</i>	<i>ja<sup>1</sup>pa<sup>3</sup></i>	<i>japi</i>
<b>Olay</b>						
Champang	<i>zəŋsən</i>	<i>papa</i>	<i>wən</i>	<i>zukku</i>	<i>dateuk</i>	<i>dəpu</i>
Haqchum	<i>zəŋfən</i>		<i>βən</i>	<i>βɔ</i>	<i>zək<sup>h</sup>uk</i>	<i>za pɔ</i>
<b>Hakhun</b>						
Hakhun	<i>se<sup>2</sup></i>	<i>i<sup>2</sup>va<sup>1</sup></i>	<i>van<sup>1</sup></i>	<i>vi<sup>3</sup></i>	<i>da<sup>1</sup></i>	<i>da<sup>4</sup>p<sup>hi</sup>i<sup>1</sup></i>
Haidley	<i>se<sup>2</sup>p<sup>h</sup>o<sup>2</sup></i>	<i>ava<sup>1</sup></i>	<i>vi<sup>1</sup></i>	<i>vui<sup>2</sup></i>	<i>za<sup>1</sup></i>	<i>za<sup>3</sup>p<sup>h</sup>ui<sup>2</sup></i>
<b>Tikhak</b>						
Tikhak	<i>raŋ<sup>3</sup>sa:<sup>2</sup></i>	<i>iya:<sup>2</sup>, aya:<sup>1</sup></i>	<i>uə:<sup>1</sup></i>	<i>uəi<sup>2</sup></i>	<i>ja:<sup>2</sup></i>	<i>ja<sup>3</sup>pɔi<sup>2</sup></i>
<b>Others Myanmar</b>						
Pinkhu	<i>aŋ ŋen</i>	<i>apa</i>	<i>vən</i>	<i>jukvi</i>	<i>lətaŋ</i>	<i>neteiko</i>
Yasawa	<i>jaŋ mik</i>	<i>awa</i>	<i>wan</i>	<i>duk ve</i>	<i>dake</i>	<i>ɖape</i>
<b>Others India</b>						
Muklom	<i>raŋsal</i>	<i>va</i>	<i>vəl</i>	<i>vi</i>	<i>ja</i>	<i>japi</i>
Phong	<i>rəŋsa</i>	<i>(ŋi<sup>2</sup>)va<sup>1</sup></i>	<i>ve</i>	<i>vo</i>	<i>da<sup>1</sup></i>	<i>dafo</i>
<b>French</b>	<i>*rəŋ + *cər</i>	<i>*pwa</i>	<i>*ʔ-wa r</i>	<i>*wo y</i>	<i>*gla</i>	<i>*gla poy</i>

	burn	drink	mother	long	earth	blood	sleep
<b>Pangwa</b>							
Ngaimong	<i>k'am<sup>3</sup></i>	<i>nij<sup>2</sup></i>	<i>ɲəu<sup>1</sup></i>	<i>lu<sup>1</sup>, loə<sup>3</sup></i>	<i>ha?</i>	<i>həi<sup>1</sup></i>	<i>kun<sup>1</sup></i>
Haqcheng	<i>k'am<sup>3</sup></i>	<i>nij<sup>2</sup></i>	<i>ɲəu<sup>1</sup></i>	<i>əlu<sup>2</sup></i>	<i>ha?</i>	<i>həi<sup>1</sup></i>	<i>kon<sup>1</sup></i>
Joglei	<i>tə<sup>h</sup>ak</i>	<i>nij<sup>2</sup></i>	<i>ɑɲəu<sup>1</sup></i>	<i>alu<sup>1</sup></i>	<i>ha?</i>	<i>həi<sup>1</sup></i>	<i>kun<sup>1</sup></i>
Mueshaung	<i>k'am<sup>3</sup></i>	<i>nuj<sup>2</sup></i>	<i>əɲuu<sup>1</sup></i>	<i>əlu<sup>1</sup></i>	<i>ya?</i>	<i>təɣui<sup>1</sup></i>	<i>kətsol<sup>2</sup></i>
Mungre	<i>k'im<sup>3</sup></i>	<i>nəj<sup>2</sup></i>	<i>ɲɔŋ<sup>1</sup></i>	<i>lu<sup>1</sup>, loi<sup>3</sup></i>	<i>hei?</i>	<i>tahai<sup>1</sup></i>	<i>kun<sup>3</sup>, jəp</i>
Maitai	<i>ək<sup>h</sup>jam<sup>3</sup></i>	<i>naŋ</i>	<i>a-ɲuŋ</i>	<i>alau</i>	<i>ha?</i>	<i>tə<sup>h</sup>i<sup>1</sup></i>	<i>jap</i>
Jiingi <sup>5</sup>		<i>nij</i>	<i>ɲɔŋ<sup>1</sup></i>		<i>hə?</i>	<i>tə<sup>h</sup>i<sup>3</sup>tə<sup>h</sup>i<sup>1</sup></i>	<i>jəp</i>
Cholim	<i>ik<sup>h</sup>jam<sup>3</sup></i>	<i>ɲij<sup>2</sup></i>	<i>ə-ɲu<sup>1</sup></i>	<i>alu<sup>1</sup></i>	<i>ge?</i>	<i>təgi<sup>1</sup></i>	<i>ʒɲ<sup>1</sup></i>
Chamchang	<i>ɲai<sup>2</sup></i>	<i>ɲaŋ<sup>2</sup></i>	<i>ɲuŋ<sup>1</sup></i>	<i>lu<sup>1</sup></i>	<i>hi?</i>	<i>təɣai<sup>1</sup></i>	<i>kon<sup>1</sup></i>
Shecyü	<i>k<sup>h</sup>ɣm<sup>3</sup></i>	<i>ɲəj<sup>2</sup></i>	<i>ɲuŋ<sup>1</sup></i>	<i>lu<sup>3</sup></i>	<i>hi?</i>	<i>təjəi<sup>1</sup></i>	<i>kɔn<sup>3</sup></i>
Lauchang	<i>k'e<sup>3</sup></i>	<i>ɲaŋ<sup>2</sup></i>	<i>ɲoŋ<sup>1</sup></i>	<i>lau<sup>1</sup></i>	<i>ɣuk</i>	<i>təɣai<sup>1</sup></i>	<i>kon<sup>1</sup></i>
Lungkhi	<i>k'am<sup>2</sup></i>	<i>nij<sup>2</sup></i>	<i>əny<sup>1</sup></i>	<i>əlu<sup>1</sup></i>	<i>ga?</i>	<i>tsəgi<sup>1</sup></i>	<i>jup, ten<sup>3</sup></i>
Yvngban	<i>kam<sup>3</sup></i>	<i>nij<sup>2</sup></i>	<i>po<sup>2</sup>po<sup>2</sup>, inu<sup>1</sup></i>	<i>alu<sup>1</sup></i>	<i>ga?</i>	<i>igi<sup>1</sup></i>	<i>jup</i>
Wvng							
Shangthi	<i>tə<sup>h</sup>ək</i>	<i>nij<sup>2</sup></i>	<i>ənu<sup>1</sup></i>	<i>əly<sup>1</sup></i>	<i>ge?</i>	<i>təgi<sup>1</sup></i>	<i>jip</i>
Gaqlun	<i>k'am<sup>2</sup> ma<sup>3</sup></i>	<i>nij<sup>2</sup></i>	<i>a<sup>3</sup>nu<sup>2</sup></i>	<i>lu<sup>1</sup> a<sup>3</sup></i>	<i>ga?</i>	<i>gi<sup>1</sup></i>	<i>ten<sup>3</sup></i>
Rinkhu	<i>tə<sup>h</sup>ak</i>	<i>ɲen<sup>2</sup></i>	<i>ano<sup>1</sup></i>	<i>alu<sup>1</sup></i>	<i>ga?</i>	<i>tagi<sup>1</sup></i>	<i>jup</i>
Rera		<i>nin<sup>2</sup></i>	<i>apo<sup>2</sup></i>		<i>ga?</i>	<i>gi<sup>1</sup></i>	<i>jup</i>
<b>Olay</b>							
Champang	<i>kam</i>	<i>ʒuk</i>	<i>popo</i>	<i>holok</i>	<i>hə?duŋ</i>	<i>hi</i>	<i>ʒup</i>
Haqchum	<i>əkam</i>	<i>ʒuk</i>		<i>əlu</i>	<i>hə?ʒuŋ</i>	<i>he</i>	<i>ʒɲ</i>
<b>Hakhun</b>							
Hakhun	<i>a<sup>2</sup>k'am<sup>2</sup></i>	<i>ʒu?</i>	<i>i<sup>2</sup>ɲu<sup>1</sup></i>	<i>lu<sup>1</sup></i>	<i>ha?</i>	<i>a<sup>3</sup>hi<sup>1</sup></i>	<i>a<sup>2</sup>ʒip<sup>2</sup></i>
Haidley		<i>ʒup</i>	<i>ɑɲu<sup>1</sup></i>	<i>alu<sup>1</sup></i>	<i>ha?</i>	<i>si<sup>1</sup></i>	<i>aʒam<sup>3</sup></i>
<b>Tikhak</b>							
Tikhak	<i>ak<sup>h</sup>an<sup>2</sup></i>	<i>nəj<sup>2</sup></i>	<i>ita:<sup>2</sup>, m<sup>2</sup></i>	<i>alu:<sup>2</sup></i>	<i>ha?<sup>h</sup></i>	<i>tə<sup>2</sup>hi:<sup>1</sup></i>	<i>ajəp<sup>4</sup></i>
<b>Other Myanmar</b>							
Pinkhu	<i>tak men</i>	<i>pak men</i>	<i>apo</i>	<i>lu ə</i>	<i>ga(?)luŋ</i>	<i>aji</i>	<i>jap ma</i>
Yasawa	<i>k'am</i>	<i>ne</i>	<i>mu</i>	<i>lo ka kəta?</i>	<i>ga?</i>	<i>agi</i>	<i>ɖap</i>
<b>Other India</b>							
Muklom		<i>ulij</i>	<i>nu</i>	<i>alo</i>	<i>ha?</i>	<i>tahi</i>	<i>ɥip</i>
Phong	<i>k<sup>h</sup>am</i>	<i>ʒuk</i>	<i>ɲi<sup>2</sup>nu<sup>1</sup></i>	<i>lu</i>	<i>ha?</i>	<i>si<sup>1</sup></i>	<i>vik</i>
<b>French</b>	<i>*grə n, *chak</i>	<i>*N-li ɲ/ *N-lu ɲ</i>	<i>*ɲə w</i>	<i>*low</i>	<i>*ka</i>	<i>*C-hə y/ *syi</i>	<i>*C/V<sup>6</sup> -ɣu p/</i>

### 'sleep'

The final word in Table 2 is one listed as a 'tantalizing possibility' by Burling (1982: 12), for which he listed *jip* as the Tangsa form. This meaning is covered by a range of words in Tangsa, some with a form related to /jup/, some to /kon/,

<sup>5</sup> I was unable to collect a list of verbs in Jiingi (Dunghi). The words for 'drink' and 'sleep' were collected by the Linguistic Society Naga Survey Team, Myanmar. I would expect the form for 'burn' to be /k<sup>h</sup>a/ based on a probably regular /-a/ reflex of *\*.am* in Jiingi

<sup>6</sup> French writes C with a V underneath it. I've not been able to find out from reading his thesis what this symbol means.

some to other forms. Notice that this word does not show the /j-/ ~ /d-/ correspondence observed for ‘leg’ and ‘moon’ above; in both Champang and Hakhun it has initial /ʒ-/, which is not contrastive with /j-/. Only Yasawa has initial /d-/, here observed as having a clear dental realisation.

This brief examination of some Tangsa forms for those given by Burling has confirmed some of his suggestions, while adding new information that allows the comparison of some words to be looked at in a new light (for example ‘drink’). I will now turn to an examination of the some of the morphology of Tangsa.

## 4 Morphological profile

Most of the Tangsa varieties investigated so far have verbal agreement particles, marking both tense/aspect/modality and person and number on particles that were probably originally independent auxiliaries or copula (see DeLancey 2011) but are now bound morphemes, sometimes realised as phonologically bound suffixes. A fuller discussion of these is found in Morey (in print). The forms were mostly elicited but are also confirmed in those varieties for which there are substantial collections of glossed texts (e.g. Chamchang, Cholim, Mueshaung, Lauchang).

Table 4 lists past and future forms for the varieties given in Table 2, save for Champang, Pinkhu and Yasawa, which, based on data collected to this point, do not have person/number agreement marking on the verbs in any form at all. More research is certainly needed on this point, but, for example, the Haqchum consultant gave a set of past agreement markers quite typical for Tangsa varieties, whereas data collected from a number of speakers of the variety regarded as the closest to Haqchum, Champang, does not show agreement at all. DeLancey (1989, 2011) has argued that agreement is a conservative feature of these languages which has therefore been lost in varieties like Champang, possibly quite recently since in other ways Haqchum and Champang are alike.

The markers shown in Table 4 combine with the verbal, non-nominalized stem of the verb, as for example *ka' tək* ‘I went’ in Ngaimong, combining the verb root *ka'* ‘go’ with the 1<sup>st</sup> person past form *tək*. In the case of the future, there is sometimes a preverbal element or prefix, which is a schwa in Ngaimong, Haqcheng and Joglei, and a form varying between /ma/, /me/ and /mi/ in Mungre, Cholim-Longri, Chamchang-Shecü, Lauchang,<sup>7</sup> Shangthi and Rera (this form generally has more phonological / prosodic independence than the schwa prefix and is not shown as prefixed in the table). Yvngban Wvng also has an /m-/ future, but it is post-verbal. Readers will note that the Yvngban Wvng future particles are shown as /ma-/ plus the agreement marker. The

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<sup>7</sup> One of two main consultants realised this future marker as /mə-/, the other as a syllabic nasal /ṃ/.

Yvngban Wvng consultant was very clear that there was a double vowel in both the 1<sup>st</sup> singular and 2<sup>nd</sup> plural, /ma-əŋ<sup>2</sup>/ and /ma-ən<sup>2</sup>/ respectively, and that the distinction between the future marker and the agreement marker could be shown.

Space has not allowed the negative forms to be included here, but in most varieties negative is marked by an /m-/ initial particle, following the verb, as *ki<sup>1</sup> may<sup>3</sup>* in Chamchang or *ka<sup>1</sup> muk* in Ngaimong for ‘I did/do not go’. The form of the negative particle in Chamchang is thus very similar to the future in Yvngban Wvng. Furthermore, Rera, Rinkhu, Yvngban Wvng and Shangthi have a preverbal /mi/ ~ /mi<sup>2</sup>/ in the negative, with the verb marked by the agreement marker. Thus negatives in some varieties are very similar to futures in others.

Within the past, Ngaimong, Haqcheng, Joglei, Mueshaung, Mungre, Jiingi and Maitai all have final agreement particles with final stops, whereas other varieties have final nasals/open syllables usually marked by the 3<sup>rd</sup> tone. In the future the markers are always nasal/open final but generally marked by the 2<sup>nd</sup> tone. This distinction is summarised in Table 3.

TABLE 3 – Summary of agreement markers in Tangsa

	past (stop final)	past (open final)	future
1sg	-ək / -ak	-aŋ <sup>3</sup>	-aŋ <sup>2</sup>
1pl	-iʔ	-i <sup>3</sup>	-i <sup>2</sup>
2sg	-uʔ	-u <sup>3</sup>	-u <sup>2</sup>
2pl	-it / -at	-in <sup>3</sup> / -an <sup>3</sup>	-in <sup>2</sup> / -an <sup>2</sup>

The fact that the past shows variation between stop final and open final forms parallels Jinghpaw, where DeLancey (2011) has pointed out that there is ‘alternation between nasal and voiceless stop variants of the 1<sup>st</sup> and 2<sup>nd</sup> person endings . . . (and) that the devoiced alternant has a perfective or punctual sense relative to the nasal’. In the varieties that have final stops for the agreement markers in the past, the negatives also have final stops. Our hypothesis is that the distinction of tense/aspect between past/negative and future was originally marked in the Sal languages by stop versus open finals.

There are a number of categorical distinctions shown in Table 4 which are not present in all varieties. For example in Mueshaung the form of the future marker alters depending on whether the verb is transitive or intransitive, with the former always marked by a particle with initial /t-/ and the latter by one with initial /ʃ-/. The Mueshaung /t-/ future form is formally similar to the past markers in a number of varieties that have open finals in the past, such as Rera and Muklom. It seems likely that the /ʃ-/ initial form is a better candidate for an older future marker, as it is cognate with Lungkhi and Tikhak at least. I therefore assume that at some point Mueshaung innovated a transitivity distinction in the future and brought the /t-/ form from the past but with the future agreement markers to indicate this.

There is also a transitive distinction in Yvngban Wvng, this time in the past, between /t-/ initials for transitive and /k-/ initials for intransitive. This distinction in Yvngban Wvng is not completely categorial, with examples of both ‘sleep’ and ‘say’ collected with both /t-/ and /k-/ forms of the past marker. This complexity remains to be further investigated. It is noteworthy, however, that in both the systems where a transitivity split has so far been identified, the transitive form has initial /t-/. The /k-/ initial forms are found in both past and future in different varieties, and may have originally been a present or continuous marker, which is its function today in the Haidley variety.

In some of the non-Pangwa varieties, such as Hakhun, as well as in related Nocte varieties, there is a complex hierarchical marking system (DeLancey 2011, Krishna Boro personal communication 2015). This hierarchical marking, which also encodes transitivity, is of a different type from the Mueshaung future in that it distinguishes the marking of verbs with 1<sup>st</sup> or 2<sup>nd</sup> person objects from the marking of intransitive verbs or transitive verbs that have 3<sup>rd</sup> person objects. In Mueshaung, this type of hierarchical marking is found in some situations, as exemplified in (2), where the form  $p^hr^2$  is a past marker when a 3<sup>rd</sup> person subject is acting on a 1<sup>st</sup> person object. If the object was 3<sup>rd</sup> person, it would be marked with  $tr^?$ , the 3<sup>rd</sup> person past marker given in Table 4, which also marks intransitive verbs.

- (1) *lungz*      *kuiux*      *rueq*      *tok*      *phux*.  
*luŋ<sup>1</sup>*      *kuu<sup>2</sup>*      *rɔʔ*      *tok*      *p<sup>hr</sup>2*  
stone      CLF      AG      break      PST.3>1  
‘The stone rolled and broke my (leg).’

As mentioned earlier, the agreement markers were generally collected by elicitation and then confirmed in the analysed texts. In most varieties it is not very difficult to collect them, but for Maitai there were some difficulties. I first collected information about Maitai from the village of Lakla in Assam, where Ngaimong is the local lingua franca (see Morey forthcoming). The inconsistency of forms as seen in Table 4 were first assumed to be due to Ngaimong influence, however the same inconsistencies were found on the Myanmar side, with consultants both in India and Myanmar giving alternate forms in the past. The only generalization possible at present is that the stop final forms were specifically stated to be used with questions in the 2<sup>nd</sup> person, whereas open final forms were used in declaratives.

One more categorial distinction not shown in Table 4 is that in a few varieties there is a distinction between inclusive and exclusive for the 1<sup>st</sup> plural but only in the future. For Chamchang/Shecyü and Mungre future, the forms shown in the Table are for the inclusive, the exclusive forms being *hai<sup>2</sup>* in Chamchang/Shecyü *ŋai<sup>2</sup>* in Mungre. These exclusive forms are predictable from the other future forms, and what appears to have happened is that the inclusive

is an innovation, extending the meaning of a widespread hortative that has the form *i* in a number of varieties, but has now extended its meaning ‘let’s’ to the meaning ‘we (incl.) will’.

In the past, several varieties, Jiingi and Haidley, show palatalization of the initial /t-/ in the 1<sup>st</sup> person plural, in front of a high front vowel.

As already mentioned in Table 3 above, the most common forms of the 2<sup>nd</sup> person plural have final alveolar stops or nasals, but there are exceptions. In Haqcheng the 2<sup>nd</sup> plural now has final labial (/p/ in the past and /m/ in the future), a feature shared in part by Maitai. In contrast, both Cholim and Shangthi have final velar /ŋ/ for both past and future. In Haqcheng at least this change must be very recent, since it is one of very few features that differ from Ngaimong.

Something can be said about the kinds of changes that have occurred to lead to the current variety of Tangsa agreement marking. Cholim was the first variety that I studied and had I based the analysis of Tangsa on that variety alone, it would have presented a very inaccurate picture of Tangsa morphology. Assuming that at an early stage of Tangsa, perhaps proto Sal, the past was marked with stop final forms (see Table 3), we suggest the sound changes in Cholim were as shown in (2):

- 2) (i) stop final to open final syllables (marked by Tone 3) in the non-future
- (ii) adoption of *k*- initials in the non 3<sup>rd</sup> person past
- (iii) final 1<sup>st</sup> person /-aŋ/ changes to /-jo/ in the past
- (iv) final 2<sup>nd</sup> plural /-in/ changes to /-iŋ/

The first of these changes apply to many varieties; the second to a more limited group, so far only Cholim, Longri, Chamchang, Shecyü and Lauchang. The third change only applies to Cholim and the variety closest to it, Longri. The fourth change must be the most recent, since it does not apply to Longri. I assume that this type of change has happened in order to differentiate Cholim from Longri.

TABLE 4 – Agreement markers in Tangsa varieties – past and future

	Past						Future					
	1		2		3		1		2		3	
	Sg	Pl	Sg	Pl	Sg	Pl	Sg	Pl	Sg	Pl	Sg	Pl
<b>Pangwa</b>												
Ngaimong	V tək	V tɪʔ	V toʔ	V tit	V taʔ	V taʔ	ə-V əɪʔ	ə-V əiʔ	ə-V əuʔ	ə-V inʔ	ə-V	
Haqcheng	V tak	V tɪʔ	V toʔ	V tɪp	V taʔ	V taʔ	ə-V əɲʔ	ə-V iʔ	ə-V əuʔ	ə-V imʔ		
Joglei	V tək	V tɔiʔ	V tuʔ	V tit	V taʔ	V taʔ	ə-V əɲ	ə-V i	ə-V u	ə-V in	ə-V	
Mueshaung (1) transitive	V tauk	V tɪʔ	V toʔ	V tuut	V tsʔ	V tsʔ	V fauɲʔ	V ʃiʔ	V ʃuuʔ	V ʃumʔ	V ʃɻʔ	
(2) intransitive	as (1)						V tauɲʔ	V tiʔ	V tuuʔ	V tumʔ	V tsʔ	
Mungre	V taʔ	V tik	V luʔ	V lət	V	V	mɛ² V ɲəɲʔ	mɛ² V iʔ	mɛ² V ɲəɲʔ	mɛ² V ɲənʔ	mɛ² V	
Maitai (1) declarative	V tap³	V tam³, V tiʔ	V tam³	V tan³	V te³	V te³	V naɲʔ	V niʔ	V nuʔ	V namʔ	V le²	
Maitai (2) question			V tuʔ	V tap			as (1)					
Jingi	V tak	V teeʔ	V teuʔ	V tat	V taʔ	V taʔ	V naɲʔ	V ɲiʔ	V noʔ	V nanʔ		
Cholim	V kjo³	V ki³	V ku³	V kin³	V tuʔ¹	V tuʔ¹	mɛ² V əɲʔ	mɛ² V iʔ	mɛ² V u²	mɛ² V iɲ²	mɛ² V	
Longri	V ko	V ki	V ku	V kin	V tə-va	V tə-va	ma V əɲ	ma V i	ma V u	ma V n²	ma V	
Chamchang	V kaɲ³	V kai³	V lau³	V lan³	V to³	V to³	mi² V ha²	mi² V iʔ	mi² V hau²	mi² V han²	mi² V	
Sheeyü	V kəɲ³	V kaɲ³	V lau³	V lan³	V to³	V to³	mi² V ha²	mi² V iʔ	mi² V həu²	mi² V hən²	mi² V	
Lauchang	V keɲ³	V kaɲ³	V lau³	V lan³	V tə wa	V tə wa	mə V a²	mə V ai²	mə V əu²	mə V an²	mə V	
Lungkhi	V dəɲ³	V di³	V du³	V din³			V teəɲ³	V tei³	V teu³	V tein³	V teaʔ	
Yvngban transitive	V təɲ²	V ti²	V tu²	V tən²	V to³	V to³	V ma-əɲ²	V ma-i²	V ma-u²	V ma-ən²	V man²	



	Past			Future		
	1	2	3	1	2	3
	Sg	Pl	Sg	Pl	Sg	Pl
Yngban Wvng (2) intransitive	V kəŋ <sup>2</sup>	V ki <sup>2</sup>	V ku <sup>2</sup>	V kəŋ <sup>2</sup>	as (1)	
Shangthi	V daŋ <sup>3</sup>	V di <sup>3</sup>	V du <sup>3</sup>	V diŋ <sup>3</sup>	V di <sup>3</sup>	V di <sup>3</sup>
Gaqun	V tə aŋ <sup>3</sup>	V tə i <sup>3</sup>	V tə u <sup>3</sup>	V tə əŋ <sup>3</sup>	V tə i <sup>3</sup>	V tə u <sup>3</sup>
Rinkhu	V kəŋ <sup>1</sup>	V ki <sup>1</sup>	V ku <sup>1</sup>	V kin <sup>1</sup>	V kəwa <sup>3</sup>	V jəŋ <sup>1</sup>
Rera	V təŋ	V ti	V tu	V tan	V to	V i
<b>Olay</b>						
Haqchum	V ta <sup>2</sup>	V ti <sup>2</sup>	V to <sup>2</sup>	V tit	V ta <sup>2</sup>	V ke
<b>Hakhun</b>						
Hakhun	V tə <sup>1</sup>	V ti <sup>1</sup>	V to <sup>1</sup>	V tat <sup>1</sup>	V ta <sup>1</sup>	V ə <sup>3</sup>
Haidley	V tə <sup>2</sup>	V tei <sup>2</sup>	V tu <sup>2</sup>	V tat	V te <sup>2</sup>	V ŋi <sup>2</sup>
<b>Tikhak</b>						
Tikhak	V təŋ <sup>1</sup>	V te <sup>1</sup>	V to <sup>1</sup>	V tən <sup>1</sup>	V tə <sup>1</sup>	V çə <sup>1</sup>
<b>Other India</b>						
Muklom	V təŋ	V ti	V tu	V tən	V ta	V nən
Phong	V təŋ	V te	V tu(?)	V tan	V ta(?)	V ə
					V u(?)	V a

## 5 Subgrouping within Tangsa

It is not yet possible to provide clear and consistent linguistic criteria for defining the Pangwa varieties as a single group within Tangsa, despite their many lexical similarities. Within Pangwa, speakers on both sides of the border recognise certain varieties as being similar, often in pairs (see Morey in print). For example Ngaimong and Haqcheng are a pair that form a clear subgroup with Joglei (and also Sangwan, for which no data is presented here) on linguistic grounds, for example sharing /t-/ initial past forms with stop final agreement markers.

Chamchang and Shecyü also form such a group having as features a clear morphological innovation – the mixture of /k-/ , /l-/ and /t-/ initials for the past, as well as some regular sound changes including *\*-a* → /i/ except for father (and also *\*sa* ‘son’) which have /-e/, and *\*-aŋ* → /a/. The Lauchang variety shares all of those features with Chamchang/Shecyü, but differs from them in terms of verb stem alternations (see Morey in print). Another pair on the basis of morphological features in Cholim and Longri, although Cholim has undergone two additional changes not found in Longri, *\*-a* → /e/ and 2<sup>nd</sup> plural /-n/ → /-ŋ/, discussed in Section 0 above.

It is generally accepted that morphological innovations are a more secure basis for subgrouping than sound change innovations, so assuming that the in these varieties stop-final forms for the past are a retention (see above Table 4), then the change to open finals may be a lower level subgrouping innovation. Table 5 lists those varieties that (in this analysis) have retained stop finals and those that have innovated open finals, and shows that this feature does not distinguish Pangwa from non-Pangwa varieties.

TABLE 5 – Retention of stop final past markers and innovation of open finals

	retention of stop final	innovation of open final
<b>Pangwa</b>	Ngaimong/Haqcheng/Joglei	Shangthi/Rinkhu/Yvngban Wang/ Gaqlun/Rera
	Mueshaung	Chamchang/Shecyü /Lauchang
	Mungre	Cholim/Longri
	Jiingi/Maitai	Lungkhi
	<b>Non-Pangwa</b>	Hakhun / Haidley

The retention or innovation of stop finals is also not a predictor of mutual intelligibility. Statezni (2013: 251) found that the subtribes which have ‘sufficient intelligibility’ with Shecyü were Lauchang, Cholim, Mungre and Maitai, subtribes found on both sides of Table 5. Moreover, since the innovation of

open finals is found in both Pangwa and non-Pangwa varieties, it is not clear this criteria can be used for subgrouping.

The tables of data in this paper (Table 2 and Table 4), have been arranged in the following order (1) Pangwa (with stop final retention groups first) (2) Olay, (3) Hakhun, (4) Tikhak, (5) Others in Myanmar (Pinkhu and Yasawa), (6) Others in India (Muklom and Phong).

In ordering the Pangwa varieties in Table 2 and Table 4, I have tried to group together those varieties that have similar features, using the following criteria

- i) stop final or open final past markers
- ii) /ma/ ~ /me/ ~ /mi/ preverbal future marker
- iii) presence of /k-/ markers in the past
- iv) lexical forms such as \*sal for ‘sun’, /h/ versus /g/ initials for ‘earth’, /juk-/ for ‘monkey’

Thus in Table 2 and Table 4 those Pangwa varieties that have final stops for the past markers are listed first (Ngaimong, Haqcheng, Joglei, Mueshuang, Mungre, Maitai, Jiingi). Those that have /mV-/ preverbal markers and /k/ past are listed next (Cholim, Longri, Chamchang, Shecyü and Lauchang – all groups suggested by Statezni 2013: 251 to have ‘sufficient intelligibility’) and those that do not retain the reflex of \*sal for ‘sun’ are listed last.

These criteria do not always combine well, with, for example Mungre being a variety having stop final past markers, but having the /me/ preverbal future marker, which is otherwise only found with varieties having open final past markers.

It remains to be seen whether the ordering of the groups in Table 2 and Table 4 is a guide towards the eventual subgrouping of these varieties. Nevertheless this can be said: the basic findings of Burling (1982) are confirmed by the data here, but the complexity of variation within Tangsa is such that the well motivated grouping of these varieties still remains to be done.

## References

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## 4

Adjectival constructions in Bodo and  
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## 1 Introduction

Since the initial work of Dixon (1977, 1982), it has been widely recognized that adjective categories cross-linguistically tend to be strongly linked by morphosyntactic behavior to either the noun or verb category, to the point that in many languages it is not clear that a distinct adjective category can be established. In Sinitic and Southeast Asian languages, for example, adjective functions are carried out by words which can be analyzed as a subcategory of verbs, while in Indo-European and Uralic languages adjectives, while identifiable as a distinct category, have a great deal in common with nouns. The oldest and commonest pattern in Tibeto-Burman languages is a category of stative or change-of-state verbs used as predicates, and nominalized to function as modifiers.

In Bodo there are two ways in which we could define an Adjective<sup>2</sup> category. There is a broad category of words which occur as predicates denoting a quality of the referent of the subject noun phrase, and as modifiers of head nouns, and in the latter function are never marked as genitive. Only this and the ability to combine with certain intensifiers distinguishes these Adjectives from nouns. But within this category is a smaller set of words derived from stative verbs by an otherwise obsolete nominalizing construction. In this category we

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<sup>1</sup> The work reported here was done with the help of Prafulla Basumatary, Krishna Boro and Bihung Brahma, and supported in part by the Fulbright Scholar Program and the Department of Linguistics and English Language Teaching at Gauhati University.

<sup>2</sup> I will use Haspelmath's (2010) suggestion of capitalizing category names when they are used to refer to an explicitly defined syntactic category in a specific language. Thus "adjective" refers to a cross-linguistic phenomenon, while "Adjective" refers to a morphosyntactically-defined category in a particular language, here Bodo unless otherwise specified.

can see the older characteristic Tibeto-Burman pattern, which has disappeared in some of the other Bodo-Garo languages.

In this section we will briefly examine a few examples of the general TB pattern. In §2 I will describe the grammar of Adjectives in Bodo, which is quite different from what we see elsewhere in the family. In §3 we will look at the last surviving remnant of the earlier pattern in Bodo, with corresponding traces in Garo, and consider the shift from the earlier to the modern pattern in terms of the overall history of the Bodo-Garo languages.

### 1.1. Adjectival constructions in Tibeto-Burman languages

Some Tibeto-Burman languages have a definable adjective category, usually only marginally distinguishable from nouns or from verbs. But in a larger number, not restricted to any genetic subgroup, we see a characteristic pattern less familiar in the typological literature, where the predicate adjective function is carried out by a syntactically definable subset of stative verbs, and the noun modifying function by morphologically nominalized forms of those verbs. This recalls the grammar of adjectivals in Southeast Asian-type languages like Chinese and Thai, where adjectives are a marginally distinct category of stative verbs (Post 2008), but in those languages we see these stative verbs occurring in their base form as both predicates and modifiers, while in Tibeto-Burman languages the verbs in modifier function must be morphologically nominalized. In most languages these nominalized adjectives can also function as predicates, formally predicate nominals but functionally property concept terms.

For example, in Meithei, verbs and clauses are nominalized with the suffix *-bə* ~ *-pə*, and in this form can function as modifiers to a head noun (Chelliah 1997: 157–159):

- (1) *kolom pá-lə-pə nipa*  
 pen hold-PROX-NMLZ boy  
 ‘The boy who held the pen’

- (2) *Ram-nə phú-pə Tombə-tu*  
 P.N.-ERG beat-NMLZ P.N.-DET  
 ‘Tomba who was beaten by Ram’

There is a special category of stative verbs characterized by their ability to form adjectives through affixation of both this nominalizer and the ‘attributive’ prefix *ə-* (Chelliah 1997: 86–87, 164–165, see also Singh and Singh 2002):

- (3) *ə-waŋ-pə nupa ə-tu*  
 ATT-tall-NMLZ man ATT-DET  
 ‘that tall man’

- (4) *sadhəbiget*    *ə-sa-pə*  
 certificate    ATT-hot-NMLZ  
 ‘a false certificate’

Sometimes where there is an identifiable adjective category we can show by internal reconstruction that it originated in this characteristic system, as in Tibetan<sup>3</sup> (DeLancey 1994). In Central Tibetan adjectives in predicate (5) or modifying (6) function consist of a monosyllabic stem and one of a small set of old nominalizing suffixes, generally *-pa* ~ *-ba*, or *-po* ~ *-bo*:

- (5) *deb*        *‘di*    *yag=po*    *red*  
 book    this    good        be  
 ‘This book is good.’

- (6) *‘di*        *deb*    *yag=po*    *red*  
 this        book    good        be  
 ‘This is a good book.’

This pattern has been regularizing over the attested history of Tibetan; earlier texts show a larger range of nominal suffixes here, with the feminine forms *-ma* and *-mo* attested as well; there is still a remnant set of adjectives with these suffixes.<sup>4</sup>

The adjective stem no longer has any independent verbal function, but the bare stem occurs in the comparative construction, where it is inflected as a verb (Denwood 1999: 182):

- (7) *bod-las*        *dbyin.ji-‘i*        *lung-pa*    *rgya*    *chung=gi*    *red*  
 Tibet-ABL    Britain-GEN    region    extent    small=IMPF    be  
 ‘The British Isles are smaller than Tibet.’

This internal evidence suggests that these stems were originally stative verbs, as in Meithei.

## 1.2 \*gV- adjectives across the family

This configuration of adjectival forms and functions is reported across the most of the Tibeto-Burman languages, and is sometimes instantiated with new morphological material. On the other hand, the *ə-* prefix in Meithei represents a well-known and well-documented nominalizer of PTB provenance (Wolfenden

<sup>3</sup> Lhasa Tibetan analysis and data from work with Yungdrung Manang in Eugene, OR, 1982–1986, see also Denwood 1999: 179–184.

<sup>4</sup> Francke (1929) presents a short list of adjectives which he says still choose a masculine or feminine suffix in concord with the head noun, but this pattern seems to be lost in contemporary spoken Lhasa.

1929, Matisoff 2003). Of special interest for our present purpose is a nominalizing prefix \**gV-* (Matisoff 2003: 136–138) which is attested in a number of Tibeto-Burman languages in a wide range of nominalizing functions. We will see a remnant of an adjective-deriving function in Bodo (§3). This function is widespread across the family: Matisoff cites examples from West Himalayish, Jinghpaw, Qiangic, Bodo-Garo, and Kuki-Chin-Naga. Detailed description of this and related constructions with \**g-* ~ *k-* in these and other languages can be found in Konnerth 2012, to appear. Here we will look at only three representative examples, two geographically and perhaps genetically close to Bodo, the third quite distant.

In Karbi, a language of Assam which is probably close to the Kuki-Chin branch, a general-purpose nominalizer *ke-* serves, among other things, to derive adjectives from a set of stative verbs (Konnerth 2014):

- (8) *kasú ke-mē*  
 plate NMLZ-be.good  
 ‘a good plate’

This form is found in many of the ‘Naga’ groups of Northeast India, including Tenyidie (Kuolie 2006: 115) and Tangkhul (Jayshree Devi 2014):

- (9) *əmo p<sup>h</sup>a-je*  
 P.N. be.good-REALIS  
 ‘Amo is good.’

- (10) *əŋa kə-p<sup>h</sup>a*  
 child nomz-be.good  
 ‘[a] good child’

The same construction is well-attested outside NE India, for example in the rGyalrong (Qiangic) languages of Sichuan. As in Karbi and Tangkhul, also in rGyalrong this is the only adjectival construction. Predication of a property is accomplished with stative verbs (Japhug rGyalrong; Jacques 2004: 466):

- (11) *ki tɛeme ɲu-mpɛɾɾ*  
 this girl MIR-pretty  
 ‘This girl is beautiful.’

And nominal modifiers are stative verbs nominalized with *ku-*:<sup>5</sup>

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<sup>5</sup> All the rGyalrong languages have two distinct velar nominalizing prefixes (in Japhug *ku-* and *kɾ-*) which divide up the set of functions carried out by Karbi *ke-*; this seems to be a secondary development unique to rGyalrongic.



- (12) *teheme ku-mpɛrr*  
 girl NMLZ-be.pretty  
 ‘a beautiful girl’

In the next two sections we will examine the Adjective category in Bodo. §2 will describe a category quite different from those we have looked at so far. But in §3 we will see an archaic subcategory clearly cognate to the Karbi, Tangkhul and rGyalrong derivations described in this section.

## 2. Adjectives in Bodo

In this section I will outline the behaviors of property concept terms, and the syntax of predication and nominal modification. In Bodo and the other Bodo-Garo languages, the Adjective category is only marginally distinct from Nouns. Words with more nominal semantics tend to be marked as genitive when they modify another nominal, and there is always a set of words which cannot be so marked when they function as modifiers, but beyond this very little distinguishes words which typically denote referents from those which typically denote properties of referents. Many words occur productively in both functions, especially those which as nouns refer to humans who have a particular characteristic, e.g. *bwrai* ‘old man, elderly (of a man)’, *burwi* ‘old woman, elderly (of a woman)’, *phisa* ‘child, small’. Others, e.g. *mwzang* ‘good’, have primarily adjectival function. There are words which do not normally occur as modifiers without genitive marking, and others which function primarily as modifiers, so we can meaningfully refer to Noun and Adjective categories in Bodo. All, however, have essentially nominal morphosyntax.

§2.1 deals with predicate adjective constructions, and §2.2 with nominal modification. §2.3 shows that in these functions Adjectives are barely distinguishable from Nouns. In §2.4 we see that while comparative and intensifying constructions do serve to distinguish Adjectives from Nouns, they are shared with Verbs, so that there is no combinatorial pattern which is unique to Adjectives. Finally, §2.5 will briefly survey nominalization and relative clause constructions.

### 2.1. Predicate complements

There is no distinction between predicate nominals and predicate adjectives. In simple equational sentences, both occur without additional marking, and without any overt copula:<sup>6</sup>

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<sup>6</sup> Bodo examples with source noted are from oral texts collected and transcribed by Prafulla Basumatary, Krishna Boro, and Bihung Brahma, or from a transcription of dialogue from the Bodo film *Hainamuli* made by Basumatary. Examples are presented in a

- (13) *nwng-bw sakri ang-bw sakri*  
 you-also civil.servant I-also civil.servant  
 ‘You’re a government worker, and so am I.’ (*Ungrateful Son*)

- (14) *khanai gwlaio*  
 hair long  
 ‘[Her] hair is long.’ (*Mirror*)

Negation requires the copula *nong*:

- (15) *bara gwdwr nong-a*  
 much big be-NEG  
 ‘[It]’s not that big.’ (*Mirror*)

Both can also occur as complement to *za* ‘happen, become’:

- (16) *sikhla mansi-phwr hw-phwi-naya gwdwi za-w*  
 young person-PL give-PROX-NF sweet become-GENERIC  
 ‘When young girls give [it] (water), it’s sweet.’ (*Hainamuli*)

- (17) *bi-nw hinzaio za-bai*  
 this-CONTRAST woman become-PERF  
 ‘Is this the woman?’ (*Mirror*)

## 2.2. Modifiers

The modifier of a head noun may precede or follow the head noun. In (18) *mwzang* ‘good’ precedes the head noun, and in (19) it follows:

- (18) *be-bw nwng baidi-nw*  
 he-ALSO you like-CONTRAST  
  
*sa-se mwzang mansi-sw*  
 CLS-one good man-ONLY  
 ‘He’s also a good man like you.’ (*Hainamuli*)

- (19) *nwng-ha hinzaio mwzang mw’n-gwn*  
 you-POSS woman good get-FUT  
 ‘You’ll get a good woman.’ (*Hainamuli*)

There is no difference in distribution to distinguish nouns from adjectives; both occur freely either as head or modifier. The same word can occur in either func-

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spelling system commonly used by Bodo authors who prefer roman script. The letter *w* represents the high back unrounded “sixth vowel” (Burling 2013).

tion, e.g. *phisa* ‘child, small’, which we see occurring as the head noun modified by *gidir* ‘big’ in (20), and as a modifier of the head noun *aina* ‘mirror’ in (21):

(20) *isibang gidir phisa-ni bipha za-nanwi*  
 so much big child-GEN father be-NF  
 ‘Being the father of such a big child . . .’ (*Hainamuli*)

(21) *bi aina phisa-khw la-na*  
 that mirror small-OBJ take-NF  
 ‘taking that small mirror’ (*Mirror*)

In the following sequence (two successive lines from a film) we see similar behavior with *bwrai* ‘old (man)’:

(22) *guru bwrai*  
 teacher old  
 ‘The old teacher!’

(23) *wi abou abou? dong na gwi-a bra*  
 Hey grandfather exist or not.exist-NEG EXCL  
  
*be sala lwkhisara bwrai-a-lai*  
 this epithet scoundrel old.man-SUBJ-INTIMATE  
 ‘Hey, grandpa, is he there or not, the worthless old man?’ (*Hainamuli*)

In (22) *bwrai* is a modifier of *guru* ‘teacher’. In the second clause of (23), the syntactic analysis is not clear. Both *lwkhisara* ‘scoundrel, immoral’ and *bwrai* ‘old man, elderly’ are able to function either as referential head or modifier, and since the order of head and modifier is not fixed, *lwkhisara bwrai* can be interpreted either as ‘immoral elder’ or ‘old scoundrel’.

### 2.3. Adjectives as nominal heads

Adjectives occur freely as heads of NP’s. In exx. (18)–(19) we saw *mwzang* ‘good’ as a pre- and a postnominal modifier. In (24–25) we see it as a head noun, with case and discourse-status marking:

(24) *malai-baidi nong-a mwzang-a-nw*  
 stranger-like be-NEG good-SUBJ-CONTRAST  
 ‘The good one is not like the others.’ (*Hainamuli*)

- (25) *nwnɡ*      *za*              *mao-w*  
 you          whatever      do-GENERIC  
*mwzang-khou-nw*      *maomar-w*      *gosai*  
 good-OBJ-CONTRAST      do-GENERIC      (name of a god)  
 ‘Lord Gosai, whatever you do, you do good!’ (*Hainamuli*)

And they are eligible for the same (quite limited) set of morphological constructions as any other noun, e.g. they can not only take case marking, but also the (optional) plural suffix *-phwr*:

- (26) *hisri*              *mwzang-phwr-zwng*      *bu*      *sri*      *bu*      *sra*  
 cleaning.rag      good-PL-with      beat      clean      REDUP      REDUP  
*khalam-na*      *ladw*  
 do-NF              take  
 ‘Clean [it] with good (clean) rags.’ (*Onla*)

## 2.4. Comparative and intensifying constructions

Dixon (2004) proposes that even where adjectives are otherwise undistinguishable from one of the other major categories, we can identify an adjective category based on eligibility to occur in a comparative construction (see also Post 2008). In many languages co-occurrence with one or more intensifiers (e.g. English *very*) is another test. There is no dedicated comparative or intensifying construction in Bodo; these functions are carried out by various adverbial suffixes. Adverbial suffixes otherwise occur only with Verbs. Thus while Adjectives in Bodo have no unique morphosyntactic construction which defines them (i.e. nothing corresponding to English comparative *-er* or intensifying *very*), they are distinguished from Nouns by the comparative and intensifying constructions which they share with Verbs, and from verbs by the rest of their behavior, which they share with Nouns.

If there is a grammaticalized comparative construction in Bodo, it is that illustrated in (27):

- (27) *bihao*      *bikumzu-ni*      *uwa-a-lai*      *ma*      *uwa*      *bi-ni-sai*  
 f-i-l      m-i-l-GEN      bamboo-SUBJ      what      bamboo      s/he-GEN-THAN  
*sab-sin*      *sabsin*      *beseba*      *gwdwr-sin*      *romromai*  
 nice-more      REDUP      very      big-more      flourish  
*za-bai*              *bi-ha*  
 happen-PERF      s/he-POSS  
 ‘Her bamboo grew much better and bigger than any of her father and mother-in-law’s bamboos.’ (*Treasure*)

The relevant features are *-sai*, at the end of the first line, marking the standard of comparison, and *-sin*, glossed as ‘more’, suffixed to *sab* ‘nice’ and *gwdwr* ‘big’ in the second line. The former occurs only in this function, but is not necessary in it:

- (28) *Laogi-ni-khrui mahazwn-ni phisazw-khou-sw*  
 P.N.-GEN-very landlord-GEN daughter-OBJ-ONLY  
*sab-sin nu-lailang-bai-bra*  
 pretty-more see-fetch-PERF-EXCL  
 ‘[I] find the landlord’s daughter prettier than Laogi.’ (*Hainamuli*)

The suffix *-sin* occurs freely with verbs in the sense ‘additionally, on top of that, more than is expected, more than is appropriate’:

- (29) *bi sa-au-nw buŋ-sin-na hw-bai*  
 s/he on-LOC-CNTR say-more-NF give-PERF  
 ‘He said more on top of that.’

It occurs with both the change-of-state verbs and the *gV*-prefixed adjectives derived from them: *gwdwr-sin* ‘bigger’, *der-sin* ‘to grow more’. A basis of comparison can be included in either a verbal or adjectival clause, marked by the ablative *-ni-phrai*. In this construction the *-sin* suffix is optional:

- (30) *Krisna-ya ang-ni-phrai undwi(-sin)*  
 Krishna-SUBJ I-GEN-from young(-more)  
 ‘Krishna is younger than me.’
- (31) *bi ang-ni-phrai der-sin-bai*  
 s/he I-GEN-from grow-more-PERF  
 ‘He has grown more than me.’

Intensification is also usually accomplished with adverbial suffixes, most commonly *-drai* ‘too, excessively’ and *-thar* which with verbs means ‘definitely, without fail’, and with adjectives ‘very, too’. Like *-sin*, these occur with both adjectives and verbs: *gwdwr-drai* ‘bigger than it should be’, *báŋ-drai* ‘increase more than is necessary’, *gwdwr-thar* ‘very big’, *phwi-thar* ‘definitely come’.

## 2.5. Nominalization and relativization in Bodo

Many Tibeto-Burman languages do not make a sharp distinction between nominal modification by adjectives and by relative clauses, forming both constructions by nominalization (DeLancey 1999, 2002). In Bodo, as we have seen, Adjectives are not necessarily derived. But, as in other Tibeto-Burman

languages, relative clauses are simply nominalized clauses used as modifiers. Clausal nominalization is marked by *-nai*:

- (32) *dáosin-dáola*    *bír-nai-a*            *uhhhhh-na*            *bír-na*    *hw-bai*  
 birds                    fly-NMLZ-SUBJ    uhhhhh-QUOT    fly-NF    give-PERF  
 ‘The birds flying made a “uhhhh” sound.’ (*Mirror*)  
*iniphrai-tho*    *be*            *bakos-khw*            *phwr*  
 then-ADV            that            box-OBJ            swiftly  
*bwr-khang-nai-khw*                    *nu-yw-nw*  
 open-complete-NMLZ-OBJ    see-GENERIC-CONTRAST  
 ‘Then [she] saw [him] quickly opening the box.’ (*Mirror*)

Nominalized clauses function as headless relative clauses:

- (33) *phipha*            *thwi-dar-lai-nai*  
 father            die-EMPH-DISTAL-NMLZ  
 ‘one whose father had died’ (*Mirror*)

And like other nominals, they can be used as modifiers of the head of a noun phrase:

- (34) *mai*            *ha-nai*            *manswi-phwr*  
 paddy            reap-NMLZ            person-PL  
 ‘the people who were harvesting rice’ (*Boy Who Cried Tiger*)

This is the only relative clause construction, and can be used for relativization for any function of the head noun, including objects (35) and obliques (36):

- (35) *o*            *ang*            *gái-nai*            *uwa-khw*            *dán-bai*  
 yes            I            plant-NMLZ            bamboo-OBJ            cut-PERF  
 ‘Yes, [he] has cut the bamboo which I planted.’ (*Treasure*)  
 (36) *dáosin-dáola*    *thá-nai*            *zaga*  
 birds                    stay-NMLZ            place  
 ‘the place where the birds live’ (*Mirror*)

The important point for our present purpose is that the *gV-* prefix described in the next section is in no way involved in any of these constructions. In following sections we will see comparative evidence which suggests that it originally had a broad nominalizing function including relative clause formation.

### 3 *gV*- adjectives

Within the Adjective category as defined in the preceding section there is a much more clearly defined category of morphologically analyzable nominal stems which represent an older, characteristically Tibeto-Burman adjectival system. §3.1 will describe the synchronic phenomenon in Bodo; in §3.2 we will see that this construction has deep roots in the family.

#### 3.1 *gV*- adjectives in Bodo

Bodo has a substantial set of Adjectives which are characterized by an initial minor syllable *gV-*, where *V* is realized most commonly as the neutral vowel /w/, as in Table 1 (a) or as a copy of the stem vowel, as in Table 1 (b):

TABLE 1 – Bodo *gV*- adjectives

	Prefixed form	Gloss	PBG	PTB
a)	<i>gw-zam</i>	‘old, ancient’	*Gw <sup>0</sup> -cam <sup>1</sup>	
	<i>gw-dan</i>	‘new’	*Gw <sup>0</sup> -dal <sup>4</sup>	
	<i>gw-zwu</i>	‘tall’	*cu <sup>1</sup>	
	<i>gw-láu</i>	‘long’	*lao <sup>2</sup>	*low
	<i>gw-khá</i>	‘bitter’	*kha <sup>2</sup>	*kha
	<i>gw-khwi</i>	‘sour’	*khwi <sup>1</sup>	*kywa:r
	<i>gw-dwí</i>	‘sweet’	*twi <sup>2</sup>	*twi
	<i>gw-swm</i>	‘black, dark’	*Gw <sup>0</sup> -swm <sup>4</sup>	*syim
	<i>gw-zá</i>	‘red’	*Gw <sup>0</sup> -cak	*tsyak
b)	<i>ga-ham</i>	‘good’		
	<i>ga-hai</i>	‘short’		
	<i>gi-zí</i>	‘old’		
	<i>gi-si</i>	‘wet’	*Si <sup>4</sup>	
	<i>gu-suj</i>	‘short’	*SVj <sup>1</sup>	
	<i>gu-phúr</i>	‘white’	*phu[r] <sup>4</sup>	
	<i>ge-phé</i>	‘soft’		
	<i>ge-séng</i>	‘thin, sparse’		

It is possible that these two patterns represent two different lexical strata; in this small sample the first type (list a) are more likely to have Proto-Bodo-Garo reconstructions (from Joseph and Burling 2006), and often Proto-Tibeto-Burman reconstructions as well (from Matisoff 2003), than the second type. However, we have not yet made any systematic study of this question.

These have the same syntactic distribution as other nominal property concept terms, but they are morphologically analyzable. Adjectives of this type correspond to an unprefixed monosyllabic inchoative state verb:

- (37) *be*            *gotho-a*            *gwswm*  
 this            boy-SUBJ            dark  
 ‘The boy is dark (in complexion).’
- (38) *be*            *gotho-a*            *swm-bai*  
 this            boy-SUBJ            darken-PERF  
 ‘The boy got dark (as, sunburned).’

The prefixed forms seem to be felt as basic; at least, I have heard more than one literate Bodo speaker describe the relation between the verb and adjective forms as a rule which removes the first syllable of an adjective to form a verb.

The set of change-of-state predicates which form adjectives through prefixation of *gV-* are also characterized by their eligibility for causativization by means of a special prefix *phV-*:

TABLE 2 – *gV*-adjective and causative derivation

Stative verb	Adjective	Causative
<i>dér</i> ‘be, get big’	<i>ge-der</i> ‘big’	<i>phe-der</i> ‘make big’
<i>sung</i> ‘be, get short’	<i>go-sung</i> ‘short’	<i>pho-sung</i> ‘shorten’
<i>zam</i> ‘become old (of things), wear out (intr.)’	<i>gw-zam</i> ‘old, worn out’	<i>phw-zam</i> ‘wear out (tr.)’

We will say more about this prefix in §3.3.

### 3.2. *gi-* adjectives in Garo

The grammar of property concept terms in Garo (Burling 2004: 109–110) is quite different from Boro. Stative verbs are used to predicate property concepts, and relative clauses, which is to say nominalized verbs, are used as modifiers. But Burling devotes special attention to the remnants of the *gV-* class in Garo, the seven ‘*gi-* type adjectives’ (2004: 273):

TABLE 3 – Garo *gi*-adjectives in Bodo-Garo and PTB

	Garo	Bodo	PBG	PTB
‘white’	<i>gip-bok</i>		* <i>bok</i>	* <i>bok</i>
‘black’	<i>gi-sim</i>	<i>gw-swm</i>	* <i>Gw<sup>0</sup>-swm<sup>4</sup></i>	* <i>syim</i>
‘red’	<i>git-chak</i>	<i>gw-zá</i>	* <i>Gw<sup>0</sup>-cak</i>	* <i>tsyak</i>
‘new’	<i>git-dal</i>	<i>gw-dan</i>	* <i>Gw<sup>0</sup>-dal<sup>4</sup></i>	
‘old’	<i>git-cham</i>	<i>gw-zam</i>	* <i>Gw<sup>0</sup>-cam<sup>1</sup></i>	
‘fresh’	<i>git-tang</i>	<i>gw-thang</i>	* <i>than<sup>l</sup>]</i>	
‘unripe, raw’	<i>git-ting</i>		* <i>Gw<sup>0</sup>-thij<sup>4</sup></i>	



Given the Bodo evidence, there is of course no surprise in seeing a small remnant category in another language of the branch. But the grammar of this set in Garo is interesting. First, only four of the seven occur with and without the prefix, like their Bodo counterparts; *gital* ‘new’, *gitchak* ‘red’, and *gitting* ‘unripe’ do not have corresponding verbs *\*dal*, *\*chak* and *\*ting*. More interestingly, all the full prefixed forms can conjugate as verbs, just like the unprefixed forms (Burling 2004: 273):

(39) *ba ra*        *bok-jok-ma*  
       cloth        whiten-COS-INTERR

(40) *ba ra*        *gipbok-jok-ma*  
       cloth        white-COS-INTERR  
       ‘Did the cloth get white?’

But like nouns, and unlike stative verbs, they can occur uninflected as modifiers:

(41) *leka*        *gi-sim*  
       paper        black  
       ‘black paper’ (NOT ‘the paper is black’)

So, at least in the final stages of the disappearance of the old system, the grammar is lost, one word at a time, leaving a residue of disyllabic adjectives.

### 3.3 Bodo-Garo *gV-* adjectival stems as a fossilized construction

This PTB deverbal adjective construction is not attested in all members of the branch. It is most productive in Bodo, Dimasa, and Kokborok. We have seen the traces which remain in Garo. There is no evident trace of it in Rabha (Joseph 2007), or Atong (van Breugel 2014). Jacquesson (2005: 113) notes that although derivation of adjectives with the velar prefix is not productive in Deuri, evidence of such derivation in an earlier stage of the language is seen in a handful of adjectives and deadjectival nouns like *gija* ‘thick’, *giri* ‘thin’, and *gira* ‘elderly, old person’.

But as we have seen, there is no doubt that the construction predates Proto-Bodo-Garo, in fact Adjective derivation with *gV-* in Bodo-Garo represents inheritance from PTB. This is interesting because the Bodo-Garo branch preserves very little inherited morphology. The only fully productive morphological construction in Bodo-Garo which can be traced back to PTB is the prohibitive prefix *ta-*, reflecting PTB *\*da* ~ *\*ta* (Matisoff 2003: 586). Aside from this the only remnants of pre-Proto-Bodo-Garo morphology in Bodo are the causative *sV-*, found only in a few lexical relics, and the nominalizing *gV-* and causative *phV-* which characterize our set of change-of-state stems. The

productivity of the last two forms is strictly limited; both occur with all and only this set of stems. Thus the *gV*- adjective formation represents a pocket of ancient structure preserved in a conspicuous and somewhat important insulated module of the grammar, which has otherwise been completely restructured since ancestral Bodo-Garo first became a major language of the Brahmaputra Valley (DeLancey 2012, 2014, cf. Burling 2007).

As shown in the previous section, the *gV*- prefix is inherited from Proto-Tibeto-Burman, and its adjective-deriving function apparently also. The *phV*-prefix may not be not so ancient. Resemblant and probably cognate forms are found in a number of languages of NE India and northern Myanmar, including Karbi and some ‘Naga’ languages. Matisoff (2003: 132) notes the obvious similarity to PTB *\*bəy* ‘give’, but it there is room for doubt about this hypothesis. For one thing this etymology requires irregular development of *\*b*. For another, it is syntagmatically odd; while many languages in the area do have periphrastic causatives based on a verb ‘give’ – for example, the productive causative construction in Bodo is based on the verb *hw* ‘give’ – the grammaticalized causative verb typically follows the main verb, and could not easily develop into a prefix. More recently Konnerth (2014) has argued that it is an areal borrowing from an Austroasiatic substrate. In any case, while the *phV*- prefix, like the *gV*- prefix, is demonstrably older than Proto-Bodo-Garo, unlike *gV*- it does not date back to PTB. It appears, rather, to be an innovation shared with other languages of Northeast India and northern Myanmar, possibly characteristic of a possible Central branch of the family (DeLancey 2015).<sup>7</sup> (Bodo also retains a few lexical pairs which show the more ancient PTB *\*s*- causative prefix: *buŋ* ‘full’ / *su-phuŋ* ‘fill’, *gó* ‘escape’ / *so-kho* ‘set free (tr)’, and a dozen or so more).

In Bodo the inherited construction of adjectives derived by nominalization of stative or change-of-state verbs has served as a nucleus around which an inchoate category of property concept-denoting nominals has formed into a barely-delineable Adjective category. The *gV*- complex is a last remnant of the more structured, categorial grammar characteristic of more conservative languages. The other members of the Sal branch, Jinghpaw and the conservative Northern Naga languages, show much greater, and more conservative, morphological complexity than Bodo-Garo; this disappeared in Proto-Bodo-Garo and the daughter languages over a millennium or more of intense language contact. The modern Adjective category as a whole in Bodo, and the other BG languages, arose as the languages constructed new grammar to replace structure lost under conditions of creolization.

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<sup>7</sup> Guillaume Jacques (personal communication) suggests that a secondary causative in rGyalrongic (see Jacques in press) may be cognate with these forms.

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## 5

## Adverbial suffixes in Bodo

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## 1 Introduction

**B**odo is one of the Bodo-Garo languages spoken in the state of Assam in Northeast India by around a million speakers. This paper describes a class of verbal suffixes in Bodo, which will be called ‘Adverbial suffixes’ following Burling (2004). Burling (2004:139–154) provides a description of Adverbial affixes in Garo, a closely related language of Bodo spoken in the neighboring state of Meghalaya. The Adverbial affixes in Garo are numerous in number and in fact too many for a verbal category. According to Burling, they ‘permit verbs to convey a great deal of specific meanings that is conveyed in English by separate words. They are a distinctive feature of the Garo language, and skillful speaking requires the ability to toss them off easily’. Some of the Adverbial affixes are highly productive, i.e. they can be used with a wide range of verbs. Other Adverbial affixes are limited in productivity and occur with limited number of verbs. The higher productivity positively correlates with abstract and schematic meaning, and lesser productivity with more concrete and specific meaning. Roughly speaking, the higher the productivity of an Adverbial affix is, the farther it is from the verb root, and vice versa. One can say some are more grammaticalized than the others. Some of the Adverbial affixes are known to have derived from verbs historically. Adverbial affixes are found in other closely related languages also such as Rabha (Joseph 2007:181) and A’tong (van Breugel 2008:449).

The category of Adverbial suffixes in Bodo is very similar to that of Garo, even though the actual forms are different, suggesting they are secondary developments. Bodo has more than hundred Adverbial suffixes. They are a set of stem formatives that create new verb stems adding a very wide range of semantic/pragmatic contents to the meaning of the verb base. The verb stems then take

various finite or non-finite inflectional morphemes depending on the type of clause in which they function as a predicator. Adverbial suffixes are truly distinctive and stand out from the rest of the Bodo morphology in several ways. First, they are phonologically peculiar. No other affixes in Bodo have initial clusters except the Adverbial suffixes. Some of them are even multi-syllabic. Second, they ascribe an agglutinating synthetic character to Bodo verbs. Multiple Adverbial suffixes can be added to a verb root and form highly synthetic verb stems. No other word class is as synthetic as the verb. As many as three Adverbial suffixes are found in a verb stem. An aspect which is challenging to describe is the combination of the Adverbial suffixes in a string. There are hundreds of possible combinations. It will be very difficult to describe all the possible combinations and find out which combinations do not exist. Another aspect difficult to describe, albeit for a different reason, is the variation in the order of the Adverbial suffixes with respect to one another. The semantic/pragmatic nuances that come with the different orders of the same Adverbial suffixes are difficult to pinpoint. Third, Adverbial suffixes in Bodo are syntactically diverse. *They do not all behave in the same way.* While most of them are limited to verbal clauses, a couple of them occur with non-verbal clauses as well. Almost all Adverbial suffixes can be used in both affirmative and negative sentences. One Adverbial suffix in particular has been found to be restricted to negative clauses. Almost none of the Adverbial suffixes change the verbal nature of the verb stem, i.e. the verb base has the same syntactic distribution before and after the addition of the Adverbial suffix. However, there is one Adverbial suffix in particular, i.e. *-hay* ‘about to’, which changes the very nature of the verb stem. When this suffix is added to a verb base, the resulting verb stem does not behave like most other verbs. For instance, we usually find a nominalized form of verb stems marked with *-nai* when the verbs function as a predicator of certain types of subordinate clause, such as the clausal complement of the verb *za* ‘happen’ (see on page 13). Thus, this Adverbial suffix attributes some kind of nominal nature to the verb stem. Finally, the semantics is even more fascinating. Some Adverbial suffixes add very specific and concrete meaning, for instance ‘specific ways of cutting’ in words like *dan-k<sup>h</sup>ao* ‘cut-split’, *dan-bre* ‘cut-a.lot’. Such Adverbial suffixes have more of a lexical semantics. There are others which add very abstract and schematic meaning, such as ‘completive’, ‘exhaustive’, ‘proximal’ and ‘distal motion’. Such Adverbial suffixes have more of a grammatical meaning.<sup>1</sup>

This study is conducted on the basis of a very large corpus of written and spoken Bodo. There are 871,609 word tokens, 122,451 word types, and 91,792

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<sup>1</sup> This wide range of variation in the semantic content of the Adverbial suffixes makes it hard to gloss them systematically. It will be difficult to create abbreviations and more importantly to read the abbreviations of the Adverbial suffixes. Therefore, we will use abbreviations only when such abbreviations are commonly found, otherwise we will use full words, just like in lexical glosses.

sentences in the written corpus and 60,711 word tokens, 16,465 word types, and 7,682 sentences in the spoken corpus. The written data represents the Standard variety of Bodo, and the spoken data represents dialects from Kamrup, Udalguri, and Karbi Anglong, besides the Standard variety of Kokrajhar. The corpora are mostly compiled by the second author. The authors also have used constructed examples to illustrate ungrammaticality of certain expressions. The first author is a speaker of Kamrup variety and the second author is a speaker of Udalguri variety. Examples in this paper are tagged with WB (written Bodo) or SB (spoken Bodo) based on which corpus they belong to, followed by text number, and then sentence number, such as [WB-778-2.45]. Frequency counts and concordances have been conducted using SIL FLE<sub>X</sub> software. Frequency counts were also checked manually since there were similar forms that are not the Adverbial suffixes we were looking for. All the data are currently in Devanagari script in the corpus. The data presented in this paper is, however, in IPA broad transcription. Since tone has a very low functional load in Bodo, we are marking only the high tone on the words which have a low tone counterpart. In other words, words with low tone and words that are not found to have minimal pair counterpart are not marked for tone.

This paper has the following structure. §2 will provide a couple of facts about Bodo verb morphology that would be helpful in appreciating the examples later. This will include a brief discussion of a number of finite and non-finite morphemes in the language. §3 discusses phonological, morphological, syntactic and diachronic aspects of the Adverbial suffixes. §4 provides a description of a set of individual Adverbial suffixes, all of them are very common except for the last one. §5 provides a brief comparison of Adverbial suffixes in Garo and Bodo. §6 summarizes the paper.

## 2 Bodo verb morphology and Adverbial suffixes

We will briefly introduce the structure of verb morphology in this section. We can broadly divide the verb morphology into four positional classes, presented in table 1 below.

TABLE 1 – Position class of verbal morphology

-1	0	1 (multiple)	2 (multiple)	3
Causative prefixes	Verb root	Adverbial suffixes	Finite suffixes	Terminal suffixes
			Non-finite suffixes	

Among the morpheme classes in the table above, only the verb root and the finite/non-finite morphemes are obligatory. A verb stem depending on whether it is in a finite clause or a non-finite clause must have one of the finite/non-finite

morphemes. The rest of the morphology is optional. The prefixes, a set of two causative morphemes *p<sup>h</sup>V-* and *sV-*, are a coherent class of morphemes with a paradigmatic relation. The Terminal suffixes are a set of four or five morphemes, such as *-daŋ/-zaŋ* ‘perhaps’, *-k<sup>h</sup>uma* ‘probably’, *-nu* ‘quotative’, and *-zen* ‘precative’, which follow finite morphemes. The Adverbial suffix comes immediately after the verb root. There can be more than one Adverbial suffix in a row (indicated by ‘multiple’ in the table). The finite/non-finite morphemes follow the Adverbial suffixes, if there are any. We can also have multiple finite morphemes in a row, what typically creates a meaning which might not be quite transparent. A somewhat more detailed discussion of finite, non-finite, and Terminal suffixes follows.

All finite clauses must have one of the morphemes on the verb stem presented in Table 2 below, unless it is an imperative clause, which does not require any morphology on the verb. All other morphology is optional, including the Adverbial suffixes. The following examples illustrate the ungrammaticality of a verbal clause that does not contain any of the morphemes in Table 2.

- (1) *aŋ*            *no-ao*            *t<sup>h</sup>áŋ-gun.*  
       1SG        home-LOC        go-FUT  
       ‘I will go home’
  
- (2) *\*aŋ*            *no-ao*            *t<sup>h</sup>áŋ.*  
       1SG        home-LOC        go
  
- (3) *\*aŋ*            *no-ao*            *t<sup>h</sup>áŋ-t<sup>h</sup>o*  
       1SG        home-LOC        go-a.while

The only morphology the verb *t<sup>h</sup>áŋ* ‘go’ has in (1) is *-gun*, a morpheme from Table 2. Example (2) is not an imperative sentence and the verb does not have any morphology, and thus ungrammatical. Example (3) has an Adverbial suffix *-t<sup>h</sup>o*, but it does not have any finite morphemes from the Table 2, and thus ungrammatical.

TABLE 2 – List of finite morphemes in Bodo

Finite morphemes	Function
<i>-mun</i>	Past/Irealis
<i>-gun</i>	Future
<i>-gou</i>	Immediate future/Desiderative
<i>-u</i>	Habitual/Affirmative
<i>-bai</i>	Perfect
<i>-duŋ</i>	Realis



Finite morphemes	Function
-a	Negative
-dia	Did not any more
-lia	Will not any more
-ak <sup>h</sup> ui	Negative perfect
-du	Imperative
-ni	Jussive
-duni/dini	Jussive
-t <sup>h</sup> uŋ	Optative
-sui	Change of state

Verb stems also require certain morphology when the clause is embedded in another clause. We will call these non-finite morphology. One type of non-finite morphology is the clausal nominalizer *-nai*. When a clause functions as an argument of a verb or modifies a noun like a relative clause, the verb in the dependent clause usually takes the nominalizer *-nai*. Another piece of non-finite morphology is the ‘infinitive’ *-nu*. Verbs like *sañ* ‘think’, *naigir* ‘want’, *naŋ* ‘need’, *há* ‘can’, *ruŋ* ‘know’, etc. take a complement clause marked with *-nu* on the verb. Moreover, when clauses are chained together, all but the final clause take a non-final marker *-na* or *-nanui*. Finally, adverbial clauses take varieties of subordinating suffixes on the verb stem, such as temporal/conditional *-ba*, reason *-k<sup>h</sup>ai*, concessive *-babu/-blabu*, etc.

The following examples illustrate the use of the above-mentioned non-finite morphemes.

- (4) *birgrusri-ni buŋ-nai-k<sup>h</sup>ou p<sup>h</sup>ut<sup>h</sup>ai-bai.*  
 PN-GEN say-NMLZ-ACC believe-PRF  
 ‘(He) believed what Birgrusri said.’ [WB-270-35.1]

The verb *buŋ* ‘say’ in (4) is part of a clause that functions as the Object argument of the matrix verb *p<sup>h</sup>ut<sup>h</sup>ai* ‘believe’, and therefore has the nominalizer *-nai* on it. The nominalized clause is then marked with the accusative marker *-k<sup>h</sup>ou*.

- (5) *bi-k<sup>h</sup>ou-nu nuŋ haba k<sup>h</sup>alam-nu naigir-duŋ.*  
 3SG-ACC-FOC 2SG marry do-INF want-RLS  
 ‘You want to marry her!’ [WB-747-2.216]

The verb *k<sup>h</sup>alam* ‘do’ in (5) is part of a clause that functions as the Object of the matrix verb *naigir* ‘want’. This verb requires that the verb of the dependent clause be marked with *-nu* infinitive. It is worth mentioning that both *-nai* ‘nominalizer’ and *-nu* ‘infinitive’ are also found on certain finite clauses, and it seems that those non-finite clauses are now starting to function as finite clauses

in Bodo. We will see some finite use of both *-nai* and *-nu* later. Moreover, *-nu* is also found on purpose clauses.

- (6) *bip<sup>h</sup>a-ni*      *rao-p<sup>h</sup>ur-k<sup>h</sup>ou*      *k<sup>h</sup>una-nanui*      *monzula-ja*  
 father-GEN      saying-PL-ACC      hear-NF      PN-NOM  
*ese*      *gidob-u.*  
 little      fear-HAB  
 ‘Hearing what her father said, Manjula was afraid.’ [WB-325-11.50]

The above sentence expresses two events, the event of hearing and the event of being afraid. Those two events are expressed by two chained clauses – one final and one non-final. The non-final clause takes *-na* or *-nanui* on the verb, such as *k<sup>h</sup>una-nanui* above, and the final clause takes a finite verb, such as *gidob-u*.

- (7) *mobail-ni*      *som-k<sup>h</sup>ou*      *nai-ba*      *nu-bai*      *hor-ni*  
 mobile-GEN      time-ACC      look-when      see-PRF      night-GEN  
*nou*      *bazi-bai.*  
 nine      strike-PRF  
 ‘When (he) looked at the time on his phone, he saw that it struck 9 in the evening.’ [WB-213-3.3]

The verb *nai* ‘look’ in (7) is part of an Adverbial clause that expresses a timeframe for the event of the Matrix clause. Such adverbial clauses are required to have subordinating suffixes on the verb, such as *-ba* as in *nai-ba*. There are several types of Adverbial clauses and they take different subordinating suffixes. Table 3 presents the most common non-finite morphemes in Bodo.

TABLE 3 – List of common non-finite morphemes in Bodo

Non-finite morphemes	Function
<i>-nu</i>	Infinitive/Purpose
<i>-nai</i>	Nominalizer
<i>-na/-nanui</i>	Non-final
<i>-bla</i>	When/If
<i>-ba</i>	When/If
<i>-k<sup>h</sup>ai</i>	Because
<i>-ni</i>	Because

All the Adverbial suffixes come between the verb base and the finite/non-finite suffixes. The terminal suffixes come at the end of the string of morphemes on the verb base. The following illustrates one of the Terminal suffixes.

- (8) *bi-sur*      *t<sup>h</sup>ai-bai-day*.  
 3-PL            go-PRF-DUB  
 ‘They have probably left.’

The morpheme *-day* ‘perhaps’ comes after the finite morpheme *-bai* ‘perfect’ in (8). The form *k<sup>h</sup>uma* is found both before and after the finite morphemes and expresses completely different meanings, as shown in (9) and (10) below.

- (9) *unou*            *udis-bu*            *gui-a*            *za-bai-k<sup>h</sup>uma* . . .  
 later            sense-also            not.exist-NEG            happen-PRF-perhaps  
 ‘(He) also **perhaps** lost track of things.’ [WB-658-2.149]

- (10) *bit<sup>h</sup>ai-a*            *gusui-zui*            *gusu*            *t<sup>h</sup>ui-nai-k<sup>h</sup>ou-su*  
 3SG.HON-NOM            mind-COM            mind            die-NMLZ-ACC-FOC  
*sán-k<sup>h</sup>uma-bai*.  
 think-secretly-PRF  
 ‘He **secretly** thought about dying in his mind.’ [WB-750-3.113]

In (9) *-k<sup>h</sup>uma* comes after the inflectional suffix *-bai*, hence a terminal suffix, and adds the meaning of ‘perhaps’, whereas in (10) it comes before the inflectional suffix *-bai*, hence an Adverbial suffix, and adds a sense of ‘secretly’. As an Adverbial suffix, *-k<sup>h</sup>uma* ‘secretly’ comes from *k<sup>h</sup>uma* ‘lose’.

### 3 Some characteristics of Adverbial suffixes in Bodo

In the previous section we have looked at the morphological structure of verbs, position classes and the individual morphemes that occupy those position classes. We have seen illustrations of various finite and non-finite morphemes. By now we should have a sense of where the Adverbial suffixes come and what precedes or follows them. In the following sub-sections, we will provide some description of various aspects of Adverbial suffixes, such as phonological, morphological, syntactic, and diachronic. In the subsequent section, we will be looking at individual Adverbial suffixes in terms of their distributions and functions.

#### 3.1 Phonological properties

We will begin by mentioning some of the notable phonological properties of the Adverbial suffixes here. Almost all Adverbial suffixes are monosyllabic. Some disyllabic Adverbial suffixes in our database are *-k<sup>h</sup>umur* ‘erase, extinguish’, *-guma* ‘lose’, which are very transparent grammaticalized serial verbs derived from lexical verbs *k<sup>h</sup>umur* ‘erase, extinguish’ and *guma* ‘lose (intransitive)’ respectively. We have found one disyllabic Adverbial suffix, *-baibai* ‘do some-

thing similar', which does not seem to have an identifiable synchronic lexical source. It appears that Adverbial suffixes lose their syllabic weight (i.e. disyllabic ones become monosyllabic) through a process of vowel deletion of the initial syllable, provided the resulting sequence of the consonants is a Consonant+l/r. Perhaps, the existing disyllabic Adverbial suffixes have not undergone this process because the resulting sequences of consonants (i.e. *k<sup>h</sup>m*, *gm*, *bb*) are not allowed. Otherwise, we wouldn't have seen any disyllabic Adverbial suffixes. This process does not seem to be restricted to verbs, but also found in nouns (see the next paragraph). The existence of this process becomes obvious when we look at the sources of some of the Adverbial suffixes shown in Table 4 below.

TABLE 4 – List of Adverbial suffixes with onset cluster derived from verbs

Lexical source	Adverbial suffix
<i>siri</i> 'to fall (of leaves)'	<i>sri</i> 'clean'
<i>k<sup>h</sup>ului</i> 'drop something'	<i>k<sup>h</sup>lai</i> 'make somebody/something fall'
<i>p<sup>h</sup>oloy</i> 'to make a hole'	<i>p<sup>h</sup>long</i> 'make a hole'
<i>suray</i> 'to become morning'	<i>sra</i> 'clean'
<i>sulab</i> 'have time to do something'	<i>slab</i> 'have time to do something'
<i>sulai</i> 'to change'	<i>slai</i> 'change'

The onset clusters is another notable phonological feature of the Adverbial suffixes. They are the only productive affixes with onset clusters. Onset clusters are found only in sound symbolic words and in non-initial syllables (mostly second syllable) of certain lexical items, mostly nouns. Certain nouns are known to have developed this cluster on the second syllable through the same process mentioned above, see for instance *maizli* 'seed for sowing' below. However, there are many whose etymology is unknown, such as *san.sri* 'to swim', and therefore the development of the onset clusters in those words is uncertain.

<i>mai.zli</i>	'seed for sowing' (< <i>mai</i> 'rice', <i>zului</i> 'seed')
<i>dui.zlay</i>	'rainy season' (< <i>dui</i> 'water', <i>zlay</i> '??')
<i>bay.griŋ</i>	'earthquake'
<i>za.braŋ</i>	'spice type'
<i>go.sla</i>	'shirt'
<i>san.sri</i>	'to swim'

None of the items above contains any productive morphological form. Nevertheless, the first lexical item has two identifiable morphemes *mai* 'rice' and *zului* 'seed'. The second lexical item has only one identifiable morpheme *dui* 'water'. The rest have no known morphological composition. Irrespective of

their diachronic status, they all end up having onset clusters on non-initial syllable. This also happens to borrowed items, such as the one below, which is not known to have any morphological complexity in the source language.

*<sup>h</sup>o.p<sup>h</sup>la* ‘bag’ (< Assamese *topola* ‘bag’)

While we know how the Adverbial suffixes in Table (4) above ended up having onset clusters, there are many more Adverbial suffixes with onset cluster for which such information is not available, because the origin of these suffixes is unknown. The following table presents Adverbial suffixes with onset clusters with no known source of origin.

TABLE 5 – List of some Adverbial suffixes with initial clusters

Adverbial suffix	Meaning (approximate)
<i>-blang</i>	‘wide’
<i>-bra</i>	‘harsh’
<i>-brob</i>	‘without preparation’
<i>-drai</i>	‘more than necessary’
<i>-glab</i>	‘loudly’ (laugh)
<i>-gluj</i>	‘around’ (as in beat around)
<i>-grwm</i>	‘feel’
<i>-k<sup>h</sup>lej</i>	‘bend’
<i>-p<sup>h</sup>la</i>	‘pretend’
<i>-p<sup>h</sup>ram</i>	‘lightly’
<i>-slai</i>	‘change’
<i>-sro</i>	‘clear’
<i>-t<sup>h</sup>ro</i>	‘all’

### 3.2 Morphological properties

The set of morphemes that we are dealing with is all suffixes. Adverbial suffixes are stem formatives, i.e. they form new verb stems which still require additional morphology to be able to be used in a finite or non-finite clauses. The following examples illustrate the Adverbial suffix *-p<sup>h</sup>in* ‘again’ with various types of finite and non-finite morphology in various clause types.

- (11) *aru*      *be*      *tren-zuŋ-nu*      *p<sup>h</sup>ui-p<sup>h</sup>in-gun.*  
 and      this      train-INST-FOC      come-back-FUT  
 ‘And (I) will **come back** on the same train.’ [WB-618-5.13]

- (12) *boro-ni harimu-k<sup>h</sup>ou p<sup>h</sup>u-t<sup>h</sup>aj-p<sup>h</sup>in-nai-ni*  
 Bodo-GEN culture-ACC cause-be.alive-again-NMLZ-GEN  
*som za-bai.*  
 time happen-PRF  
 ‘It is time to **revive** the Bodo culture.’ [WB-36-9.10]
- (13) *bi-k<sup>h</sup>ou raobu nu-p<sup>h</sup>in-nu mún-ak<sup>h</sup>i-sui.*  
 3SG-ACC no.one see-again-INF get-NEG.PRF-CS  
 ‘No one got to see him **again**.’ [WB-467-2.100]
- (14) *aru dán-p<sup>h</sup>in-nanui lir-p<sup>h</sup>in-duŋ.*  
 more cut-again-NF write-again-RLS  
 ‘(He) crosses out more and writes (it) **again**.’ [WB-431-2.2]
- (15) *hostel-ou t<sup>h</sup>áj-p<sup>h</sup>in-bla sunui-k<sup>h</sup>ou la-nu*  
 hostel-LOC go-back-when lime-ACC take-INF  
*bao-duŋ-mun aj-u.*  
 forget-RLS-PAST 1SG-NOM  
 ‘I forgot to take the lime when I went **back** to hostel.’ [WB-106-1.621]

Example (11) illustrates Adverbial suffix with the finite suffix *-gun* ‘future’, a finite morpheme, (12) with nominalizer *-nai*, (13) with infinitive *-nu*, (14) with non-final marker *-nanui*, and (15) with subordinating suffix *-bla*. These examples illustrate the range of clause types in which verb stems with *-p<sup>h</sup>in* can be used.

Adverbial suffixes are optional in the sense that a verb form may or may not have an Adverbial suffix. Verbs generally contain between 1 to 3 Adverbial suffixes. The order of the Adverbial suffixes is fixed except for when both of the Adverbial suffixes are highly productive and have very abstract schematic meaning. Example (16) and (17) illustrate a fixed order relation between two Adverbial suffixes.

- (16) *boibu undu-sri-zub-bai.*  
 all sleep-quiet-exhaustive-PRF  
 Everyone slept (and it is) all quiet.’ [WB-494-2.7]
- (17) *\*boibu undu-zub-sri-bai.*

The order between *sri* ‘silent’ and *zub* ‘exhaustive’ is fixed. The Adverbial suffix *-sri* has to be next to *undu* ‘sleep’. This Adverbial suffix seems to occur only with the verb *undu* ‘sleep’. On the other hand, the order between *-hor* ‘distal motion’ and *-p<sup>h</sup>in* ‘again’ is not fixed, as illustrated by (18) and (19) below.

Both of these Adverbial suffixes are highly productive and can be used with almost any verb.

- (18) *gosai-a      aŋ-k<sup>h</sup>ou      nai-hor-p<sup>h</sup>in-duŋ.*  
 god-NOM      1SG-ACC      look-DIST-again-RLS  
 ‘God looked back at me from distance (i.e. from heaven).’  
 [WB-108-2.292]

- (19) *bi-suur      nai-p<sup>h</sup>in-hor-lai-duŋ.*  
 3-PL      look-again-DIST-RECP-RLS  
 ‘They looked back at each other from distance.’ [WB-493-2.142]

Even though both orders are found, they may not be equally frequent. One order may be more frequent than the other. The order in (18) is found 25 times and the one in (19) 7 times in our corpus. The following table presents variable orders between commonly found pairs of Adverbial suffixes.

Table 6: Frequency of variant orders of pair of Adverbial suffixes

Order A	Gloss	Frequency	Order B	Frequency
<i>-t<sup>h</sup>ar-mar</i>	‘really-for.real’	7	<i>-mar-t<sup>h</sup>ar</i>	4
<i>-k<sup>h</sup>aŋ-zub</i>	‘completive-exhaustive’	13	<i>-zub-k<sup>h</sup>aŋ</i>	7
<i>-hui-zub</i>	‘distal-exhaustive’	6	<i>-zub-hui</i>	1
<i>-p<sup>h</sup>in-zub</i>	‘again-exhaustive’	12	<i>-zub-p<sup>h</sup>in</i>	0 (but possible)
<i>-laŋ-zub</i>	‘distal-exhaustive’	28	<i>-zub-laŋ</i>	13
<i>-laŋ-p<sup>h</sup>in</i>	‘distal-again’	28	<i>-p<sup>h</sup>in-laŋ</i>	4
<i>-haŋ-t<sup>h</sup>ar</i>	‘about.to-really’	3	<i>-t<sup>h</sup>ar-haŋ</i>	3
<i>-t<sup>h</sup>ar-bao</i>	‘really-more’	6	<i>-bao-t<sup>h</sup>ar</i>	0 (but possible)
<i>-buu-zub</i>	‘proximal-exhaustive’	3	<i>-zub-buu</i>	3
<i>-hui-mar</i>	‘distal-for.real’	10	<i>-mar-hui</i>	1

Sometimes the difference in meaning between the two orders is very subtle and often negligible, but sometimes it may turn out to be significant, especially when an Adverbial suffix creates an idiomatic meaning along with the verb base. For example, the difference between *-zub-buu* in (20) and *-buu-zub* in (21) is insignificant. If we change the order, the hearer won’t notice much.

- (20) *gasui-k<sup>h</sup>ou-buu      p<sup>h</sup>an-zub-buu-bai      rak<sup>h</sup>eb-a.*  
 all-ACC-also      sell-exhaustive-PROX-PRF      PN-NOM  
 ‘Rakheb sold everything on his way here (i.e. proximal motion).’  
 [WB-106-1.978]

- (21) *p<sup>h</sup>oraisa som-ou-nuu lugu mún-buu-zub-duw.*  
 student time-LOC-FOC friend get-PROX-exhaustive-RLS  
 ‘(I) met all in my student life.’ (i.e. on his lifetime from student life to the present time) [WB-238-3.7]

On the other hand, the order between *-zub-p<sup>h</sup>ui* in (22) and *-p<sup>h</sup>ui-zub* in (23) is significant when the verb base is *mún* ‘get’, because *mún* ‘get’ and *p<sup>h</sup>ui* ‘come’ together may denote a unique sense of ‘arrive’.

- (22) *bi gasi-k<sup>h</sup>ou-buu mún-zub-p<sup>h</sup>ui-bai.*  
 3SG all-ACC-also get-exhaustive-PROX-PRF  
 ‘He came and got everything.’ or ‘He got everything here.’

- (23) *bi-sur mún-p<sup>h</sup>ui-zub-bai.*  
 3SG-PL get-PROX-exhaustive-PRF  
 ‘They all arrived.’

The occurrence of *-p<sup>h</sup>ui* ‘come’ next to the verb *mún* ‘get’ in (23) allows us to draw the sense of ‘arriving’, which is not possible in (22).

Some of the Adverbial suffixes are highly productive, such that they can occur with almost any verb. Others are limited to a very few number of verbs, sometimes just one. The frequency of occurrence of some of the Adverbial suffixes in our database is given in the following table. This table gives us an idea of the range of frequency distribution of the individual Adverbial suffixes.

TABLE 7 – Frequencies of some of the individual Adverbial suffixes

Adverbial suffix	Meaning (approximate)	Frequency
<i>-sling</i>	cut diagonally, on a slant	21
<i>-k<sup>h</sup>leng</i>	to make something bend	31
<i>-k<sup>h</sup>lab</i>	detaching a small part of something	66
<i>-glaj</i>	do something leisurely	71
<i>-p<sup>h</sup>er</i>	to have an experience in/of something	73
<i>-k<sup>h</sup>ao</i>	to split in half	95
<i>-gluw</i>	do something chaotically (such as beating unscrupulously)	100
<i>-k<sup>h</sup>lai</i>	to make something fall down	134
<i>-p<sup>h</sup>la</i>	to pretend to do something	230
<i>-p<sup>h</sup>laj</i>	to do something by mistake	249
<i>-p<sup>h</sup>ui</i>	proximal motion	300
<i>-p<sup>h</sup>in</i>	do something again	1070



### 3.3 Syntactic properties

While most of the Adverbial suffixes occur only on a verbal predicate, some of them occur on both verbal and non-verbal predicates. Example (24) illustrates an Adverbial suffix *-p<sup>h</sup>in*, which occurs only on a verbal predicate.

- (24) *san-nui-su*      *mao-nanui*      *muzaŋ*      *mún-a-ba*      *zrab*  
 day-two-around    work-NF      good      get-NEG-if      SS  
*gar-p<sup>h</sup>in-guun*      *aŋ*  
 leave-again-FUT    1SG  
 ‘If I do not like (it) after working a few days, I will leave the job **again** instantly.’ [WB-116-2.93]

The Adverbial suffix like *-t<sup>h</sup>ar*, on the other hand, can be used with both verbal and non-verbal clauses. Example (25) illustrates a verbal predicate clause with *-t<sup>h</sup>ar*, example (26) with nominal predicate, (27) with adjectival predicate and (28) with existential clause.

- (25) *aŋ-k<sup>h</sup>ou*      *mit<sup>h</sup>i-a*      *sán-t<sup>h</sup>ar-duŋ*      *nuŋ*.  
 1SG-ACC      know-NEG      think-really-RLS    2SG  
 ‘You are **really** thinking that I do not know (that).’ [WB-171-2.87]
- (26) *aŋ*      *k<sup>h</sup>ibroma-t<sup>h</sup>ar*      *na?*  
 1SG      dung.beetle-really      Q  
 ‘Am I **really** a dung beetle?’ [WB-816-2.94]
- (27) *buut<sup>h</sup>ur-a*      *zubur*      *gusu-t<sup>h</sup>ar*.  
 weather-NOM      lot      cold-really  
 ‘The weather is **really** very cold’ [WB-743-2.46]
- (28) *san-a*      *gui-t<sup>h</sup>ar-lja*.  
 sun-NOM      not.exist-really-not.anymore  
 ‘The sun is not there **at all** anymore.’ [WB-112-2.110]

The Adverbial suffixes that can occur in both non-verbal and verbal clauses are few in number. They are given in the following table.

TABLE 8 – List of Adverbial suffixes which can occur in both verbal and non-verbal clauses

Adverbial suffix	Meaning
<i>-t<sup>h</sup>ar</i>	‘really’
<i>-mar</i>	‘for real’
<i>-zubb</i>	‘exhaustive’
<i>-k<sup>h</sup>a</i>	‘for sure’
<i>-bao</i>	‘more’

Almost all Adverbial suffixes can occur in both affirmative and negative sentences. There is one in particular which is restricted to only negative clauses, namely *-bay*, illustrated below.

- (29) *bi-u*            *hinzao-p<sup>h</sup>ur-zuŋ*            *bat<sup>h</sup>ra*            *railai-bay-a*.  
 3SG-NOM        woman-PL-COM        speech            talk-much-NEG  
 ‘He does not talk to women **much**.’ [WB-22-3.8]

- (30) \**bi-u*            *hinzao-p<sup>h</sup>ur-zuŋ* *bat<sup>h</sup>ra*            *railai-bay-u*.

While the negative sentence in (29) is grammatical, the positive counterpart in (30) is not. This restriction of *-bay* is applicable not only to matrix clauses as in (29), it is also applicable to non-matrix clauses. Thus, *-bay* cannot be used in non-matrix clauses that do not have a negative form. This would include nominalized clauses with *-nai*, infinitive clauses with *-nu*, chained clauses with *-na/nanui* among others, since these subordinating suffixes do not have an inherent negative meaning. On the other hand, subordinating suffix like *-k<sup>h</sup>ai* ‘because’ allow negative forms such as *-ui* ‘not’ (see description of *-bay* in section 4 below for details).

Adverbial suffixes in general do not change the word class of the verb base. Thus, the verbs marked with Adverbial suffixes function only as a verbal predicate. However, one Adverbial suffix in particular, namely *-hay* ‘about to’, can change the word class resulting in functions and behavior of the verb stem that is not typical of verbs at all. Example (31) illustrates the verbal use of a verb stem containing *-hay*.

- (31) *dose*            *zirai-hay-duŋ-mun*.  
 a.while        rest-about.to-RLS-PAST  
 ‘(I) was just **about to** rest for a while.’ [WB-170-2.43]

Example (32) illustrates non-verb-like behavior and use of verb stems containing *-hay*. The non-verb-like quality would become apparent when we compare (32) with (33) which contains an Adverbial suffix that does not change the class of verb stem, namely *-mar* ‘for real’.

- (32) *san-a-bu*            *mablabanu*            *hab-hay*            *za-bai*.  
 sun-NOM-also        long.time.ago        set-about.to        happen-PRF  
 ‘The sun was about to set long time ago.’ [WB-325-14.98]

- (33) *bi-sur-u*            *zoipur-ou-nu*            *t<sup>h</sup>ay-mar-nai*            *za-si-gun*.  
 3-PL-NOM        PN-LOC-FOC        go-for.real-NMLZ        happen-IMM-FUT  
 ‘They are going to go to Joipur for real.’ [WB-618-24.18]

The verb *za* ‘happen/take place’ takes nominal participants (or finite clauses, but not bare verb stems). The verbal constituent needs to be nominalized first to be used in a *za* construction as in (33). However, verb stems with *-hay* does not take the nominalizer *-nai* in a *za* construction as in (32). There are several other non-verb-like behavior of verb stem with *-hay* (see the description of *-hay* in §4 for details).

### 3.4 Historical source

The historical source of most of the individual Adverbial suffixes is unknown. However, it is clear that there are at least two types of sources – serial verbs and sound symbolic words. Serial verbs, also known as ‘versatile verbs’, account for approximately 40% of all the Adverbial suffixes. 28% of the Adverbial suffixes sound like sound symbolic words. We have no idea about 33% of the Adverbial suffixes where they came from. Serial verbs are grammaticalized forms of a set of lexical verbs, which are still in use. The following examples illustrate both lexical use and serial verb use of the verb *hor* ‘send’.

- (34) ... *bip<sup>h</sup>a-ni-sim*      *teligram*      *hór-bai*.  
 ... father-GEN-to      telegram      send-PRF  
 ‘(He) **sent** a telegram to his father.’ [WB-678-2.40]

- (35) *binip<sup>h</sup>rai*      *bip<sup>h</sup>a-ni-t<sup>h</sup>iŋ*      *megon*      *guza*      *dunt<sup>h</sup>i-na*  
 then      father-GEN-towards      eye      red      show-NF  
*nai-hor-bai*.  
 look-DIST-PRF  
 ‘Then, (he) looked at his father **from distance** showing red/angry eyes.’  
 [WB-326-4.107]

The verb *hór* ‘send’ is used as a lexical verb in (34) meaning ‘send something’, and as a serial verb in (35) meaning ‘doing an activity from a distance’, such as ‘looking from a distance’. For more detailed discussion on serial verbs, see Boro (2012). The following table presents the most commonly used serial verbs.

TABLE 9 – Commonly used serial verbs in Bodo along with their lexical source

Serial verbs	Lexical source
<i>-p<sup>h</sup>ui</i> ‘Proximal motion’ (the event of the verb base takes place at the end of the proximal motion)	<i>p<sup>h</sup>ui</i> ‘come’
<i>-bu</i> ‘Proximal motion’ (the event of the verb takes place along the proximal motion)	<i>bu</i> ‘pull’
<i>-hui</i> ‘Distal motion’ (the event of the verb base takes place at the end of the distal motion)	<i>hui</i> ‘go and give’

Serial verbs	Lexical source
- <i>laŋ</i> ‘Distal motion’ (the event of the verb base takes place at the beginning of the distal motion)	<i>laŋ</i> ‘take away’
- <i>hor</i> ‘the event of the verb base is conducted from distance’	<i>hor</i> ‘send’
- <i>zub</i> ‘exhaustive’	<i>zub</i> ‘finish’
- <i>k<sup>h</sup>aŋ</i> ‘completive’	<i>k<sup>h</sup>aŋ</i> ‘finish cooking’

It is likely that some of the Adverbial suffixes historically come from verbs and they no longer have the source lexical verbs. In fact, many of the serial verbs in our list do not have the lexical counterparts in the first author’s dialect, namely Kamrupia/Sanjari dialect. Only the second author recognizes them as having a lexical source.

The second source of the Adverbial suffixes is sound symbolic words. Bodo is very rich in sound symbolic expressions. They are often found in reduplicated form and allow initial consonant clusters on the first syllable of the word. Note the use of *bre* ‘cutting something too many times’ and *glab* ‘boisterously’ in the following examples.

- (36) . . . *t<sup>h</sup>aizou-p<sup>h</sup>ur-a* . . .      *emp<sup>h</sup>ou*      ***bre***      ***bre***  
. . . mango-PL-NOM      insect      SS      RED  
*su-bre-nai*  
sting-many.times-NMLZ  
‘The mangoes are spoilt by insects.’ (Insects stung the mangoes too many times) [WB-371-2.4]

- (37) *domon-a*      *glab*      *glab*      *mini-ju.*  
PN-NOM      SS      RED      laugh-HAB  
‘Domon laughs boisterously.’ [WB-337-8.9]

- (38) *bibdi*      *buŋ-nanui*      *mini-glab-laŋ-u.*  
like.that      say-NF      laugh-boisterously-DIST-HAB  
‘Saying like that, (she) laughs boisterously. [WB-119-2.253]

In example (36) *brebre* is a sound symbolic word, which is reduplicated and has a /br/ cluster. *brebre* modifies the verb *su* ‘sting’. In the same sentence, we have the Adverbial suffix with the same form and meaning, i.e. *bre*, on the main verb. It is obvious that they are historically related. Similarly, in (37) *glabglab* is a sound symbolic word, which is reduplicated and has /gl/ cluster. It modifies the verb *mini* ‘laugh’. In (38) we see an Adverbial suffix with the same form and meaning on the main verb. The following table presents list of Adverbial suffixes which we think to be sound symbolic.

TABLE 10 – List of some Adverbial suffixes which sound like sound symbolic

Adverbial suffix	Meaning
<i>-k<sup>h</sup>raj</i>	‘turn upward’
<i>-k<sup>h</sup>rao</i>	‘loudly’
<i>-srao</i>	‘in strewing manner’
<i>-srut</i>	‘tightly’
<i>-t<sup>h</sup>rut</i>	‘slightly’
<i>-zrao</i>	‘sounding like hitting with leaves’

There are several Adverbial suffixes which are neither serial verbs nor look like sound symbolic words. A couple of them are listed below.

TABLE 11 – List of Adverbial suffixes with unknown source

Adverbial suffixes	Meaning
<i>-bai</i>	‘casually, with no specific purpose’
<i>-bao</i>	‘more’
<i>-drai</i>	‘more than necessary’
<i>-k<sup>h</sup>e</i>	‘by mistake’
<i>-k<sup>h</sup>on</i>	‘encircle’
<i>-p<sup>h</sup>a</i>	‘together, along with’
<i>-p<sup>h</sup>la</i>	‘pretend to’
<i>-sin</i>	‘more than’
<i>-t<sup>h</sup>er</i>	‘have no patience to’

## 4 Some common adverbial suffixes

In this section, we will describe some of the most common Adverbial suffixes individually. In this description, we will highlight (i) their semantics/pragmatics, (ii) types of clauses in which they can be used, and (iii) any class changing functions they may have. In this description we will exclude most of the serial verbs. See Boro (2012) for a description of those. We have included one Adverbial suffix which is less common, restricted to Standard dialect only, namely *-p<sup>h</sup>am* ‘do something to improve it’. The Adverbial suffix *-baŋ* ‘much’ is commonly used in daily speech. The frequency of *-baŋ* in the table below is unexpectedly low. The suffixes described in this section are presented in the table below with their respective frequencies and possible sources.

TABLE 12 – Some common Adverbial suffixes

Adverbial suffix	Meaning	Possible source	Frequency
<i>-bao</i>	‘more’	Unknown	1899
<i>-p<sup>h</sup>in</i>	‘again, back’	Unknown	1070
<i>-gru</i>	‘first, before anything else’	Unknown	525
<i>-t<sup>h</sup>o</i>	‘for the time being’	Unknown	705
<i>-zen</i>	‘just starting’	Unknown	223
<i>-haj</i>	‘about to’	Unknown	642
<i>-p<sup>h</sup>u</i>	‘take a momentum’	Unknown	176
<i>-bay</i>	‘much’	<i>bay</i> ‘increase’ (a verb)	31
<i>-t<sup>h</sup>ar</i>	‘really’	Unknown	3003
<i>-mar</i>	‘for real’	Unknown	308
<i>-hab</i>	‘get deeply involved in’	<i>hab</i> ‘enter’ (a verb)	505
<i>-p<sup>h</sup>am</i>	‘do something to improve it’	<i>p<sup>h</sup>aham</i> ‘repair’ (a verb)	18

The order of description of individual adverbial suffixes below is in the order the Adverbial suffixes are listed in the above table.

#### a) *-bao* ‘more’ (glossed as ‘more’)

In general this suffix indicates that more of a particular event takes place. This presupposes that the event already took place or was taking place, and the added information is that more of that same event takes place. For example, if someone was reading a book, with this suffix a sentence would mean that that person read more of the book, resulting in an increase in the number of total pages of the book read. Consider the following examples.

- (39) *zi sase sanui don, bisur-bu aru sanbuse*  
 REL one two exist they-also more how.many.days  
*t<sup>h</sup>a-bao-nu.*  
 stay-more-INF  
 ‘The few who are there, how many days are they going to stay more?’  
 [WB-54-3.22]

- (40) *t<sup>h</sup>ut p<sup>h</sup>agla-p<sup>h</sup>ur, aŋ-k<sup>h</sup>i sik<sup>h</sup>la-bao*  
 EXCL mad-PL 1SG-FOC young.woman-more  
*nama, nuŋ-sur-zuŋ railai-za-bao-nu.*  
 Q 2SG-PL-COM talk-possible-more-INF  
 ‘You crazy people! Am I still young to talk to you guys anymore?’  
 [WB-456-2.59]

Both (39) and (40) have presuppositions that the event of staying in (35) and the event of talking in (40) has been taking place or took place prior to the utterance of the above expressions. The above sentences with *-bao* simply indicate whether or not more of staying in (39) and talking in (40) will take place. A couple more examples follow.

- (41) *anandopal-ni*    *p<sup>h</sup>uler-ni*    *zuhuulao-p<sup>h</sup>ur-a*    *unau-bui*  
 PN-GEN            race-GEN            hero-PL-NOM            later-also  
*mamud-zuŋ*    *zuzi-bao-duŋ-mun.*  
 PN-COM            fight-more-RLS-PAST  
 ‘Anandopal’s races’ heroes fought **more** with Mamud later.’  
 [WB-697-4.17]
- (42) *dinui-ni*    *roŋza-nai*    *san-ou-bui*    *nuŋ*    *bidi*  
 today-GEN    be.happy-NMLZ    day-LOC-also    you    like.this  
*zá-ja*    *luŋ-a*    *k<sup>h</sup>alam-u-bla*    *aŋ*    *sur-ni*  
 eat-NEG    drink-NEG    do-AFF-if    1SG    who-GEN  
*t<sup>h</sup>ak<sup>h</sup>ai*    *t<sup>h</sup>aŋ-nanui*    *t<sup>h</sup>a-bao-nui.*  
 sake    live-NF    stay-more-INF  
 ‘If you do not eat or drink on a happy day like this, for whose sake I should stay alive **anymore**.’ [WB-499-2.63]
- (43) *aŋ*    *nai-bao-ni,*    *be*    *sak<sup>h</sup>ri-k<sup>h</sup>ou*    *la-nai-ja*  
 1SG    see-more-jus    this    job-ACC    take-NMLZ-NOM  
*ham-guun-na*    *ham-a.*  
 be.good-FUT-DIS    be.good-NEG  
 ‘I will think **more** on whether it is a good idea to take this job or not.’  
 [WB-116-2.92]

Note that *-bao* not only denotes ‘more occurrence of an event’, but also ‘continuation of a state’. Consider example (41) reproduced as (44) below only with relevant portion.

- (44) ... *aŋ-k<sup>h</sup>i*    *sik<sup>h</sup>la-bao*    *nama,*    ...  
 ... 1SG-FOC    young.woman-more    Q    ...  
 ‘Am I still young? [WB-456-2.59]

The utterance in (44) is a rhetorical question about the speaker’s age and the expected answer is ‘No’. The adverbial suffix on the predicate *sik<sup>h</sup>la* ‘young woman’ indicates the continued ‘state of youth’ as the point in question. Example (44) implies that the speaker was young once.

The ‘continued state’ does not have to be a physical state, such as ‘youth’, it can be a state of a particular event. The following example is about ‘the event

of reaching a particular place'. In the past, the state of affair was such that this event was likely to happen. The marking of *-bao* indicates the continuation of that state (that the event is in a position to take place) of the event. The rhetorical question in (45) with a negative expected answer (such as 'Never'), negates this continued state of likelihood of occurrence of the event in the light of the information that the destination is very far.

- (45) *ep<sup>h</sup>a*     *guzan*     *lama-jao*     *nuŋ-lai*     *mabla*  
 so     distant     road-LOC     2SG-polite     when  
*so-hui-bao-nu?*  
 reach-DIST-more-INF  
 'When are you going to reach there, the destination is so far?' (lit. On such a long road, when are you going to reach?) [WB-504-2.82]

So far we have looked at use of *-bao* on the matrix verbs. Below we will look at use of *-bao* on the verbs of non-matrix clauses. First, a verb stem containing *-bao* can be nominalized with *-nai*, and the nominalized clause in turn can be used to modify nouns or used as a complement clause. Consider the following examples.

- (46) *munp<sup>h</sup>rumbu*     *pranto-k<sup>h</sup>ou*     *mak<sup>h</sup>ase*     *porgona*  
 each     area-ACC     many     district  
*eba*     *torop<sup>h</sup>-ou*     *ran-bao-nai*     *za-duŋ-mun.*  
 or     block-LOC     divide-more-NMLZ     happen-RLS-PAST  
 'Each area was **further** divided into districts or blocks.' [WB-718-1.68]

- (47) [*be-zuŋ*     *luguse*     *aŋ*     *buŋ-nu*     *sán-bao-nai*  
 this-COM     along     1SG     say-INF     think-more-NMLZ  
*bat<sup>h</sup>ra-ja*]     *za-bai*     *zerou*     *zouga-nai*     *doŋ*  
 matter-NOM     happen-PRF     where     develop-NMLZ     exist  
*beohai*     *guzun*     *aru*     *roŋza-nai*     *t<sup>h</sup>a-juu.*  
 there     be.satisfied     and     be.happy-NMLZ     stay-HAB  
 'The matter which I was thinking **more** about saying is that where there is development, there is satisfaction and happiness.' [WB-763-2.54]

Sentence (46) has the structure in (48) below, which shows that the verb *za* takes a nominal constituent as a participant, and the sentence means 'X happened', where 'X' can be an event, such as 'dividing', or a state. The verb stem *ran-bao* 'divide-more' is predicator of that nominalized clause.

- (48) [[Nominal constituent]     *za*]



Sentence (47) has the structure in (49), which shows that the verb *za* ‘happen’ takes two constituents – one NP and one finite clause. The NP is headed by *bat<sup>h</sup>ra* ‘matter’ which is being modified by a nominalized clause marked with *-nai*. The verb stem *san-bao* ‘think-more’ is the predicator of that modifying clause and thus bearing the nominalizer *-nai*.

(49) [[NP]            *za*                            [Finite clause]]

The following examples illustrate the use of verb stems with *-bao* in infinitive clauses marked with *-nu*. The *-nu* marked infinitive clauses function as arguments of certain verbs, such as *ha* ‘can’, *naŋ* ‘need’, *naigir* ‘want’, *san* ‘think’, etc. Consider the following examples.

(50) *bisur bara gubao zó-bao-nu há-jak<sup>h</sup>ui-sui.*  
 they much late sit-more-INF can-NEG.PRF-CS  
 ‘They could not sit **more** for long.’ [WB-112.109]

(51) *maba buy-bao-nu naigir-duŋ-mun.*  
 something say-more-INF want-RLS-PAST  
 ‘(He) wanted to say something **more**.’ [WB-787-2.67]

The verb stems *zó-bao* ‘sit-more’ and *buy-bao* ‘say-more’ are part of clauses that function as arguments of the verbs *há* ‘can’ and *naigir* ‘want’ in (50) and (51) respectively. As predicator of those embedded clauses, they take the subordinating suffix *-nu*.

Finally, the following examples illustrate the use of the verb stems with *-bao* in chained clauses marked with the non-final markers *-na* or *-nanui*.

(52) *maba-mabi buy-bao-nanui horbilas-a unŋ<sup>h</sup>ar-laŋ-bai . . .*  
 something-RED say-more-NF PN-NOM get.out-away-PRF  
 ‘Saying something **more**, Horbilas went away.’ [WB-325-11.49]

(53) . . . *dos minit-su gudou-hu-bao-nanui dundia*  
 . . . ten minute-around boil-cause-more-NF coriander  
*hu-nanui k<sup>h</sup>aŋ-naŋ-gou.*  
 give-NF put.down-need-AFF  
 ‘Let (it) boil **more** for around ten minutes, and then put coriander, and then take (it) down.’ [WB-197-2.52]

Example (52) expresses a sequence of two events – event of saying something and then leaving. Example (53) expresses a sequence of three events – events of boiling, putting coriander, and taking down. All events but the final one are coded by non-final clauses marked with *-nanui*. As predicator of non-final

clauses the verb stems *buy-bao* ‘say more’ and *gudou-hu-bao* ‘cause to boil more’ take the non-final markers. Verb stems with *-bao* is also found in various types of Adverbial clauses. However, we think the above discussion of use of *-bao* is sufficient to give a good feel about the use of this Adverbial suffix in various clause types.

**b) *-p<sup>h</sup>in* ‘again’ (glossed as ‘again’)**

In general, this suffix indicates that an event takes place all over again from the beginning or from a certain earlier point. Thus, this suffix adds a sense of repetition of what is considered to be the same event. Thus, there is presupposition that the event took place already in the past. Consider the following examples.

- (54) *mase*            *suima-ja*        *seyday-k<sup>h</sup>ou*        *nu-nanui*        *dose*  
 one                dog-NOM        PN-ACC            see-NF            a.while  
*ner-nanui*        *unao*            *sri*                *t<sup>h</sup>a-p<sup>h</sup>in-duŋ.*  
 snarl-NF        later            quiet            stay-again-RLS  
 ‘A dog saw Sengdang, snarled for a while, and then stayed quiet **again**.’  
 [WB-176-2.7]

The use of *-p<sup>h</sup>in* in (54) indicates that the dog was quiet before it saw Sengdang, and thus the event of staying quiet was repeated by the dog.

Depending on context, we may get a slightly different reading in some cases. Instead of indicating a repetition of the event coded by the verb that carries *-p<sup>h</sup>in*, what it indicates is the repetition of the resultant state of that event as a repeated state of affair. Consider the following example.

- (55) *san-nui-su*        *mao-nanui*        *muzan*            *mun-a-ba*        *zrab*  
 day-two-around    work-NF            good            get-NEG-if        SS  
*gar-p<sup>h</sup>in-guŋ*        *aŋ.*  
 leave-again-FUT    1SG  
 ‘If I do not like (it) after working a few days, I will leave the job **again** instantly.’ [WB-116-2.93]

Example (55) is from a famous Bodo story titled *muihur* ‘Hunting’. The main character Golo utters (55) in which he promises to leave his job of forest guard again, if he does not like it. Example (55) indicates that he left his job at least once in the past. According to the story, however, he was actually fired from his original job and demoted to a forest guard (his current job). One can argue whether ‘getting fired’ and ‘leaving a job’ are ‘same/similar’ or not. But, they certainly have one thing in common, the end result of ‘losing a job’. Therefore, one can interpret *-p<sup>h</sup>in* in (55) as indicating a repetition of the resultant state of the action of leaving a job.

Sometimes with verbs like *p<sup>h</sup>ui* ‘come’, *t<sup>h</sup>aj* ‘go’ and others it is more appropriate to gloss *-p<sup>h</sup>in* as ‘back’, rather than ‘again’. The interpretation of *-p<sup>h</sup>in* in (56) is the same as in (55). Example (56) does not indicate that the people returned to the village at any point in the past prior to the present return. What it indicates is that ‘they were present in the village before and they are present now as a result of the event of their coming back’. Thus, it is ‘the state of their being present’ which is being repeated, not ‘the event of their return’.

- (56) *gami-ni*            *k<sup>h</sup>ár-nai*            *mansi-p<sup>h</sup>ur-a*            *sap<sup>h</sup>a*            *sanui gidiy-na*  
 village-GEN        run-NMLZ            people-PL-NOM        one            two turn-NF  
*p<sup>h</sup>ui-p<sup>h</sup>in-bai-mun.*  
 come-back-PRF-PAST  
 ‘People who ran from the village, some (of them) returned **back**.’  
 [WB-242-14.1]

The above examples illustrate use of verb stems with *-p<sup>h</sup>in* in matrix clauses. This Adverbial suffix can also be used in non-matrix clauses such as nominalized clauses with *-nai*, infinitive clauses with *-nu*, chained clauses with *-na/-nanui*, and in Adverbial clauses of various types. First, the following examples illustrate use of *-p<sup>h</sup>in* in nominalized clauses which function as arguments or nominal modifiers.

- (57) *un-t<sup>h</sup>ij*                    *nai-p<sup>h</sup>in-nai-ni*                    *t<sup>h</sup>ak<sup>h</sup>ai*            *bi-ha*  
 back-towards        look-back-NMLZ-GEN            reason            3SG-POSS  
*arzu*            *zebu-a-nu*            *t<sup>h</sup>a-jak<sup>h</sup>ui-sui.*  
 necessity        any-NOM-FOC        stay-NEG.PRF-CS  
 ‘He did not have any reasons for looking **back**.’ [WB-382-2.136]

The verb stem *nai-p<sup>h</sup>in* ‘look back’ takes the nominalizer *-nai*, which nominalizes the clause *unt<sup>h</sup>ij nai-p<sup>h</sup>in*. The nominalized clause takes a genitive case *-ni* and modifies the relator noun *t<sup>h</sup>ak<sup>h</sup>ai* ‘reason’. The following example illustrates use of verb stems with *-p<sup>h</sup>in* in infinitive clauses.

- (58) *bi-k<sup>h</sup>ou*            *raobu*            *nu-p<sup>h</sup>in-nu*            *mún-ak<sup>h</sup>ui-sui.*  
 3SG-ACC            nobody            see-again-INF            get-NEG.PRF-CS  
 ‘Nobody got to see him **again**.’ [WB-467-2.100]

Finally, the following example illustrates verb stems with *-p<sup>h</sup>in* in clause chaining construction.

- (59) *bisi*            *hab-p<sup>h</sup>in-nai*            *sigaj*            *bud<sup>h</sup>iram-a*  
 wife            enter-back-NMLZ            before            PN-NOM  
*t<sup>h</sup>áj-p<sup>h</sup>in-nanui*            . . .            *undu-p<sup>h</sup>la-nanui*            *t<sup>h</sup>a-ja-sui.*  
 go-back-NF            . . .            sleep-pretend-NF            stay-NEG-CS  
 ‘Before the wife comes back, Budhiram goes **back** (to his bed) and pretends to be asleep.’ [WB-171-2.128]

Note the negative form on the matrix verb, i.e. *t<sup>h</sup>a-ja-sui* ‘did not stay’, actually adds a positive meaning and seems to have effects that are not clear to us at this point.

**c) -gru ‘first’ (glossed as ‘first’)**

This Adverbial suffix indicates that an event takes place before some other event. Thus, it presupposes that there are multiple events that may take place. Consider the following example.

- (60) *agui*            *suress*            *zirai-t<sup>h</sup>o-de.*            *ro*            *aj*            *saha*  
 brother            PN            rest-a.while-IMP            wait            1SG            tea  
*p<sup>h</sup>uduŋ-hui-gru-ni.*  
 make-DIST-first-JUS  
 ‘Brother Suresh, rest for a while. Wait, I will make tea **first**.’  
 [WB-456-2.43]

- (61) . . . *gubaj*            *sejra-sik<sup>h</sup>la-ja*            *d<sup>h</sup>on-doulot*  
 . . . many            young.man-young.woman-NOM            money-property  
*mohor-musri-k<sup>h</sup>ou-su*            *nai-gru-ju.*  
 appearance-RED-ACC-FOC            look-first-HAB  
 ‘Many young people look at wealth and appearance **first**.’ [WB-112-2.13]

Example (60) states that event of making tea will precede another event, namely talking. Example (61) is talking about priority of young people, what they pay attention to first and what next.

This Adverbial suffix is also found in various types of non-matrix clauses. Example (62) illustrates use of verb stems with *-gru* in a nominalized clause. The expression in (62) is commonly used in personal letters, which generally starts by wishing people love. Example (63) illustrates use of verb stems with *-gru* in infinitive clauses and example (64) in chained clauses.

- (62) *aj-ni*            *gurbui-ni*            *bibar*            *báo-hor-gru-nai-k<sup>h</sup>ou*  
 1SG-GEN            heart-GEN            flower            offer-DIST-first-NMLZ-ACC  
*nazao-du.*  
 accept-IMP  
 ‘Please accept the love that I am sending **first** of all.’ [WB-589-3.1]

- (63) *mat<sup>hu</sup> hu-gru-nu mun-a.*  
 voice give-first-INF get-NEG  
 ‘(You) should not speak **first**.’ or ‘(You) are not allowed to speak first.’  
 (lit. You do not get to give your voice first.) [WB-112-2.53]
- (64) *aroz k<sup>h</sup>alam-gru-nanui-su suluŋ-nai p<sup>h</sup>ari*  
 prayer do-first-NF-FOC learn-NMLZ activity  
*la-naŋ-gou.*  
 take-need-AFF  
 ‘We should take/start learning activity, after doing the prayer **first**.’  
 [WB-255-24.4]

**a) -*t<sup>h</sup>o* ‘for the time being’ (glossed as ‘a.while’)**

This Adverbial suffix indicates that something is/remains true till a certain point of time and that no claim is made about its validity beyond that point of time.

- (65) *k<sup>h</sup>ap<sup>h</sup>al-a muzaŋ be t<sup>h</sup>agida-jao zuŋ*  
 forehead-NOM good this pressure-LOC we  
*gui-t<sup>h</sup>o-a.*  
 not.exist-a.while-NEG  
 ‘(We) are lucky that we are not under this pressure **currently**.’  
 [WB-932-2.19]

In (65) the state of us not being under pressure is true up till the time of speaking. The Adverbial suffix *-t<sup>h</sup>o* indicates that the speaker is not making any claim if this will continue to be true in the future. Similarly, in (66) the speaker is claiming that his sister-in-law continues to have certain old habits, but he is not claiming that this will continue in the future beyond the time of his speech.

- (66) *guzam ak<sup>h</sup>ut<sup>h</sup>ai-k<sup>h</sup>ou-nu baogar-nu*  
 old habit-ACC-FOC forget-INF  
*há-t<sup>h</sup>o-ak<sup>h</sup>ui.*  
 can-a.while-NEG.PRF  
 ‘(She) has not been able to get rid of the old habits **yet**.’ [WB-456-2.39]

A very close but slightly different sense of *-t<sup>h</sup>o* is that an event takes place for a little while, not long. In (67) the sister-in-law asks her brother-in-law to rest a while, while she makes tea. In (68) the speaker asks the addressee to wait for his grandfather for a while.

- (67) *agui sures zirai-t<sup>ho</sup>-dui, ro ay saha*  
 brother PN sit-a.while-polite hold.on 1SG tea  
*p<sup>h</sup>uduj-hui-ni.*  
 make.hot-DIST-JUS  
 ‘Brother Sures, sit **for a while**. Wait, I will go and make tea.’  
 [WB-456-2.47]

- (68) *numbou-k<sup>h</sup>ou nuη-nu ne-t<sup>ho</sup>-du.*  
 2SG.grandfather-ACC 2SG-FOC wait-a.while-IMP  
 ‘You wait for your grandfather **a while**.’ [WB-504-2.62]

The following examples illustrate use of verb stems containing *-t<sup>ho</sup>* in non-matrix clauses. Example (69) illustrates use of verb stems containing *-t<sup>ho</sup>* in a nominalized clause which functions as a complement of the verb *za*. Example (70) illustrates use of verb stems containing *-t<sup>ho</sup>* in an infinitive clause that functions as an argument of the verb *naη* ‘need’. Example (71) illustrates use of *-t<sup>ho</sup>* in a chained clause.

- (69) *zubb-nai-ou ma lir-bao-nu dinui bek<sup>h</sup>ini-ou-nu*  
 end-NMLZ-LOC what write-more-INF today this.point-LOC-FOC  
*k<sup>h</sup>ulum-k<sup>h</sup>ou dik<sup>h</sup>ay-t<sup>ho</sup>-nai za-bai.*  
 pen-ACC put.down-a.while-NMLZ happen-PRF  
 ‘At the end, what else am I going to write? Today (I) am going to put down my pen **for the moment**.’ [WB-558-3.1]

- (70) *emp<sup>h</sup>ou enla-k<sup>h</sup>ou-buu zá-t<sup>ho</sup>-nuu naη-a.*  
 insect-ACC-also eat-a.while-INF need-NEG  
 ‘(You) should not also eat insects **for the time being**.’ [WB-290-40.3]

- (71) *gubun habahuk<sup>h</sup>a-k<sup>h</sup>ou duun-t<sup>ho</sup>-nanui*  
 other activity-ACC keep-a.while-NF  
*p<sup>h</sup>orai-nai-ou gusu p<sup>h</sup>o-zo-nai.*  
 read-NMLZ-LOC mind cause-sit-polite  
 ‘Putting hold to other activities **for a while**, pay attention to your study.’  
 [WB-765-2.29]

#### b) *-zen* ‘just starting’ (glossed as ‘start’)

In a matrix clause, this Adverbial suffix adds the sense that the event of the main verb is just starting to take place. In other words, what this suffix indicates is that the event is in its very early stage. This suffix is used in contexts in which people want to convey that (i) it has not been very long since the event has started, and/or (ii) the event is still in an early/premature stage. Thus, often this suffix is found in expressions that people use to convey an excuse for their ina-

bility to do something. For instance, people may say ‘I do not know the answer yet, because I just started to read the book.’ The suffix *-zen* will be used on the verb for ‘read’ to indicate that reading is at a very early stage. There is, however, the entailment that the event has begun or would have begun by a certain point of time.

(72) *dasu*            *p<sup>h</sup>orai-nu*            *la-zen-duŋ.*  
 just.now          study-INF            take-start-RLS  
 ‘(I) am just starting to study (it). [WB-557-2.14]

(73) *saon*                    *dan-a*                    *hab-zen-duŋ-lo-suu-mun.*  
 month.name          month-NOM            enter-start-RLS-only-FOC-PAST  
 ‘The month of Saun barely started.’ [WB-254-35.1]

(74) *geolang*          *mel-a*                    *zagai-zen-bai.*  
 opening            ceremony-NOM            begin-start-PRF  
 ‘The opening ceremony has started.’ (i.e. starting to begin) [WB-79-2.171]

The sentence in (72) is used as an excuse for not having enough knowledge on a journal, saying that the speaker has not read enough of the journal because he just started. Sentence (73) is used in a context in which the speaker is talking about early rain. It has not been very long when the month of Saun started and the rain started pouring. Sentence (74) is used like a live commentary where the speaker is describing what is happening in front of him. He is describing as things happen.

In a non-matrix clause, *-zen* may have an additional sense of ‘in the beginning of an event’. First, the following example illustrates verb stems with *-zen* in a nominalized clause.

(75) *bi-ju*                    *monzu-k<sup>h</sup>ou-bu*          *skul-ou*            *nu-zen-nai-ni-p<sup>h</sup>rai-nu*  
 3SG-NOM            PN-ACC-also            school-LOC          see-start-NMLZ-GEN-since-FOC  
*gusu*                    *t<sup>h</sup>u-k<sup>h</sup>uma-duŋ.*  
 mind                    suffice-secretly-RLS  
 ‘He has loved Manju ever since he saw her **first time**.’ [WB-325-14.54]

In (75) the experiencer falls in love first time he sees the woman. That the event of falling in love takes place in the beginning of his acquaintance with the girl is indicated by *-zen*. It of course implies that he saw her many times later. Examples (76) and (77) illustrate verb stems containing *-zen* in infinitival clauses and non-final clause respectively.

- (76) *be suzug-ou-nuu bi-suur-u gao-suur-ni*  
 this opportunity-LOC-FOC 3-PL-NOM self-PL-GEN  
*p<sup>h</sup>len-p<sup>h</sup>ur-k<sup>h</sup>ou zagai-zen-nuu sán-bai.*  
 plan-PL-ACC start-start-INF think-PRF  
 ‘They are thinking about **starting** to actualize their plans at this opportunity.’ [WB-752-2.42]

- (77) *t<sup>h</sup>asari-ni t<sup>h</sup>ak<sup>h</sup>ai oronbari-ni-p<sup>h</sup>rai*  
 environment-GEN sake forest-GEN-from  
*hóm-zen-nanui labu-nai muider . . .*  
 catch-start-NF bring-NMLZ elephant  
 ‘An elephant **just** caught and then brought from the forest for the sake of environment . . .’ [WB-647-2.16]

In (77) *-zen* adds the sense that **it has not been long since** the elephant has been caught, and when it was still fresh it was brought elsewhere.

The meaning we have seen in a matrix clause is that an event is just starting. This meaning seems to make *-zen* incompatible with instantaneous events, such as ‘slap’, ‘sit’, etc. Thus, the following examples do not sound right to us.

- (78) *\*aŋ bi-k<sup>h</sup>ou suba-zen-bai.*  
 1SG 3SG-ACC slap-start-PRF
- (79) *\*bi da-suu zó-zen-duŋ.*  
 3SG now-FOC sit-start-RLS

### c) *-hay* ‘about to’ (glossed as ‘about.to’)

This suffix adds the sense that the event of the verb is about to start. However, it does not necessarily entail that the event actually takes place. Consider the following examples.

- (80) *sansu-ni uŋk<sup>h</sup>am zá-nuu zó-hay-t<sup>h</sup>ar-duŋ-lo-mun.*  
 noon-GEN rice eat-PURP sit-about.to-really-RLS-only-PAST  
 ‘(We) were really **about to** sit down to eat lunch.’ [WB-242-5.27]
- (81) *k<sup>h</sup>anai-ja duŋ-p<sup>h</sup>a duŋ-nui-lo mun-hay-duŋ.*  
 hair-NOM CL-one CL-two-only become.gray-about.to-RLS  
 ‘The hair is **starting to** go gray just a few.’ [WB-175-2.93]

Example (80) describes a situation in which the speakers were about to sit (but did not in this context) when people started running in the street. Example (81) describes a situation in which hair is about to go gray. In this situation of course there has to be some gray hair for one to be able to say that sentence.



This Adverbial suffix may look similar to *-zen* ‘just starting’ sometimes, as in (81), but they are not always interchangeable. Suffix *-zen* entails that the event takes place, while suffix *-hay* does not. This explains why *-hay* cannot be used in (77) above. Example (77) expresses a sequence of two events, catching and then bringing an elephant. In this context, the later event of ‘bringing’ presupposes the event of ‘catching’ takes place. If we mark verb ‘to catch’ with *-hay*, it wouldn’t entail that the elephant has been caught. Therefore, the semantic content of the second clause (i.e. bringing the elephant) would be odd (since one cannot bring something if one has not got it in one’s hand already).

The suffix *-hay* stands out from the rest of the Adverbial suffixes for it changes the behavior of the resulting verb stem, such that the *-hay* marked verb stem is used in ways in which verb stems are not generally used. First, a verb stem with *-hay* can be used in a non-matrix clause without taking any of the non-finite suffixes. For instance, a *-hay* marked verb stem can occur in a complement clause of a *za* construction without taking the nominalizer *-nai*. Compare the following examples.

- (82) *komoli basumotari-k<sup>h</sup>ou lak<sup>h</sup>i-p<sup>h</sup>in-nai za-ju.*  
 PN PN-ACC keep-again-NMLZ happen-HAB  
 ‘Komoli Basumatari has been kept again (in the previous position).’  
 [WB-212-2.30]

- (83) *dor-k<sup>h</sup>ou k<sup>h</sup>ey-hay za-ju.*  
 door-ACC open-about.to happen-HAB  
 ‘(He) was about to open the door.’ [WB-137-19.2]

Verb stems like *lak<sup>h</sup>i-p<sup>h</sup>in* ‘keep-again’ requires the nominalizer *-nai* in order to occur in the complement clause of the verb *za* ‘happen’, as in (82), whereas verb stems containing *-hay* does not take/allow the nominalizer on the verb stem in the same construction, as in (83).

Another way in which a *-hay* marked verb stem behaves in an atypical manner is that the case markers like *-ou* ‘locative’ can be directly attached to the verb stem, without requiring a nominalizer in between. Compare the following examples.

- (84) *beseba gubao raizlai-bai bi-sur zenla*  
 how.much late talk-PRF 3SG-PL scaffold  
*mún-hay mún-hay-ou.*  
 reach-about.to reach-about.to-LOC  
 ‘They talked for a long time near the scaffold.’ [WB-493-2.127]

- (85) *nat<sup>h</sup>ai*      *p<sup>h</sup>ui-p<sup>h</sup>in-nai-ou*      *razd<sup>h</sup>ani*      *tren-zuŋ*  
 but              come-back-NMLZ-LOC      PN              train-INST

*p<sup>h</sup>ui-guŋ.*  
 come-FUT

‘But, when we will come back, (we) will come by Rajdhani train.’  
 [WB-618-5.31]

The expression *mún-haŋ mún-haŋ* and *p<sup>h</sup>ui-p<sup>h</sup>in*, both containing Adverbial suffixes, are marked with the locative case marker *-ou*, in (84) and (85). However, the former does not allow the nominalizer *-nai* between the verb stem and the locative marker, whereas the latter requires it. Moreover, note that verb stems with *-haŋ* allow reduplication as in (84) above and (86) below, which verb stems with other Adverbial suffixes do not allow.

- (86) *raŋrasi-ja*      *gab-haŋ*      *gab-haŋ*      *za-ju.*  
 PN-NOM      cry-about.to      cry-about.to      happen-HAB

‘Rangrasi was **about to** cry.’ [WB-168-2.184]

A final non-verb-like behavior of verb stems with *-haŋ* is that they can be used as a predicate without any finite morphemes on them, as illustrated below. A necessary condition is that they need to be in reduplicated form. Structurally, the following clauses are pretty much like Adjectival/Nominal predicate clauses, which also do not require any of the verbal morphology.

- (87) *orga-ja*      *bihari*      *laŋ-haŋ*      *laŋ-haŋ*  
 PN-NOM      second.wife      take.away-about.to      take.away-about.to

‘Orga is **about to** take a second wife.’ [WB-168-2.33]

- (88) *t<sup>h</sup>eubu*      *t<sup>h</sup>embairam-a*      *t<sup>h</sup>áŋ-haŋ*      *p<sup>h</sup>ui-haŋ.*  
 still      PN-NOM      go-about.to      come-about.to

‘Thembairam is still impatient (moving to and fro).’ [WB-76-2.112]

Example (88) does not really have a reduplicated verb stem. Rather it consists of two related verbs (opposites or negated). These kinds of expressions of related verbs with *-haŋ* on them expresses a sense of hesitation or indetermination. A similar expression is (89) below. The expression *buŋ-haŋ* ‘say-about to’ and its negated version *buŋ-a-haŋ* ‘say-not-about to’ expresses indetermination.

- (89) *obla-su*      *buŋ-haŋ*      *buŋ-a-haŋ*      *buŋ-nu*  
 then-FOC      say-about.to      say-not-about.to      say-INF

*nagir-uu*      *sumbuur-a.*  
 want-HAB      PN-NOM

‘Only then, Swmbwr was willing to say (it) **hesitantly**.’ [WB-493-2.156]

The negation in general follows all Adverbial suffixes including *-hay*, but in (89) the negative marker precedes *-hay*. Thus, the *-hay* expression in (89) is somehow idiomatic and fixed.

Most of the above discussion highlights the non-verb-like use of the verb stems with *-hay* in various types of clauses. The following shows the ordinary verb-like use, like any other Adverbial suffix, of *-hay*. Example (90) illustrates verb stems with *-hay* in nominalized clauses, example (91) in infinitive clauses, and example (92) in chained clauses.

- (90) *gari-ja kʰár-nu la-hay-nai som-ou-nnu sanui*  
 vehicle run-INF take-about.to-NMLZ time-LOC-FOC two  
*hoa hinzao-a zirai-pʰui-duŋ.*  
 man woman-NOM sit-come-RLS  
 ‘At the time when the vehicle was **about to** start, two man and woman came and sat.’ [WB-776-2.9]

- (91) *sukʰu dukʰu-kʰou sán-hay-nu ruŋ-hay-bai.*  
 happiness sadness-ACC think-about.to-INF know-about.to-PRF  
 ‘(S/he) is **starting** to learn to think about emotions.’ [WB-226-19.2]  
 [Modified]

- (92) *sni-san-su-ni unou daumuina-ja ese muzaj*  
 seven-day-around-GEN later mynah-NOM little good  
*za-hay-nanui epʰa epʰa adar zá-nu hóm-nai-sui.*  
 happen-about.to-NF little RED food eat-INF start-NMLZ-CS  
 ‘About seven days later, **starting to** feel little better, the mynah started to eat some food.’ [WB-923-23-2.45]

#### **d) -pʰu ‘take a momentum’ (glossed as ‘take.momentum’)**

This Adverbial suffix indicates that an event is just taking a momentum. This presupposes that the event is ongoing and the participants of the events are just starting to get ‘busy’ participating in the event. Consider the following examples.

- (93) *obla hatʰa kʰúr-gun-ni uŋkʰam sóŋ-nu*  
 then wedding.type-FUT-GEN rice cook-INF  
*lahar pʰahar kʰalam-pʰu-duŋ.*  
 arrangement RED do-take.momentum-RLS  
 ‘Then, (they) were starting to **get busy** preparing to cook rice for the wedding (a special type).’ [WB-504-2.75]

- (94) *be som-ao mulug daoha za-p<sup>hu</sup>-t<sup>har</sup>-duy.*  
 this time-LOC world war happen-take.momentum-really-RLS  
 ‘At that time, world war really started to **take a momentum.**’  
 [WB-192-9.23] [modified]

Example (93) describes a situation when people were getting busy cooking food as a part of the preparation for the wedding. Example (94) describes a point of time when the world war took a momentum.

The following examples illustrate use of verb stems with *-p<sup>hu</sup>* in non-matrix clauses. Example (95) shows their use in nominalized clauses, and example (96) in non-final clauses. No instance of verb stems containing *-p<sup>hu</sup>* being used in infinitive clause is found, but we believe it is just a gap.

- (95) *zúy-p<sup>hu</sup>-nai ór-ni sá-jao gar-sum-bai.*  
 burn-take.momentum-NMLZ fire-GEN on-LOC put-submerge-PRF  
 ‘(He) put (him) on fire that was burning **up.**’ [WB-739-5.6]

- (96) *p<sup>h</sup>agladia ser-ni k<sup>h</sup>asi bibar-a*  
 PN bank-GEN plant.type flower-NOM  
*bar-p<sup>hu</sup>-nanui siri-bai.*  
 bloom-take.momentum-NF fall-PRF  
 ‘Khasi flowers at the Pagladia river bank bloomed **a lot** and then fell.’  
 [WB-256-29.1]

In example (95) the verb stem *zúy-p<sup>hu</sup>* with the nominalizer *-nai* modifies the noun *ór* ‘fire’ describing that the fire was just burning up. Example (96) describes the flower on a river bank, which bloom up and then fall.

#### e) *-bay* ‘much’ (glossed as ‘much’)

This Adverbial suffix indicates that an event is taking place with greater frequency. This adverbial suffix is restricted to negative sentences. Thus, the utterances actually mean that something does not take place much or frequently.

- (97) *bi-sur ak<sup>h</sup>olk<sup>h</sup>ant<sup>h</sup>i mani-nanui k<sup>h</sup>amani mao-nai-ni*  
 3SG-PL manners obey-NF work do.work-NMLZ-GEN  
*huda-k<sup>h</sup>ou nu-bay-a.*  
 habit-ACC see-much-NEG  
 ‘(We) do not see their habits of working following good manners **much.**’  
 [WB-648-2.49]

- (98) *lumza-nai mansi-ja gulumdui uy<sup>h</sup>k<sup>h</sup>ar-bay-a.*  
 fever-NMLZ person-NOM sweat get.out-much-NEG  
 ‘People with fever do not sweat **much.**’ [WB-371-6.52]

Verb stem with *-bay* are also restricted in non-matrix clauses. Subordinate clauses that do not allow a negation cannot have *-bay* on their verb stem. Thus, we do not find verb stems with *-bay* in nominalized clauses with *-nai*, infinitive clauses, and chained clauses. We find *-bay* in non-matrix clauses that allow negation of the subordinate clause, as shown below.

- (99) *nun*            *p<sup>h</sup>ui-bay-ui-k<sup>h</sup>ai*            *ai-ja*            *som-som*  
 2SG            come-much-NEG-because            mother-NOM            time-RED  
*gab-bai*        *t<sup>h</sup>a-ju*.  
 cry-PROG      AUX-HAB  
 ‘Because you do not come here **often**, mother keeps crying from time to time.’ [WB-839-72.3]

- (100) *nat<sup>h</sup>ai*        *k<sup>h</sup>uma-ja*        *bara*            *k<sup>h</sup>una-bay-ui-lai*  
 since            ear-NOM            much            hear-much-NEG-because  
*urui-nu*        *k<sup>h</sup>una-duŋ*        *sán-na*        *sik<sup>h</sup>ar-ak<sup>h</sup>ui-sui*.  
 casual-ADVZ    hear-RLS            think-NF        get.up-NEG.PRF-CS  
 ‘Since (I) do not hear **well**, (and) thinking that I misheard, I did not get up.’ [WB-494-2.38]

Reason adverbial clauses, marked with subordinator *-k<sup>h</sup>ai* in (99) and *-lai* in (100), allow negation with *-ui*, and thus *-bay* can be used in such clauses.

#### f) *-t<sup>h</sup>ar* ‘really’ (glossed as ‘really’)

Unlike many other Adverbial suffixes, *-t<sup>h</sup>ar* is used on verbal as well as non-verbal predicates. *-t<sup>h</sup>ar* expresses a certain state of speaker’s mind. It indicates that a speaker has a firm belief on the truth condition of his/her statement. The following examples illustrate *-t<sup>h</sup>ar* on Adjectival predicate clauses.

- (101) *but<sup>h</sup>ur-a*        *zubur*            *gusu-t<sup>h</sup>ar*.  
 weather-NOM      lot                cold-really  
 ‘The weather is **really** very cold’ [WB-743-2.46]
- (102) *gubay-t<sup>h</sup>ar*        *nama?*  
 lot-really            Q  
 ‘Is it **really** a lot?’ [WB-211-143.3]
- (103) . . . *boibu*    *soman*        *munt<sup>h</sup>ai*        *mún-nai-a*        *gunay-t<sup>h</sup>ar*.  
 . . . all            equal            right            get-NMLZ-NOM    necessary-really  
 ‘. . . That everyone gets equal right is **really** necessary.’ [WB-452-6.7]

In (101), the speaker expresses his firm believe that the state that the weather is very cold is true to his knowledge. Similarly, in (102) the speaker questions whether the addressee has a firm believe on the state that the addressee is very

ill. Example (103) expresses a firm belief on the necessity of equal right. The following examples illustrate *-t<sup>h</sup>ar* on Nominal predicate clause.

- (104) *gudu be bursi ser ser boro*  
 past this PN bank RED PN  
*gami-lo-t<sup>h</sup>ar-mun.*  
 village-only-really-PAST  
 ‘In the past, (those) were **really** all Boro villages on the bank of the Bwrsi river.’ [WB-112-2.82]

- (105) *aj k<sup>h</sup>ibroma-t<sup>h</sup>ar na?*  
 1SG dung.beetle-really Q  
 ‘Am I **really** a dung beetle?’ [WB-816-2.94]

In (104) the speaker is trying to convince his listeners of a past state by expressing his firm belief that that past state (there were all Bodo villages) was true to his knowledge. Example (105) questions how strongly the addressee believes the fact that ‘he is a dung beetle’? The following example illustrates *-t<sup>h</sup>ar* in existential clause.

- (106) *san-a gui-t<sup>h</sup>ar-lja.*  
 sun-NOM not.exist-really-not.anymore  
 ‘The sun is not there at all **anymore**.’ [WB-112-2.110]

In verbal predicate clauses *-t<sup>h</sup>ar* indicates the speaker’s strong belief on whether an event does or does not happen, did or did not take place, or should or should not take place. Consider the following examples.

- (107) *be baigor muider-k<sup>h</sup>ou saza*  
 this disobedient elephant-ACC punishment  
*hu-t<sup>h</sup>ar-naŋ-gun.*  
 give-really-need-FUT  
 ‘(We) will have to **really** punish this disobedient elephant.’ [WB-666-3.2]

- (108) *aj k<sup>h</sup>ár-baibai-nu t<sup>h</sup>in-t<sup>h</sup>ar-duŋ-mun.*  
 1SG run-similar-INF ask-really-RLS-PAST  
 ‘I **did** ask him to run or do something like that.’ [WB-242.5.31]

- (109) *uzunhai pulis-p<sup>h</sup>ur-a-bu lama-sim*  
 this.way police-PL-NOM-also road-till  
*sop<sup>h</sup>ui-t<sup>h</sup>ar-bai.*  
 reach-really-PRF  
 ‘On the other hand, the police also have **really** arrived on the gate.’  
 [WB-242-5.29]

Example (107) indicates that the speaker believes that there is a real necessity to punish the elephant, that the punishment should take place. Example (108) is used to convey that the event of requesting to run did take place. Example (109) conveys that the police's arrival is real enough (implying that now they should run), although the police have not arrived in reality in that context. All of them express the sense that the speaker has a firm believe that the event must take place (in 107), or did take place (in 108 and 109).

The following examples illustrate use of verb stems with *-t<sup>h</sup>ar* in non-matrix clauses. Example (110) illustrates use of *-t<sup>h</sup>ar* in nominalized clauses, example (111) in infinitive clause, and example (112) in chained clauses.

- (110) *zubb-t<sup>h</sup>ar-nai-ou*      *muidar-a*      *t<sup>h</sup>ui-nuu*      *gunanɔŋ*  
 end-really-NMLZ-LOC      elephant-NOM      die-INF      necessary  
*za-duŋ-mun.*  
 happen-RLS-PAST  
 'At the **very end**, the elephant had to die.'  
 (lit. When it was **really** coming to an end, . . .) [WB-666-3.32]

- (111) *mugol*      *sant<sup>h</sup>ri-p<sup>h</sup>ur-a*      *nat<sup>h</sup>ai*      *mewar-k<sup>h</sup>ou*      *dok<sup>h</sup>ol*  
 PN      soldier-PL-NOM      but      PN-ACC      occupy  
*k<sup>h</sup>alam-t<sup>h</sup>ar-nuu*      *há-jak<sup>h</sup>ui-mun.*  
 do-really-INF      can-NEG.PRF-PAST  
 'But, the Mugol soldiers could not **really** occupy Mewar.' [WB-715-1.20]

- (112) *no-sim*      *t<sup>h</sup>áŋ-t<sup>h</sup>ar-nanui*      *dodore-mun-ni*      *no-ao*  
 house-till      go-really-NF      PN-PL-GEN      house-LOC  
*k<sup>h</sup>obor*      *la-hui-nai-ja-nu*      *ham-gun*      *sán-nanui*  
 news      take-DIST-NMLZ-NOM-FOC      be.good-FUT      think-NF  
*agan sur-u.*  
 set.out-HAB  
 'Thinking that it will be better to **really** go to Dodore's house and see how she is doing at home, (he) sets out.' [WB-116-2.197]

### **g) -mar 'for real' (gloss 'for.real')**

This Adverbial suffix also occurs on both non-verbal and verbal predicate clauses. It also expresses a state of speaker's mind. It indicates that the speaker used to have an assumption which is opposite of or different from the one expressed by the *-mar* marked utterance. Thus, utterances containing *-mar* expresses a corrected assumption or belief.

The following demonstrates use of *-mar* in non-verbal clauses. In (113) *-mar* occurs with an adjective *onsuli* 'affectionate' and indicates the speaker now believes his sister-in-law to be affectionate. Example (113) has an implica-

ture that the speaker did not believe his sister-in-law to be affectionate. In (114) *-mar* occurs with a nominal predicate *bangal* ‘Banladeshi’ and expresses the idea that now the speaker believes or it is clear in general that the thief was indeed a Bangladeshi. In (115) *-mar* is used with a negative existential copula and expresses a question regarding how strongly does the addressee believe the state that ‘there is no new year festival’, which is against the prior believe that ‘there is a new year festival’.

(113) *t<sup>h</sup>aruinu*      *bazui-ja*                      *onsuli-mar.*  
 truly                  sister.in.law-NOM                  loving-for.real  
 ‘(My) sister-in-law is **truly** affectionate.’ [WB-456-2.63]

(114) *sik<sup>h</sup>ao-a*                  *bidibla*                  *bangal-mar.*  
 thief-NOM                  then                  Bangladeshi-for.real  
 ‘Then, the thief is **really** a Bangladeshi.’ [WB-176-2.65]

(115) *gui-mar-lia*                                      *humbla*  
 not.exist-for.real-any.more                  then  
*boro-ni-ao*                  *buisagu-a?*  
 Bodo-GEN-LOC                  PN-NOM  
 ‘Then, the Bodo people do not really have Bwisagw festival anymore?’  
 [WB-48-3.13]

The following illustrates use of *-mar* in verbal clauses. Example (116) implies that the speaker was dubious about the prediction of the fortune teller, but now he is convinced that he was wrong and the fortune teller did predict right. Similarly (117) implies that the speaker had a belief that physically disadvantaged people also lack ideas, but his addressee proves him wrong.

(116) *gonok*                  *t<sup>h</sup>akur-a*                  *suit<sup>h</sup>u-k<sup>h</sup>ou-nu*  
 fortune.teller                  PN-NOM                  truth-ACC-FOC  
*buη-mar-duη.*  
 say-for.real-RLS  
 ‘Fortune teller Thakur **actually** told the truth.’ [WB-55-5.14]

(117) *sala*                  *ruη-mar-t<sup>h</sup>ar-gou-lui*                                  *nuη-u*  
 cursing                  know-for.real-really-AFF-INFOR                  2SG-NOM  
*k<sup>h</sup>ongga-bla-bu.*  
 handicapped-if-also  
 ‘Sala, even if you are physically disadvantaged, you **really** know stuff.’  
 [WB-211-296.2]



The following examples illustrate the use of *-mar* in non-matrix clauses. Example (118) illustrates use of *-mar* in nominalized clauses, example (119) in infinitive clause, and example (120) in chained clauses.

- (118) *bi-suur zoipur-ou-nuu t<sup>h</sup>áj-mar-nai za-si-guun.*  
 3-PL PN-LOC-FOC go-for.real-NMLZ happen-about.to-FUT  
 ‘They are going to go to Zoipur for real.’ [WB-618-24.18]

- (119) *aŋ-k<sup>h</sup>ou be gami-ni p<sup>h</sup>rai danu*  
 1SG-ACC this village-GEN from instantly  
*huuk<sup>h</sup>ar-hor-mar-nuu sán-bai.*  
 send.away-DIST-for.real-INF think-PRF  
 ‘(They) thought about throwing me out of the village **for real**.’  
 [WB-327-3.74]

- (120) *aŋ sop<sup>h</sup>ui-mar-na sombaidi mún-laŋ-ba-t<sup>h</sup>o ham-gou.*  
 1SG reach-for.real-NF timely get-away-if-FOC be.good-AFF  
 ‘If I arrive for real and get (the good) on time, (that) would be good.’  
 [WB-774-2.37]

#### **h) -hab ‘be deeply involved’ (glossed as ‘immerse’)**

This suffix indicates that the agent/experiencer is intensely involved in an event, such that s/he finds himself/herself lost in the event momentarily. It is used to describe a limited number of events, such as ‘looking’, ‘paying attention’, ‘sleeping’, ‘exhaustion’, ‘crying’, ‘getting lost’, etc. Consider the following example.

- (121) *p<sup>h</sup>uŋ-ni saha kap-k<sup>h</sup>ou ak<sup>h</sup>ai-ou la-nanui*  
 morning-GEN tea cup-ACC hand-LOC take-NF  
*radab bilai-ou gusu hu-hab-duŋ-muun aŋ.*  
 news paper-LOC mind give-immerse-RLS-PAST 1SG  
 ‘Taking the morning tea in my hand, I paid attention to the newspaper.’  
 [WB-401-3.2]

- (122) *raga zúŋ-na k<sup>h</sup>aolai-ja guza za-hab-duŋ.*  
 anger light-NF cheek-NOM red happen-immerse-RLS  
 ‘The cheeks became intensely red in anger.’ [WB-201-2.78]

The Adverbial suffix *-hab* describes the action of paying attention intensely in (121) and change of color to higher intensity in (122). It describes a sound sleep in (123) and engaging in work intensely in (124) below.

- (123) *bi*      *dania*      *aj-ni*      *zanzi-ou*      *gudu-gudu*  
 3SG      now      1SG-GEN      lap-LOC      SS-RED

***undu-hab-duṅ.***

sleep-immersed-RLS

'He is now sleeping **fast** on my lap.' [WB-784-2.59]

- (124) *bi-ju*      *k<sup>h</sup>amani-ou*      ***naṅ-hab-bai.***  
 3SG-NOM      work-LOC      engage-immersed-PRF

'He engaged himself **intensely** in the work.' [WB-784-2.65]

Use of verb stems containing *-hab* in non-matrix clauses is shown below. Example (125) illustrates use of verb stems with *-hab* in nominalized clauses, example (126) in infinitive clause, and example (127) in chained clause.

- (125) *saon-ni*      *ok<sup>h</sup>ap<sup>h</sup>ur*      ***zó-hab-nai***      *hor.*  
 PN-GEN      moon      sit-immersed-NMLZ      night

'(That was) a night in the month of Saon in which the moon sits **tight** (and thus appear late in the sky).' [WB-168-2.67]

- (126) *bima-ja*      *hemlet-ni*      *mohor*      *nu-nanui*  
 mother-NOM      PN-GEN      appearance      see-NF

***sán-hab-nu***      *hóm-bai.*  
 think-immersed-INF      catch-PRF

'Seeing Hamlet's appearance, the mother started to think **deeply**.'  
 [WB-751-2.26]

- (127) *maba-mabi*      ***sán-hab-nanui***      *harsiṅ-nu*  
 something-RED      think-immersed-NF      alone-ADVZ

*sit<sup>h</sup>la-ou*      *beseba*      *gubao*      *zó-na*      *t<sup>h</sup>a-bai.*  
 yard-LOC      how.long      late      sit-NF      stay-PRF

'Thinking **deeply** about things, he kept sitting on the yard for a long time.'  
 [WB-504-2.134]

### i) *-p<sup>h</sup>am* 'do something to improve it' (glossed as 'improve')

In general *-p<sup>h</sup>am* adds a sense of doing something to improve or get good or better result. A sense of repetition is often found in sentences with *-p<sup>h</sup>am*. However, this does not seem to be a part of the semantics of *-p<sup>h</sup>am*. It is probably due to the fact that when we make improvements, we do so over our past performances, which entails a multiple repetition of the same event. Consider the following examples that show the sense of repetition is not always there.

- (128) *baizui-ou*      *hap<sup>h</sup>aj-ni*      *rao-k<sup>h</sup>ou*      *k<sup>h</sup>una-bao-nanui*  
 outside-LOC      PN-GEN      voice-ACC      hear-more-NF  
*súŋ-p<sup>h</sup>am-hor-nai-sui,*      ‘*san*      *zou-bai*      *nama*  
 ask-improve-DIST-NMLZ-CS      sun      grow-PRFQ  
*hap<sup>h</sup>aj?’*  
 PN  
 ‘Hearing more of Haphang’s voice outside, (he) asked **to confirm**, ‘Is the sun up, Haphang?’ [WB-280-6.3]

- (129) *be-ou*      *hisri*      *guba*      *sum-nanui*      *seb-nanui*  
 that-LOC      clothe      thin      dip-NF      squeeze-NF  
*hu-p<sup>h</sup>am-naj-gou.*  
 rub-improve-need-AFF  
 ‘Dipping a thin cloth there, squeezing it, (you) should rub (him) **to make (him) better.**’ [WB-289-58.4]

In example (128), the speaker wakes up in the morning and is not sure if it is already morning. He asks his friend Haphang to confirm that the sun was already up. In (129) the speaker is rubbing an ill person with wet cloth to make him feel better.

The following examples illustrate use of verb stems with *-p<sup>h</sup>am* in non-matrix clauses. Example (130) illustrates *-p<sup>h</sup>am* in a nominalized clause, example (131) in infinitive clause, and (132) in chained clause.

- (130) *be*      *ap<sup>h</sup>ad-ou*      *rojia*      *zila*      *boro*      *t<sup>h</sup>unlai*  
 this      meeting-LOC      PN      district      Boro      literature  
*ap<sup>h</sup>ad-ni*      *da-p<sup>h</sup>am-nai*      *sumundui*  
 committee-GEN      form-improve- NMLZ      about  
*guar-ui*      *saorai-nai*      *za-ju.*  
 wide-ADVZ      discuss-NMLZ      happen-AFF  
 ‘In this meeting, a detailed discussion about Rongia District Bodo Literature Committee’s reconstitution takes place **to make it more active.**’ [WB-673-2.29]

In (130) *-p<sup>h</sup>am* adds a sense of reconstitution of a committee to improve it. The nominalized clause is a dependent of the relator noun *sumundui* ‘about’.

- (131) *be-p<sup>h</sup>ur-k<sup>h</sup>ou*      *nai-bizir-a*      *subuŋ-a*      *gao-ni*  
 this-PL-ACC      look-analyze-NEG      people-NOM      own-GEN  
*hari-k<sup>h</sup>ou*      *da-p<sup>h</sup>am-nu*      *naza-ju.*  
 community-ACC      form-improve-INF      try-HAB  
 ‘People try to **reform** their community without inspecting these.’ [WB-744-2.11]

In (131) *-p<sup>h</sup>am* creates a sense of ‘reform’ (forming something better), and the infinitive *-nu* marked clause functions as a complement of the main verb *naza* ‘try’.

(132) *solo-p<sup>h</sup>ur-k<sup>h</sup>ou*                      *nai-p<sup>h</sup>am-nanui* . . .                      *gurunt<sup>h</sup>i-k<sup>h</sup>ou*  
 story-PL-ACC                      look-improve-NF                      mistake-ACC  
*asi*                      *t<sup>h</sup>u-na*                      *dint<sup>h</sup>i-nai-ni*                      *t<sup>h</sup>ak<sup>h</sup>ai* . . .                      *doctor*  
 finger                      point-NF                      show-NMLZ-GEN                      reason . . .                      doctor  
*anil*                      *boro*                      *sar-ni-sim* . . .                      *aj*                      *sabaik<sup>h</sup>or*  
 PN                      PN                      sir-GEN-to . . .                      1SG                      gratitude  
*báo-hor-bai*.  
 offer-DIST-PRF  
 ‘I offer my gratitude to Sir Dr. Anil Boro for **reviewing** the stories and pointing out the flaws.’ [WB-492-2.5]

In (132) *-p<sup>h</sup>am* creates a sense of ‘review’ (reading a piece of writing and improving it), and the event of *nai-p<sup>h</sup>am* ‘look-improve’ is chained to the event of ‘showing the flaws’ indicated by the marking *-nanui* on *nai-p<sup>h</sup>am* ‘see-improve’.

### 5 A brief comparison of Garo and Bodo Adverbial suffixes

Both Garo and Bodo have scores of Adverbial suffixes and they are a distinctive feature of these languages. As a category Adverbial suffixes in Garo and Bodo are very similar. Adverbial suffixes are (i) stem formatives, (ii) optional, (iii) come between the verb base and the inflectional suffixes in both languages. Some of the Adverbial suffixes are highly productive, others are less productive, and highly productive ones have more abstract meaning, less productive ones do not. They also have very similar semantic space. Bodo has semantically equivalent counterparts of most of the Adverbial affixes in Garo. The following table gives a glimpse of how similar Garo and Bodo Adverbial suffixes are in terms of the functions they carry out.

TABLE 13 – Adverbial suffixes with similar functions in Garo (Burling 2004) and Bodo

Garo Adverbial suffixes	Bodo Adverbial suffixes
<i>-ang</i> ‘away, distal motion’	<i>-lanj</i> ‘away, distal motion’
<i>-a-ri</i> ‘for no special reason’	<i>-baibai</i> ‘casually, for no special reason’
<i>-ba</i> ‘proximal motion’	<i>-bu</i> ‘proximal motion’

Garo Adverbial suffixes	Bodo Adverbial suffixes
- <i>pil</i> ‘return, reversed’	- <i>p<sup>h</sup>in</i> ‘again, back’
- <i>be/-bi</i> ‘very, a lot’	- <i>t<sup>h</sup>ar</i> ‘really’
- <i>kal</i> ‘more than, comparative’	- <i>sin</i> ‘more than, comparative’
- <i>tok</i> ‘all, everything’	- <i>zub</i> ‘all, everything, exhaustive’
- <i>grik</i> ‘mutually, each other’	- <i>lai</i> ‘reciprocal’
- <i>cheng</i> ‘first, before doing anything else’	- <i>gru</i> ‘first, before doing anything else’
- <i>bat</i> ‘more than, exceed, go across’	- <i>drai</i> ‘more than necessary’
- <i>bru</i> ‘falsely, pretending’	- <i>p<sup>h</sup>la</i> ‘falsely, pretending’
- <i>chrit</i> ‘in slices, into long pieces’	- <i>k<sup>h</sup>ao</i> ‘into long pieces’
- <i>pru</i> ‘through, cut through’	- <i>p<sup>h</sup>ru</i> ‘cut/stab/stamp and make burst’
- <i>chap</i> ‘together’	- <i>p<sup>h</sup>a</i> ‘together, along with’

The meaning of Garo and Bodo Adverbial suffixes are probably not identical, but the ones given above are similar enough to translate Adverbial suffixes in one language with the ones from the other language in many contexts. As one may notice that some of the Adverbial suffixes are not just similar in function, but also in form. Judging from the fact that the meanings are so close, we find it highly unlikely that the similarity in form is accidental. They may be historically related. The suspected cognates are presented in the table below.

TABLE 14 – Suspected cognate Adverbial suffixes in Garo and Bodo

Garo	Bodo
- <i>aj</i> ‘motion away from deictic center’	- <i>lay</i> ‘motion away from deictic center’
- <i>ba</i> ‘motion towards the deictic center’	- <i>bu</i> ‘motion towards the deictic center’
- <i>pil</i> ‘return, reverse’	- <i>p<sup>h</sup>in</i> ‘again, back’
- <i>pru</i> ‘through, cut through’	- <i>p<sup>h</sup>ru</i> ‘cut/hit something burst’

Another point of similarity between the two languages is that some of the Adverbial suffixes have origin in lexical verbs. We have discussed serial verbs above. In Garo, the verbs *dil* ‘lead, guide’ and *pil* ‘return’, for instance, can be used as Adverbial suffixes (Burling 2004:140). One possible difference between the two languages may be in the ordering of the Adverbial suffixes. According to Burling (2004:139), unlike word order, where there is word order variation, the order of the adverbial affixes is almost completely fixed. In Bodo, on the other hand, we have seen that the most common Adverbial suffixes can be used in different orders relative to each other without changing the meaning much.

## 6 Summary

In this paper we have presented a description of the Adverbial suffixes in Bodo. Adverbial suffixes are a distinctive feature of the Bodo verb morphology. They form new verb stems and add very specific semantic/pragmatic contents to the verbal meaning. They are very large in number and a verb stem may have between one and three of them. Some of them are highly productive, while others are less productive. The more productive ones have very abstract and schematic meaning, while the less productive ones have more specific and concrete meaning. The more productive ones generally come near the end of the word, while the less productive ones come close to the verb root. Among the notable phonological properties of the Adverbial suffix is that several of them have initial consonant clusters, a consonant plus a liquid (/l/ or /r/), which we do not find in any other morphology. Among the notable morphological properties of the Adverbial suffixes is that more than one of them may occur in a verb stem and sometimes the order between the Adverbial suffixes may vary. Sometimes one of the two orders between a pair of Adverbial suffix is preferred, but sometime both orders may be equally found. Among the notable syntactic characteristics is their use in various clause types. Most of them are limited to verbal clauses; just a few are used both in non-verbal and verbal clauses. Most of them can occur in both affirmative and negative sentences. One particular suffix, *-ban* ‘frequently’, is limited to negative clauses. Most of them do not change the class of the verb stem. However, *-han* ‘about to’ allows use of the verb stem that is atypical of verb stems, but is rather typical of nominal or adjectival constituents. We have also discussed the possible sources of the Adverbial suffixes. Lexical verbs and sound symbolic words are the two main known sources. There is however a large number of Adverbial suffixes, approximately one third, whose origin is unknown. After discussing the various properties of the Adverbial suffixes, we have provided a detailed description of twelve individual Adverbial suffixes. All of them, except the last one, are commonly used in daily speech. We mainly highlight their semantics and their use in different clause types. Finally, we provided a brief comparison of Adverbial morphemes in Garo and Bodo. What is notable here is that the semantic space of the two categories is very similar. A few of them might even be shared between the two languages.

### Abbreviations

1	First person	JUS	Jussive
2	Second person	LOC	Locative
3	Third person	NEG	Negative
ACC	Accusative case	NF	Non-final clause marker
ADVZ	Adverbializer	NMLZ	Nominalizer
AFF	Affirmative	NOM	Nominative case
CL	Classifier	PAST	Past tense
COM	Comitative	PL	Plural

CS	Change of state	PN	Personal name (person, place)
DIS	Disjunctive	POSS	Possessive marker
DIST	Distal	PROX	Proximal
DUB	Dubitative	PRF	Perfect
EXCL	Exclamatory	PURP	Purpose clause marker
FOC	Focus marker of various types	Q	Question marker
FUT	Future tense	RECP	Reciprocal
GEN	Genitive case	RED	Reduplicated
HAB	Habitual	REL	Relativizer
HON	Honorific	RLS	Realis
IMM	Immediative	SG	Singular
IMP	Imperative marker of various types	SS	Sound symbolic
INF	Infinitive		
INFOR	Informal		
INST	Instrumental		

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## Persons and grammar in Meyor<sup>1</sup>

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I will try to describe some features of persons, tense and aspect, and the grammar of ‘reported speech’ in Meyor, the language of a small group living in easternmost Arunachal Pradesh, India. I will conclude with some thoughts about languages being counter-intuitive and about grandfathers being innovative.

### 1 Introduction

There are about 400 persons speaking three varieties of Meyor on the Indian side of the border, in Anjo (Anjaw) District, Eastern Arunachal Pradesh.<sup>2</sup> The Meyor people live mostly in nine villages between the border with China and the township of Walong. They are found in Musai (15 houses<sup>3</sup>), Tinai (13 houses), Walong-village (12 houses), Dong (10 houses), Kaho (9 houses), Khroti (5 houses), Tilam (5 houses), Kundun (4 houses), and Mulam Kembring (4 houses). These people do not all have the same history; they belong to five groups, called Khordjap-pu, Litsi-pu, Netan-pu, Phitsi-pu and Sunggu-pu. Netan and Sunggu are the names of two Meyor villages on the Chinese side, and the lineages of Netan-pu and Sunggu-pu come from these two places. Communication between these communities stopped after 1962. The three other groups appar-

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<sup>1</sup> This paper is the result of a new investigation among the Meyor people living in Tezu, in February 2015. I thank my old and dear friend Dr Chhinjo Meyor for having organized my stay there and numerous fruitful contacts, and Ajit Meyor (the son of Chhinjo’s elder sister Rosalia), born c. 1980, for his courage and acumen during our long work sessions. The trip was funded by my Research Unit, LACITO (French CNRS, UMR7107) associated with the Sorbonne Nouvelle University at Paris.

<sup>2</sup> The Meyor language was first mentioned in my 1996 paper. I added some information in Jacquesson 2001. Vocabulary and some grammatical information, from the Indian side, later appeared in Landi 2005.

<sup>3</sup> Approximately. Total would be between 70 and 80 houses. A newly married couple shifts to its own house after one year. A few houses accommodate more than 6–7 people; a few only one person.



ently are not from specific places, or may have been living in their present location for a longer period. The last well-known batch of people coming from the Chinese side is the family of Tsering Tunduk Zakhring, whom, his people say,<sup>4</sup> British officials convinced in the 1940s to move to this side. The varieties of speech that I know of are Kaho (the last village before the border), Walong, and the Netan-pu variety, reputed for its ‘tunes’, maybe the only one to have tones.<sup>5</sup> The three dialects are more or less mutually comprehensible, but have differences in prosody, lexicon, and grammar. Some Meyor people (actually *Meye* or *M’ye*, because the name Meyor seems to result from a British adaptation) also live in China. The language has many characteristics in common with Miju, the easternmost group of the so-called Mishmi. The examples given here are in Kaho dialect, all from Ajit Meyor, in his thirties, living in Kaho village and at Tezu.

The verb in Meyor consists of a verb root, sometimes with a pre-verb, and a number of suffixes that express both person and tense/aspect. Negation occurs before the verb root. The verb phrase is at the end of the sentence. Definite patients (O) are marked with *-vik*; agents (A) with *-kui* if necessary; word order in such cases is AOV. In glosses, I will use 1SG, 2SG, 3SG, 1PL, 2PL, 3PL for the six traditional persons. The apostrophe denotes a super short vowel:

- (1) *mik khəɾ-m*  
 sun rise-PST.3SG  
 ‘The sun is rising.’
- (2) *u m’-tai-mu*  
 3SG NEG-hear-HAB.3SG  
 ‘He does not hear.’
- (3) *ko i-vik thir-mij*  
 1SG 2SG-O call-PST.1SG  
 ‘I am calling you.’
- (4) *(ko) phu m’-tsət-kij*  
 (1SG) ‘phu’ NEG-blow-PST.NEG.1SG  
 ‘I am not blowing (on something).’

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<sup>4</sup> Chhinjo Meyor is one grand-daughter, through her mother Pema Lamu, of Ts. T. Zakhring.

<sup>5</sup> Partition between groups whose speech has tones and groups who do not have seems not an uncommon phenomenon in Arunachal. As far as I know, this happens in the west (close to Bhutan) among Sherdukpens where only three small villages still have tones, among Miju where only some remote villages ‘have tunes’, and among Meyor where tones are the privilege of the Netan-pu. We think of the influence of Hindi, indeed very considerable in Arunachal, but it may not be the sole reason.

In the last example, with pre-verb, the positive form would be *phu tsət-miŋ* ‘(I) make *phu*, I blow’ with the PST.1SG *-miŋ* ending as in (3). Negation triggers another ending, here labelled PST.NEG.1SG. Since *-miŋ* and *-kiŋ* can be used only in 1SG, the use of *ko* in the beginning of such sentence may indicate focus, or stress.

## 2 Two kinds of ‘you’

Personal pronouns in Meyor do not indicate gender. They are:

TABLE 1 – Personal pronouns

	1	2	3
singular	<i>ko</i>	<i>no / i</i>	<i>u</i>
plural	<i>ki</i>	<i>ni</i>	<i>vi</i>

The subject pronoun for ‘you’ is *no*, and the plural form ‘you.pl’ is *ni*, parallel to *ko* and *ki*, also to *u* and *vi*.<sup>6</sup> Instead of *no*, a form *i-* is used with a suffix; exceptions will be examined. It occurs with postpositions like *-tshi* ‘both’ and *phai* ‘with’:

(5) *i-tshi*  
2SG-both  
‘you both’

(6) *ko kar-li i-pha khuk-aŋ*  
I car-in you-with come-Ps.1SG  
‘I came with you in a car.’

And with *-yak* indicating determination or ‘possession’:

TABLE 2 – Possessives

	subj.	my house
1SG	<i>ko</i>	<i>ko-yak nam</i>
2SG	<i>no</i>	<i>i-yak nam</i>
3SG	<i>u</i>	<i>u-yak nam</i>
1PL	<i>ki</i>	<i>ki-yak nam</i>
2PL	<i>ni</i>	<i>ni-yak nam</i>
3PL	<i>vi</i>	<i>vi-yak nam</i>

<sup>6</sup> The sound here written ‘v’ is a bilabial /β/.

Most importantly, it occurs with *vik* that marks the definite patient or object:

- (7) *ko*      *i-vik*      *suk-mij*  
 1SG      2SG-O      see-PST.1SG  
 ‘I see you.’
- (8) *no*      *ko-vik*      *suk-i (wo)*  
 2SG      1SG-O      see-PST.2SG  
 ‘You see me.’

1SG *ko* has one form only, be it independent or affixing (here: agent or patient), while 2SG is *no* when independent or subject and *i-* when suffixing *-vik*. We could say that *no* is the direct form, *i* the oblique form.

Regarding 2SG/PL persons, verb paradigms can be classified in 3 groups: the ‘*e* forms’, the ‘*i* forms’, the ‘*tsi* forms’. The ‘*e* forms’ serve for noun predicates like ‘You are a Meyor’, *no Meyor e*, or ‘you are tall’ etc. In fact, *me* in 3SG is dispensable. Suffix *ku* marks plural in 3PL predicates:

TABLE 3 – Predicate nominal conjugation

be tall		
1SG	<i>ko</i>	<i>khrej kij</i>
2SG	<i>no</i>	<i>khrej e</i>
3SG	<i>u</i>	<i>khrej (me)</i>
1PL	<i>ki</i>	<i>khrej ke</i>
2PL	<i>ni</i>	<i>khrej nej</i>
3PL	<i>vi</i>	<i>khrej ku</i>

The ‘*i* forms’ and ‘*tsi* forms’ occur with verb roots. These *i* or *tsi* are often followed by a suffix. In the third column in Table 4, the 2<sup>nd</sup> person suffix is 2SG *i* or 2PL *i nej*. In the following columns, *i* is followed by a suffix, *mu* or *khuk*. In the ‘you like stories’ example, *no tampi go-i-mu*, *i* comes before *mu* or *map*. These *i* or *tsi* only occur with 2<sup>nd</sup> persons:

TABLE 4 – Examples of *i* forms in 2<sup>nd</sup> person

	eat rice		like stories	will go to Walong
1SG	<i>ko</i>	<i>tso mij</i>	<i>go map</i>	<i>ti khuk kij</i>
2SG	<i>no</i>	<i>tso i</i>	<i>go i mu</i>	<i>ti i khuk</i>
3SG	<i>u</i>	<i>tso m</i>	<i>go mu</i>	<i>ti khuk</i>
1PL	<i>ki</i>	<i>tso me</i>	<i>go map</i>	<i>ti khuk ke</i>
2PL	<i>ni</i>	<i>tso i nej</i>	<i>go i map</i>	<i>ti i khuk nej</i>
3PL	<i>vi</i>	<i>tso m ku</i>	<i>go mu ku</i>	<i>ti khuk ku</i>

TABLE 5 – Examples of *tsi* forms in 2<sup>nd</sup> person

		be ill	have seen	have forgotten
1SG	ko	<i>ndəm aŋ</i>	<i>ŋoŋ aŋ</i>	<i>tsak ki ŋ</i>
2SG	no	<i>ndəm tsik</i>	<i>ŋoŋ tsik</i>	<i>tsak tsi ki</i>
3SG	u	<i>ndəm e</i>	<i>ŋoŋ ik</i>	<i>tsak ki</i>
1PL	ki	<i>ndəm eke</i>	<i>ŋoŋ eke</i>	<i>tsak ki yap</i>
2PL	ni	<i>ndəm tsik neŋ</i>	<i>ŋoŋ tsik neŋ</i>	<i>tsak tsi ki yap</i>
3PL	vi	<i>ndəm e ku</i>	<i>ŋoŋ ik ku</i>	<i>tsak ki ku</i>

In *no Waloŋ ti-i-khuk* ‘you will go to Walong’, the verb ‘to go’ is *ti-*, but the final suffix is actually the verb meaning ‘to come’, *khuk-*, the regular auxiliary verb for future. Among the various suffixes that express person+tense/aspect, only 2SG *-i* comes before the auxiliary, while others, *-kiŋ*, *-ke*, *-neŋ* and *ku* all come after. If we consider the *tsi* forms, *no tsak-tsi-ki* ‘you have forgotten’ offers the same conclusion: only 2<sup>nd</sup> person *tsi* comes before the *ki* auxiliary ‘to do’, and other suffixes come after. In the other two examples *no ndəm-tsik* ‘you are ill’ and *no ŋoŋ-tsik*, ‘you have seen’ (the common past tense), the paradigms only differ in one important detail: active verbs have *-ik* where stative verbs have *-e*.

Verbs *khuk-* and *ki-* can be employed with their full meaning, for instance in sentences like:

(9) (*u*) *khuk-e*  
 (3SG) come-Ps.3SG  
 ‘He has come.’

(10) *u sek ki-m*  
 3SG what do-PST.3SG  
 ‘What is she doing?’

Instead of considering the 2<sup>nd</sup> person, if we start our perusal from the 3<sup>rd</sup> person, we can formalize our remarks in the following table:

TABLE 6 – Conjugation patterns

if 3SG ends in	then 2SG has	example	
zero	<i>-e</i>	you are tall	<i>no khreŋ e</i>
-m	<i>-i</i>	you eat rice	<i>no andek tso-i</i>
-mu	<i>-i-mu</i>	you like stories	<i>no tampi go-i-mu</i>
-khuk	<i>-i-khuk</i>	you will go	<i>no ti-i-khuk</i>
-e	<i>-tsik</i>	you are ill	<i>no ndəm-tsik</i>
-ik	<i>-tsik</i>	you have seen	<i>no ŋoŋ-tsik</i>
-ki	<i>-tsi-ki</i>	you have forgotten	<i>no tsak-tsi-ki</i>

There are other possible endings in 3SG, for instance *-lek*, but these above will suffice to describe the main lines. The 3SG *-m* form probably is the most common one; it means that the action is being done now or that the subject is now beginning doing it; it is also a narrative present. The 3SG *-mu* form indicates usual or habitual action, for instance ‘you like apples’. The 3SG *-khuk* form is a future, not an urgent one. The 3SG *-e* form is a stative result, ‘you are now being ill’. The 3SG *-ik* form is a past tense for active verbs. Finally the 3SG *-ki* form is a recent past, ‘you have (just) forgotten’.

Such a table, were it still more detailed, would not solve all problems, especially when persons are involved. Even within the scope of these Tables, we shall remark that 2SG *-i* form is found as a last or last but one element in ‘*i* forms’ of verbs. It comes last in sentences like *no andek tso-i* ‘you are eating food (rice)’, and last but one in *no andek tso-i-khuk* ‘you will eat food’.

A last point is to be mentioned here about *i-* meaning ‘you’. When you address a number of people one after the other, supposing you give them indications or orders, you will tell *i-vik* ‘you’ to the first one, but *no-vik* to the next ones.

### 3 Aspects

One difference between *ko tampi tsər-miŋ* and *ko tampi tsər-maŋ* ‘I am telling story’<sup>7</sup> is that with *tsər-miŋ* the speaker is actually now telling one, while *tsər-maŋ* is simply mentioning a habit; *tampi tsər-maŋ* could also be translated as ‘I have/had been telling many stories’. One would use *tsər-aŋ* to say ‘I was telling stories’ (in some more or less remote past), and *tsər-kiŋ* to say ‘I was just telling a story’ (e.g. when you came in):

- (11) *ko*            *raptse*            *simu-vik*            *vale tampi*            *tsər-maŋ*  
 1SG            own            daughter-O            much story            tell-HAB.1SG  
 ‘I have been telling many stories to my daughters.’

Yet, if it is a matter of custom or habit, and not a repeated action, we fall back to *-miŋ* type. To inquire whether French people eat fish, the question is:

- (12) *Frans-lik,*            *kəntshi*            *tham-i.nəŋ*            *wo?*  
 France-LOC            fish            eat<sup>8</sup>-PST.2PL            INT  
 ‘In France, do you.PL eat fish?’

Interrogative final *wo* is used only when necessary for clarity or stress.

<sup>7</sup> This translation is ‘baby English’, in order not to decide which stories are told and how or when.

<sup>8</sup> Verb *tham-* is used only for meat and fish; otherwise, the general verb is *tso-*.

The aspectual contrasts are different with a verb like *ŋi-* ‘sleep, get asleep’: *u ŋi-m* is ‘he is going to sleep’ (Table 4), *u ŋi-lo* ‘he just fell asleep, he (now) sleeps’, *u ŋi-e* ‘he is sleeping (please don’t disturb!)’ (Table 5). As for aspect (in the broad sense), one might inquire as to the contrast between ‘to sit’ and ‘to be sitting’ etc. The Meyor answer, consistent with the example concerning ‘getting asleep’, is:

(13) *ts’-lap!*  
IMP-sit  
‘Sit down!’

(14) (*ko*)      *ato*      *lap-miŋ*  
(1SG)      now      sit-PRS.1SG  
‘I (am going to) sit down.’

(15) (*ko*)      *lap-aŋ*  
(1SG)      sit-PRS.1SG  
‘I am sitting.’

(13) shows the Imperative prefix *ts’-* at work. Negative imperative would be with prefix *he-* instead of *ts’-*. (14) is for action and is a typical use of the *-miŋ* paradigm which often indicates something taking place now, about to occur etc. (15) is for a continuing state, and a good opportunity for the *-aŋ* paradigm (Table 5), which is a present-past, often a ‘perfective’ if we mean the description of the present result of a past action.

Moreover, there is a distinction for ‘actual witnessing’:

(16) *uŋ*      *maisō*      *ndzur-e*  
that      girl      pretty-PRS.3SG  
‘That girl is pretty (look!)’

(17) *uŋ*      *maisō*      *ndzur-tek*  
that      girl      pretty-PRS.3SG  
‘That girl is pretty.’

The use of *-e* in (16) shows that you are seeing her, whereas *-tek* in (17) is a more general indication when talking about girls with friends. In the negative, only *-e* is possible; the nuance disappears. Persons (in the grammatical sense) of course make a difference in aspect during conversation. Suppose you call a girl or a lady who is walking over there; she does not hear you. You may tell a friend:

- (18) *ko u-vik thir-mij. u m'-tai-mu*  
 1SG 3SG-O call-PST.1SG 3SG NEG-hear-HAB.3SG  
 'I am calling her, she does not hear.'

Because the 'calling action' is viewed as going on, it triggers the usual present tense. The 'not hearing action' does not go on at all, and is viewed as an inability to hear. Suppose you then decide to tell your friend: 'I am not calling her', you could perhaps say *ko u-vik m'-thir-kij* (the expected negative for *-mij* endings) but in this context the sentence is a bit awkward, and a certainly more natural reaction is *ko u-vik m'-thir-khuk-kij* 'I will not call her (anymore)', with a future tense stressing purpose or vexation.

Meyor is sensitive to 'immediacy': it makes a grammatical difference if things happen at once or not; if the past was just now (*-ki* 'past', see Table 5) or not (*-ik* 'past', Table 5); if events are to happen right now (*-m* 'present', see Table 4) or not (future with *khuk*, Table 4). The same is true when actions are to follow. Where English has to use 'as soon as', Meyor uses a specific *-lek* verb form, here glossed as 'So':

- (19) *i-yak tsaj phri-lek dzapma, ko-vik ndzom-wa-i.khuk?*  
 2SG-G work finish-So after 1SG-O meet-can-FUT.2SG  
 Right after finishing your work, can you visit me?

Note that if, instead, you mean 'before you do something, do something else', you will have, as in French, to use a negative dependent clause:

- (20) *ko tsaj m'-thruï tongu i-vik ko ndzom-khuk.kij*  
 1SG work NEG-work before<sup>9</sup>, 2SG-O 1SG meet-FUT.1SG  
 'Before I work, I will meet you.' (Fr. Je te verrai avant que je ne me mette au travail.)

This sentence also shows a more relaxed word order, a natural way of telling things. The second *ko* might be dropped altogether.

## 4 Telling stories

Most stories, either true or not, need at least three persons: one who listens or tells, the other one who tells or listens, and that other person, the topic of all gossip, a raja, a girl, a frog. However, complications arise when rajas tell about girls or frogs, and you in turn tell what they tell. By far the most common grammatical solution to the problem of reported speech is to report it as it was

<sup>9</sup> *Tongu* does not really mean 'before' but 'earlier, in the past'.

spoken. If the raja said: ‘Laila, my girl, what a godly person you are’, it is far more economical to state it as (19) than as 20):

(21) *And the raja said: ‘Laila, my girl, what a godly person you are’.*

(22) *And the raja said that Laila, his dear girl, was indeed a godly person.*

Complicated grammar such as (21) would rapidly throw us in dire embarrassment, were Laila to tell stories about frogs to her raja, and were these same frogs then to tell her stories about me – these embedded frames that storytellers love. Yet, in a number of languages, techniques were developed to trace who is speaking. Sometimes, anaphora develops as a sub-department of deixis and special pronouns are used to indicate which third person is talking about another third person. In Meyor, the solution is different.

First, we should know the difference between *sro-*, *ndo-* and *tsər-*. The verb *sro* means ‘speak’, as in:

(23) *ko*            *Meyor*            *lai*            *m’-sro-kiŋ*  
 1SG            Meyor            language            NEG-speak-PST.NEG.1SG  
 ‘I do not speak Meyor.’

More important for us, *ndo-mai* is ‘saying’ and *tsər-mai* is ‘telling’. If you request someone to give you his mobile phone number, while he is busy with something else, he may realize after some time you requested it, and then ask you:

(24) *ko*            *ndo-aŋ*            *wo?*  
 1SG            say-Ps.1SG            INT  
 ‘Did I say (it)?’

(25) *no*            *ŋyit-i-mu*            *wo*            *ato*            *i-vik*            *sek*            *ndo-aŋ*  
 2SG            know-HAB.2SG            INT            now            2SG-O            what            say-PRS.1SG  
 ‘Do you know what I told you (said to you) just now?’

With ‘say’ the stress is more on form and sound, with ‘tell’ rather on meaning. In English as in Meyor, you can ask if you have said (the sound) *shglumph*, but can hardly say that you ‘told’ *shglumph*. You can say that French cocks say *kokoriko* while German ones say *kikiriki*, you cannot say they ‘tell’ it. You say something, but you can tell about something. We have come back to the main point of this chapter.

If no hearer is mentioned, you may have sentences like:

(26) *i-yak*            *tsepni*            *tampi*            *tsər-m*            *tha*  
 2SG-G            brother            story            tell-PST.3SG            PAST  
 ‘Your brother was telling a story.’



This is normal past continuous tense in Kaho dialect: the present-past marked with *tha*. Without *tha*, the sentence would be interpreted as a present continuous ‘He is telling a story’. The short past is also possible:

- (27) *u tsər-ik*  
 3SG tell-PST.3SG  
 ‘He told (something).’

This would be, probably, an answer to your question: ‘Did he tell it?’ – He told it, yes. If you told a story, even mentioning to whom, the tense setting remains ‘normal’:

- (28) *ko moŋor i-vik tampi tsər-aŋ tha*  
 1SG yesterday 2SG-O story tell-PRS.1SG PAST  
 ‘I have told you a story yesterday.’

When the agent (A) is 3rd person (sing. or plural) and when the verb has an object (O), we shift out of the normal setting:

- (29) *i-yak tsepni-kui i-vik tampi tsər-pu*  
 2SG-GEN brother-A 2SG-O story tell-RS  
 ‘Your brother has told you a story.’

Each function is marked: agent who told (with *-kui*) and patient who is told (with *-vik*). More remarkably, the verb ending is specific: *-pu* (in Kaho speech, in Walong pronounced *-phu*) makes it clear that the teller is a 3<sup>rd</sup> person. The same *-pu* would work in sentences like:

- (30) *laŋ gədzom siŋ ko-vik tshar ki-pu*  
 other person PL 1SG-O joke do-RS  
 ‘Some people made fun of me.’

This implies that they made fun of me by telling things. In reported speech, the *-pu* form naturally occurs. Compare the two following sentences.

- (31) *dzik-kui tsor sat-ki*  
 tiger-A cow kill-PsI.3SG  
 ‘A tiger has killed a cow.’

- (32) *laŋ gədzom-kui ko-vik sai-pu dzik-kui tsor sat-ki*  
 other person-A 1SG-O report-RS tiger-A cow kill-PsI.3SG  
 ‘Someone told me that a tiger killed a cow.’

Until now, a 3<sup>rd</sup> person told something. I or you also can tell a story to somebody.

(33) *ko*      *i-vik*      *tampi*      *tsər-e*      *ko-apa-yak*  
 1SG      2SG-O      story      tell-R1SG      1SG-father-G  
 ‘I will tell you a story about my father..’

(34) *no*      *ko-vik*      *tampi*      *tsər-tsu*  
 2SG      1SG-O      story      tell-R2SG  
 ‘You (will) tell me a story.’

Examples (33 and 34) need a (virtual) hearer to be valid. The point is not only to ‘tell stories’, but to tell them to someone definite. The pattern *no ko-vik . . . -tsu* has a possible plural with *ni ko-vik . . . -tsu-neŋ*. However, with 1SG or s2PL agents, the respective *-e* and *-tsu* endings suggest future, and are equivalent to a polite request in (35), and to a promise in (36):

(35) *ko-vik*      *sabun*      *tat-tsu*  
 1SG-O      soap      give-R2SG  
 ‘Give me soap please.’

(36) *ko*      *to*      *tat-e*  
 1SG      now      give-R1SG  
 ‘Now I will give [you] soap.’

It may be that the *-tsu* suffix is related to the Imperative *ts-* prefix, or maybe to the ‘tsi forms’ in our chapter 2. Whatever the link, these three suffixes, *-pu*, *-tsu*, *-e*, do not belong to a formal paradigm. They express distinct positions in speech and are difficult to compare within a convenient common frame. Although they do not form a paradigm, and are more difficult to pinpoint when the investigation starts from formal questionnaires, they have an interesting role in the grammar of story-telling.

## 5 On persons and paradigms

Is there a paradigm for persons in Meyor? Our idea of the three grammatical persons is derived from rhetoric or from semantic considerations about dialogues with a topic: someone talks to someone else, and this ‘else’ now takes over and answers; they are talking about somebody or something, the traditional 3<sup>rd</sup> person.<sup>10</sup> Since we accept this frame for granted, we look for ‘the 3 persons’

<sup>10</sup> The earliest list of definitions of grammatical persons, already in the familiar order, is found in the *Tekhne Grammatike* by Dionysius Thrax (2<sup>nd</sup> c. AEC). Lallot 1998: 56–57.

in any language – and we usually find them. Linguistic documentation has shown a number of interesting cases about ‘4<sup>th</sup> persons’ or switch reference, but this is the domain of reference or 3<sup>rd</sup> person, not the scene of dialogue that accommodates the first two ones.

If we look at the Meyor ‘analytic’ verbal morphology, which uses auxiliaries *khuk-* and *ki-*, we observe its striking dissymetry. 1<sup>st</sup> person is marked after the auxiliary, 2<sup>nd</sup> person is marked before, and 3<sup>rd</sup> person is not marked at all:

TABLE 7 – Dissymmetric person marking

		aux.				aux.	
1SG	V	<i>khuk</i>	<i>kiŋ</i>	V		<i>ki</i>	<i>ŋ</i>
2SG	V	<i>i</i>	<i>khuk</i>	V	<i>tsi</i>	<i>ki</i>	
3SG	V	<i>khuk</i>		V		<i>ki</i>	

We are not surprised by the 3<sup>rd</sup> person ‘zero’ marking. Benveniste (1946. 1956), more than 60 years ago, has shown that characteristics of the 3<sup>rd</sup> person, cross-linguistically, on semantic and morphological grounds, suggest to see it as a ‘non person’. He observed that in most cases this person is not a person at all, but anything (‘rain fell, darkness came with melancholy, everything was blurred, light itself seemed dull’) and in some cases only a person. He remarked that many languages do not trace this ‘person’ by any marker; his favorite examples were in Semitic languages but evidence comes from many cases, including Meyor. The 3<sup>rd</sup> person is not marked because it is the most obvious candidate or default subject for any predicate.

As far as person marking (any person) on verbs is concerned, we can observe several possibilities. Non-marking for any person is common, especially (for us here) in Eastern Asia, a region where cultural/linguistic habits refrain from showing persons, even if the map of person non-agreement does not completely correspond with the map of polite escape from pronouns. The other extreme situation is the marking of all 1SG, 2SG, 3SG, as in many Indo-European languages. However, 3SG marking *\*-t* is a demonstrative, while the marks for 1SG and 2SG are not, a feature underlined by the plural parallel in *\*-n-t*. The marking of 1SG and 2SG (not 3SG) in Semitic languages, a major example of Benveniste, is not a uniform pattern because it fits noun/verb suffixes,<sup>11</sup> not verbal prefixes. The problem of the two series of morphemes is found in many languages often with the same difference between verb and noun forms (Jacquesson 2008), for instance in Kuki languages, sometimes with stylistic motivation, as with Kamhau in Tiddim, according to Henderson 1957. In

<sup>11</sup> It is usually assumed that original person marking on verbs was with prefixes, while the tenses with suffixes (which look more like the possessives of nouns) are nominal in origin.

Meyor, the two series are identical for 1SG but not for 2SG: noun forms (2SG *i-*) are distinct from verb forms (2SG *no*). The result is that 1SG *ko* is used whichever the function, while a speaker has to choose which to use for 2SG, depending on subject (2SG *no*) or non-subject (2SG *i*).

This pattern seems all the more significant for being fragile. Analogy would rapidly erase such a morphosyntactic anomaly. In Standard Miju the pattern does not exist in syntax, although it is still clear in morphology: 1SG and 2SG are both consistently *ki* and *nyo*, but the trace of 2SG *i* is still clear in the verb suffix *-yi-maj*:

(37) *ki*                    *nyo-wi*                    *ɲuj-mi*  
 1SG                    2SG-O                    see-FUT.1SG  
 ‘I will see (find) you.’

(38) *nyo*                    *ki-wi*                    *ɲuj-yi.maj*  
 2SG                    1SG-O                    see-FUT.2SG  
 ‘You will see (find) me.’

I am not saying the Meyor pattern is archaic and precious, while Miju would be on the road to mass-treatment and global dullness; I hope to evade such sweeping pseudo-historicism. Moreover, what about the strange usage of marking the 1SG object by a suffix in Miju, and only this one?<sup>12</sup>

Yet, it seems only reasonable to admit that small groups of people who speak a specific language at home would more easily either shelter awkward features as typically theirs or produce innovative awkward ones that would seem homely to them. It is more difficult to maintain or evolve dissymmetric features when your language is spoken by crores of people, because so many people have to learn it as a second language, and would tend to minimize its difficulties by analogy – except perhaps if this language has a strong and prestigious literacy. On the whole, the question is not whether such dissymmetric features are old (‘archaic’) or new (‘innovative’) because innovation may of course appear any time, including grand-fathers’. The problem is to know if dissymmetric features are random or guided by semantics. If they are random, I cannot well see why people like Robbins Burling or me have spent so much time pestering for details these people in North-East India. If randomness is arranged by semantics, the awkward features we discover are what luck and obstinacy bring to us, and among them are features that give us an idea of some of the tendencies that human minds do have.

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<sup>12</sup> In Standard Miju, 1SG as O, *-ɲə*, is commonly suffixed to the verb form; only 1SG can do it. *wi ki-wi thoj-mə-ɲə* ‘he is looking at me’ (3SG 1SG-O look-PST+3SG-1SG). Compare with *ki m-nat-ɲə* ‘I am not ill’ (1SG NEG-be.ill-1SG).

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## On Limbu directionals and locative expressions

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The Kiranti languages, including Limbu, are generally presented as having a three-way system of vertically oriented directional morphemes, up/down/across, used as ‘adverbs’ and, in composition with demonstratives, as deictics ‘up here’, ‘down there’, etc. In most of the languages, but not in Limbu, these morphemes have been reported as acting as vertically specified locative case markers postposed to nominals, ‘up in/at’, ‘over in/at’, ‘down in/at’, a phenomenon that has been called ‘vertical case’ (Ebert 1994). Limbu has been described as having only a general locative case marker, distinct from the directional adverbs.

The Tamarkhole dialect of Limbu contradicts this picture in two respects. First, it uses directional morphemes as locative markers on nominals in the manner described above. Second, and apparently uniquely among Kiranti languages, it has a five-way system of vertically oriented directionals, distinguishing topographic (‘uphill/upstream’ vs ‘downhill/downstream’) from gravitational (up vs down) axes. Comparable systems are found in the rGyal-rong languages of Western Sichuan.

The Tamarkhole general locative marker is different from the one that has been found in other Limbu dialects, but it is clearly related to the ‘down’ directional; this suggests an etymology, confirmed by early 20th century data, for the locative marker of the other Limbu dialects.

### 1 Directionals and the locative in Panchthar and Phedape

Two modern studies of Limbu dialects, Weidert and Subba (1985) (Panchthar dialect), and van Driem (1987), (Phedape), both cited by Ebert, present a three-term system of vertically specified ‘directionals’, but only a single locative case marker. It will be useful to keep this system in mind for comparison with the Tamarkhole system.

## (1) Panchthar and Phedape directionals

<i>tho</i>	up
<i>yo</i>	down
<i>na</i>	on the same level

The directionals appear both independently and in a series of deictics, related to the proximal and distal demonstratives *kɔŋ* ‘this’ *khɛŋ* ‘that’, e.g. *kɔtyo~kɔʔyo* ‘down here’, *khɛʔyo* ‘down there’, etc. (glossary entries, van Driem 1987). Neither van Driem nor Weidert and Subba reports their use on lexical nouns.

## (2) The Panchthar and Phedape locative suffix

Panchthar (Weidert and Subba 1985): *-o*, *-oʔ*.

Phedape (van Driem 1987: 49) *-ʔo*.

This marker, suffixed to demonstrative elements, forms vertically unspecified deictics, e.g. *kɔʔo*, *khɛʔo* ‘here, there’. On nominals it marks locative case, e.g. *himʔo~himmo* ‘in the house’ (Driem 1987: 49). I suspect that the glottal stop is the same (undefined) linking element as the *t~ʔ* of *kɔtyo~kɔʔyo* above; van Driem analyses it as part of the locative suffix.

## 2 Tamar Khole directionals and locatives

The Tamar Khole directionals (here represented by the Mewa Khola subdialect) are a superset of (1):

## (3) Mewa Khola directionals:

<i>tho</i>	up, uphill, upstream [gloss: ‘uphill’]
<i>yo</i>	down, downhill, downstream [gloss: ‘downhill’]
<i>thəŋ</i>	up, overhead [gloss: ‘up.v’ (‘up.vertical’)]
<i>mu</i>	down, under [gloss: ‘down.v’ (‘down.vertical’)]
<i>na</i>	across, on the same level [gloss: ‘hʔ’ (‘horizontal’)]

These can appear suffixed to demonstratives to form vertical deictics, e.g. *kɔtthəŋ*, *kɔttho* ‘up here’, etc. In Tamarkhole as recorded in the Mewa Khola, a large variety of demonstratives is found, perhaps due to dialect mixture. Distal deictic forms based on demonstratives *ha*, *kha*, and *khɔ* ‘that’, and proximal deictics based on *ɛ* and *kɔ* ‘here’ are recorded.<sup>1</sup> All are followed by a linking

<sup>1</sup> The proximal demonstratives (and demonstrative pronouns) are *ɛn*, *kɔn*, with the definite article (*ɛ*)*n*. The distal demonstrative adjectives *khɔ* ‘that’, etc. appear without the article, the pronouns (*khɔn* ‘that one’) with it. The distal ‘there’ always carries a direction marker (e.g. *khɔtma* ‘over there’). It is possible that the directional sense is neutralized for one of these forms.

element before the directional suffix. This element is often realized as glottal stop, especially before sonorants, or assimilated to *p* before *mu*.

Vertically-specified locative case markers have the same form as the vertical deictics, but in the Mewa Khola they are only based on the deictic  $\varepsilon$  'here'. These are suffixed to nominals. If the nominal ends in a vowel, the  $\varepsilon$  is elided, an elision which I indicate here by an (unpronounced) apostrophe: *paŋphe-'tyo* 'down in the village'.

(4) Mewa Khola locative postpositions:<sup>2</sup>

- ( $\varepsilon$ )*ttho*
- ( $\varepsilon$ )*tyo* (~ -( $\varepsilon$ )*ʔyo*)
- ( $\varepsilon$ )*tthaŋ*
- ( $\varepsilon$ )*tmu* (~ -( $\varepsilon$ )*ʔmu* ~ -( $\varepsilon$ )*pmu*)
- ( $\varepsilon$ )*tna* (~ -( $\varepsilon$ )*ʔna*)

Ebert (1994) has coined the term 'vertical case' for such vertically specified locative suffixes or postpositions on nominals, and shown many Kiranti examples. But on the basis of the descriptions of van Driem and Weidert & Subba, she has asserted (and theorized) their absence in Limbu (Ebert 1999).

I have no personal evidence of the presence or absence of this kind of expression in Limbu dialects other than Tamar Khole. On the other hand, I am quite sure that the general locative *-o* is absent from the Mewa Khola variety of Tamar Khole. We will see that a different morpheme fills this function.

## 2.1 The five directionals as a system

We may start with two examples which might suggest that the possibilities are exhausted by the trio *tho*, *yo*, *na*:

- |  |                     |                     |           |
|--|---------------------|---------------------|-----------|
| (5) <i>tho-haŋ-nu-aŋ</i>   | <i>mɛ-ghɔkt-ige</i> | <i>yo-haŋ-nu-aŋ</i> | <trade41> |
| uphill-side-ABL-   | 3PL-cut.off.S2-     | downhill-side-ABL-  |           |
| CONJ   | 1PL.EX              | CONJ                |           |
| <i>mɛ-ghɔkt-ige</i>  | <i>na-haŋ-nu-aŋ</i> | <i>mɛ-ghɔkt-ige</i> |           |
| 3PL-cut.off.S2-  | horiz-side-ABL-CONJ | 3PL-cut.off.S2-     |           |
| 1PL.EX   |                     | 1PL.EX              |           |
| 'They cut us off from above, they cut us off from below, they cut us off on the same level.' |                     |                     |           |

<sup>2</sup> The vocalic initial appears after a consonant final. Syllable-final *t* is often weakened to *ʔ* before a sonorant. It should be noted that all syllable-final stops are accompanied by glottal closure in Limbu (Driem 1987). There is some confusion in descriptions concerning the glottal stop and the glottal feature (ʔ) on vowels. For an introduction to Limbu phonology see Michailovsky 1986, 2002.



- (6) *lamdhet-ɛtmu* *yo-haj*            *lamdhet-ɛtmu* *yuj-ige*,            *kohi* *tho-haj*  
 door-LOC            downhill-side    door-LOC            stay.S2-1PL.EX    some    uphill-side
- lamdhet-ɛtmu*            *yuj-ige*,            *kohi*            *na-haj*            *lamdhet-ɛtmu*  
 door-LOC            stay.S2-1PL.EX    some            across-side            door-LOC
- yuj-ige* <mari47>  
 stay.S2-1PL.EX  
 ‘At the door, some of us stayed on the downhill side, some of us on the uphill side, some of us directly opposite.’ [Preparation for an attempted marriage by capture.]

But what about *mu* and *thaj*? That they constitute a pair, like *yo* and *tho*, is suggested by the two compounds glossed ‘up and down’ in the Academy dictionary: *tho:yo* and *mutha:y* (Kainla 2059, entries *tho:*, *mu*)

We will see that the directionals which are shared with Panchthar and Phedap (*yo*, *tho*, *na*) appear almost exclusively as markers of topographic vertical directions (uphill/downhill/level; up/downstream; ritual higher/lower on the ground floor of the house (Sagant 1973)), while *mu* and *thaj* are less closely tied to topography (with some overlap).

The table below gives a rough count of the occurrences of the five Tamar Khole directionals in a set of 11 Mewa Khola texts (10 of these are available for consultation in the Lacito Pangloss archive).<sup>3</sup>

(7)	directional	independent	with demonstrative	with nominal
	<i>thaj</i>	30	11	4
	<i>tho</i>	89	25	9
	<i>na</i>	89	30	14
	<i>yo</i>	77	70	13
	<i>mu</i>	~18 (56) <sup>4</sup>	118	200

It can be seen that the distribution of the directionals in their various uses is not uniform. There are 4 main asymmetries:

1. *thaj* ‘up’ is relatively infrequent in all uses
2. the pair *thaj/mu* is less frequent than the corresponding ‘topographic’ directionals in independent uses
3. the three topographic directionals seem to be roughly equally distributed, except that deictics with *yo* (e.g. *ɛtyo*) are more frequent than those with *tho* or *na*.

<sup>3</sup> The Nepali loan *bhitri* ‘in, inside’ also appears, twice independently and 10 times as a nominal postposition.

<sup>4</sup> The count is somewhat uncertain because of the existence of a homophonous emphatic discourse particle.

4. *mu* ‘down, below’ is over 10 times more frequent than the other directionals as a postposition, and also more frequent (as is *yo* ‘down’ to a lesser extent) in deictic compositions.

The last of these is the most striking. It is explained by the fact that *-mu*, in its postpositional use, but not as an independent directional, has taken on a general locative sense ‘at, in, on’ in addition to its vertically specified sense ‘down, under, below’.

All five directionals appear in Limbu dictionaries, e.g. Cemjong n.d. [2018 VS; 1961–1962], Subba 1979 (based on the Tamar Khole variety spoken in West Sikkim), and the comprehensive, multi-dialectal Nepal Academy dictionary (Kainla 2002), but in the dictionaries they do not appear as a system, and the opposition between the two ‘up’/‘down’ pairs is not brought out.<sup>5</sup> When asked (p.c. 1999), however, B. B. Subba (author of Subba 1984) unhesitatingly provided definitions similar to those given here.

## 2.2 Independent uses of directionals:

The five directionals can be used independently as directional/locative words, as seen in the following examples, which also illustrate the difference (and some overlap) between *tho* and *thaj*.

### *tho* ‘uphill, upstream’

- (8) *kheni tho thaj-inne!*  
 you.PL uphill come.up.s2-PL.IMP.INTR  
 ‘You<sup>p</sup> come<sup>p</sup> on up!’ [The target of (6) invites her suitor and his party to come up to her home to negotiate with her father.] <mari39>
- (9) *tho-nu me-y’y-ε kɔrɔ . . .*  
 uphill-ABL 3PL-come.down.s2-PST when  
 ‘When they came down from above . . .’ <kana43>
- (10) *kohi ettho tho pandɔtluj ke-yuj-m’-aj me-way-ε*  
 some up.here uphill Pandotlung ACT-stay.s1-fem 3PL-be.s2-PST  
 ‘There were some women who lived up here (?) up in Pandotlung.’ [spoken in Libang, downstream from Pandotlung; cf. (14)] <dance4>

### *thaj* ‘up’ (and sometimes ‘uphill’)

- (11) *khemsikpa yammu me-lij-ε thaj me-dha:b-ε*  
 star again 3PL.SA-climb.s2-PST up.v 3PL.SA-be.seen.s2-PST  
 Again the stars rose and were visible up above. <trade179>

<sup>5</sup> The Academy dictionary gives ‘above, up’ for both *thaj* and *tho*, but adds a positional meaning ‘on, over (something)’ for the former, and, similarly, ‘under’ for *mu*.

- (12) *anige thay topi khu:ks-umbe-b'-en me-nis-u*  
 1.PL.EX up.v cap wear.S2-1PL.EX>3-DEF 3PL.SA-see.S2-3O  
 ‘They saw us wearing Nepalese caps [‘up’, i.e. on our heads].’ <trade83>
- (13) *thay tal-dhay me-ips-e*  
 up.v storey-up.v 3PL.SA-sleep.S2-PST  
 ‘They slept up on the upper storey.’ (cf. Nep. *talā* ‘upper storey’) <jari38>
- (14) *thay pandotlung ke-yuy-ma menchia-ha?*  
 up.v Pandotlung ACT-stay.S1-FEM woman-PL  
 ‘women who live up in Pandotlung’ [spoken in Libang, downstream from Pandotlung] <sogha163>

**yo ‘downhill, downstream’**

- (15) *atti pe-si-ay yo me-deʹr-u-i*  
 where go.PST-DU-CONJ downhill 3PL.SA-take.S2-3O-Q  
  
*tho me-deʹr-u-i?*  
 uphill 3pl.sa-take.S2-3O-Q  
 ‘[Find out] where the couple went, did they take her down or up?’ <jari19>
- (16) *yo-nu la:ks-ε-rɔ thay-ε-ay*  
 below-ABL dance.S2-PA-PROG come.up.S2-PST-CONJ  
 ‘Having come dancing up from below . . .’ <sogha272>

**mu ‘down, downhill’**

Note that our examples of the independent use of *mu* clearly have the directional sense ‘down, below’, and not ‘in’ or ‘out’ or any general sense. The sense in (17) appears to be more topographic than gravitational, however.

- (17) *a-nyunba kancha kɔ mu-nu thay-ε*  
 1-pat.uncle youngest TOP down.v-ABL come.up.S2-PST  
 ‘My youngest paternal uncle came up from below.’ <nuppa68>
- (18) *mu ɔg-ay-ay th’y-ay*  
 dn.v come.off.S1-1SG.NA-CONJ fall.S2-1SG.NA  
 ‘I lost hold and fell down [from a cliff].’ <naro100>
- (19) *thay sinj-etthay kit-chij-ay kɔ thakpa kusik mu*  
 above tree-up.v coil-REFL-CONJ TOP rope like dn.v  
  
*yu-ay kɔ a-ɔ:k-pa*  
 come.down.S1 TOP 1PL-strike.S1-NOM  
 ‘[snakes] coiling themselves up up in trees and then coming down like ropes and striking people [lit. ‘striking us (INCL.)’] . . .’ <trade129>

- (20) *siŋ-etthaŋ-nu mu mut mɛ-dha-aŋ mɛ-si-mu*  
 tree-up.v-ABL down.v PRE.V 3PL-fall.S1-CONJ 3PL-die.S1-PART  
 ‘They fall down to their deaths from up in trees.’ <sogha60>

### **na ‘across’**

- (21) *uhi-sa pher-ɛ na-nu khune kɔ*  
 3.INTENS-EMPH come.level.S2-PST across-ABL 3 TOP  
 ‘in the same way, he came over’ <nuppa39>
- (22) *na-ba pa:n dewəl mɛ-mett-u*  
 across-NOM speech dewəl 3PL-say.S2-3O  
 ‘In the language over there [in Sikkim], they say ‘dewal’ [for ‘wall’].’ <naro49>
- (23) *na c’wa:tt-etmu nanak nanak las-ige ci-dhaŋdhak*  
 across water-in across.RED across.RED enter.S2-1PL.EX a.little-high.RED  
*c’wa:tt-en thaŋ-ɛ*  
 water-DEF rise.S2-PST  
 ‘Straight on, into the water, we went in further and further, and the water rose a bit higher.’ <trade47>

(The directionals have reduplicated forms, with a progressive sense, cf. also *yoyok*, *thodhok*.)

## 2.3 Postpositional uses

Postpositions formed from the directionals seem to conserve their vertical senses, except in the case of *-etmu* (see below). For *-etthaŋ*, see also (19), (20) above.

- (24) *yo keŋ-ɛ-ba tenn-etyo pe-aŋ*  
 down fall.S2-PST-NOM place-downhill go.PST-CONJ  
*khɔ-tyo kɔ la:ks-ɛ i:r-ɛ*  
 there-downhill TOP dance.S2-PST turn.S2-PST  
 ‘He<sub>i</sub> [the shaman] went down to the place where he<sub>j</sub> [the victim] had fallen and danced around down there.’ <sogha96>
- (25) *təmər khola liŋghim a-nuppa-si-rɛ-’ttho peg-aŋ-aŋ*  
 Tamar river Lingkhim 1-f.in.law-PL-GEN-uphill go.S2-1SG-CONJ  
*way-aŋ-elle*  
 be.S2-1SG-when  
 ‘When I had gone up to my father-in-law’s place in Lingkhim, in the Tamar Khola . . .’ <nuppa1>

- (26) *anige a:mbhu-'tna lɔ:nd-ige-aj*  
 1PL.EX yard-LOC.HZ exit.S2-1PL.EX-CONJ  
 ‘we came out [of the house] into the yard and . . .’ <sogha228>
- (27) *kohi kɔ na siŋŋ-elle ku-buŋŋ-etna i:p-masige*  
 some TOP across tree-GEN 3-trunk-LOC.HZ screen.S1-REFL.1PL.EX  
 ‘some of us hid ourselves over behind a tree trunk’ <trade149>
- (28) *ani-'tna tɔksɔŋ ke-wa<sup>2</sup>-ba-adi, etna kɔ seŋga*  
 1PLIN-LOC.HZ highland ACT-be.S1-NOM- PROX.LOC.HZ TOP lowland  
 1PL.IN.COP  
 ‘Over at our place we’re hill-dwellers, over here [Assam] it’s lowlands.’  
 <trade267>
- (29) *ekk-etthaj kɔkk-ɛn ke-bok-pa*  
 back-up.v load-DEF ACT-rise.S1-NOM  
 ‘carrying loads (up) on our backs’ <trade53>

In the case of *-etmu*, it is not clear in any of my text examples that it has the meaning ‘down in /down at’ as opposed to simply ‘in/at’. In (30), the potential victims are first presented as ‘up (in) trees’ (*siŋ-etthaj*); *thaj* and *-etthaj* are frequent in this context (cf. exx. 19, 20). The threat is to pull them ‘from in trees’ (*siŋŋ-etmu-nu*); *mu* clearly means ‘in’ and not ‘down’. (The verb *yak-* means ‘to be in’; it is not to be confused with *ya:kt-* ‘to stay over’ (31)). In the examples beginning with (34), the suffix is used without any physical locative sense.

- (30) *igɔrɔ siŋŋ-etthaj siŋ mɛ-dzɛpp-aj mɛ-yak-saŋ*  
 or.else tree-up.v wood 3PL-cut.S1-CONJ 3PL-be.in.S1-SUB  
  
*siŋŋ-etmu-nu-saŋ u:ks-uŋsiŋ thas-uŋsiŋ*  
 tree-LOC.IN-ABL-also pull.S2-1SG>3NSG make.fall.S2-1SG>3NSG  
 ‘Or else, if they are up in trees cutting firewood, I’ll pull them even from in the trees and make them fall. [spoken by a vengeful spirit, victim of an untimely death].’ <sogha182>
- (31) *thaj bənn-etmu dzəŋgəl-etmu ke-bek-p'-aj ke-ya:k-pa-ha<sup>2</sup>*  
 up.v forest-LOC jungle-LOC ACT-go.S1-NOM- ACT-stay.S1-NOM-CONJ-PL  
 CONJ  
 ‘those who had gone up and stayed over in the forest’ <ogre33>
- (32) *anige mura-'pmu nebo-'pmu c'wa:tt-ɛn las-ɛ*  
 1PL.EX mouth-LOC nose-LOC water.DEF enter.S2-PST  
 ‘Water got into our mouths and noses.’ <trade48>

- (33) *ku-dhegek-ha*<sup>2</sup>-*'tmu*<sup>6</sup> *ku-lay-ha*<sup>2</sup>-*'tmu* *makkhi-re* *embha* *lup* <sogha244>  
 3-head-PL-LOC 3-leg-PL-LOC blood-INST thus be.covered.S1  
 'On his head, his legs, he is covered with blood.'
- (34) *anigε* *sərsəllə* *mε-dəŋ-igen* *hindza* *phək-εtmu* <dance202>  
 1PL.EX counsel NEG-agree.S2-1PL.EX boy group-  
 LOC  
 'We didn't agree, among the group of boys.'
- (35) *tin* *rupiya* *səikəq'-εtmu* <naro12>  
 three rupee hundred.per-LOC  
 'at Rs. 3 per hundred'
- (36) *lam* *tə-m'-εtmu* *las-igε* <naas10>  
 road dig.S1-INF-LOC enter.S2  
 'we got into road-digging'
- (37) *the-'tmu* *kε-niŋwa* *mε-da-nen* <sogha257>  
 what-LOC 2-mind NEG-arrive.S1-NEG  
 'What are you unsatisfied about?'

### 3. The origin of -o 'LOCATIVE'

In parallel with this grammaticization of *mu* 'down', it seems likely that the general locative marker *-o* of other dialects reflects a grammaticization of *yo* 'down'. This is clearly suggested by the *Linguistic Survey of India*, which presents *yo* (in its full form) and *mo* in parallel as general locative markers (Grierson 1908:286).

. . . The usual suffix of the locative is, however, *yō* (*ō*, *ēō*) or *mō*; thus *pāngphē-yō* and *pāngphē-ō* in a country, into a country; *pārīhā-yo* and *pārīhā-mō* in, into, the field<sup>7</sup>; *ku-ningwā-mō* in his mind; *k'-him-mō*, in thy house. . . . A compound suffix of the locative is *khep-mō* or *hep-mō*, which sometimes also occur as *kheḥ-yō*, *khē-yō*, *heḥ-yo*, *hēyō*, respectively; thus, *lājī-hep-mo*, in a country.

This description, summarizing data from the different dialects covered in the survey, can be taken as describing two general locative markers, *o~yo* and *mo*, suffixed to nouns either directly or with a linking element (*k*)*ha~(k)he* followed by an oral or glottal stop (the latter transcribed *ḥ* ), perhaps originally *t*. There is

<sup>6</sup> The glottalization of the plural marker is in fact not pronounced separately from the phonetic glottal stop which accompanies the following syllable-final *t*.

<sup>7</sup> The word *pārīhā-mō/yō* is incorrectly segmented (cf. Nepali *bārī* 'unirrigated field'); *hāmō* is a locative suffix like those mentioned in the following sentence.

no mention or example of vertically-specified locative marking on nominals, however.

#### 4 Comparative remarks

Each of the five terms of the Tamarkhole vertical marking system appears to have cognates in one or another of the other Kiranti languages, as shown in the table.

	‘up’	‘down’	‘across’	LOC	source
Hayu	<i>l̃:kha,</i> <i>anikhen</i>	<i>ỹ:kha,</i> <i>utikhen</i>	<i>dokha</i>	<i>-he</i>	Michailovsky 1988: 122, 128
Bahing	<i>hateu</i>	<i>hayeu</i>	<i>re</i>	<i>-da</i>	Hodgson 1880(1): 351
Thulung	<i>-la</i>	<i>-yu</i>	<i>-nu</i>	<i>-ɕa</i>	Allen 1975: 110
Wambule	<i>twa-</i>	<i>ywa-</i>	<i>hwa-</i>	<i>-no/lo</i>	Opgenort 2004: 153, 180, 213, 215
Khaling	<i>-tü</i>	<i>-yu</i>	<i>-yo</i>	<i>-bi</i>	Toba & Toba 1975; Jacques, p. c.
Kulung	<i>-pto</i>	<i>-pu</i>	<i>-pa</i>	<i>-pi</i>	Tolsma 2006: 30
Chamling	<i>-dhi</i>	<i>-i</i>	<i>-ya</i>	<i>-da</i>	Ebert 1997a
Bantawa	<i>-du</i>	<i>-yu</i>	<i>-ya</i>	<i>-da</i>	Doornenbal 2009: 83
Athpare	<i>to</i>	<i>yo</i>	<i>ya</i>	<i>-ji</i>	Ebert 1997b: 99, 118
Chhintang	<i>to-</i>	<i>mo-</i>	<i>yo-</i>	<i>-be</i>	Rai et al. 2011: 301, 307
Mewahang	<i>-tu</i>	<i>-mu</i>	<i>-yu</i>	<i>-pi</i>	Gaenzle 1999: 150
Belhare	<i>-ttaj</i>	<i>-pmu</i>	<i>-ʔyã</i>	<i>-eC/pak</i>	Bickel 1999
Yamphu	<i>-tu</i>	<i>-mu</i>	<i>-yu</i>	<i>-peʔ</i>	Rutgers 1998: 68
Yakkha	<i>tu-</i>	<i>mu-</i>	<i>yu-</i>	<i>-pe</i>	Schackow 2014: 131, 181

Only *na* ‘across’ lacks immediately identifiable candidate cognates. As for *thaj*, it is clearly represented only in Belhare, but it is surely cognate to the Limbu verb *thaj-* ‘to come from below’, which is widely represented across Kiranti with the sense ‘to go up, ascend’. (Note the parallel with *yu* ‘down’, related to the widespread verb *yu-* ‘to come down’.)

What is not widely reported in Kiranti is the distinction between topographic and gravitational ‘up’ and ‘down’. The only mention I have found of a distinct gravitational dimension is in Chhintang (Dirksmeyer 2008: 63), but the words *bheĩ* ‘underside, under’ and *tem* ‘top, above’ are presented as somewhat apart from the basic directional paradigm, functioning as nominals referring to the top or bottom part of an object. In Tibeto-Burman, rich directional systems, with a clear distinction between ‘riverine’ (my ‘topographic’) and ‘gravitational’ dimensions, are well-known in rGyalrong. Jacques (2004) reports that all

Rgyalrong languages studied have three series of directional prefixes, up/down, upstream/downstream, and east/west, and a directionless prefix.

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## Lexical and morphological resemblances of Khasi and Dimasa<sup>1</sup>

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### 1 Introduction

**K**hasi is an Austro-Asiatic language which belongs to the Khasi-Khmuic sub-group and is sub-classified as Khasian (Diffloth 2005). It is spoken mainly in the states of Meghalaya and Assam in India, and in the neighbouring country of Bangladesh. Sohra is the standard dialect spoken in East Khasi Hills in Meghalaya. Khasi is an SVO language with head-initial feature and it is rich in isolating morphology and person-number-gender agreement patterns.

Dimasa is a Tibeto-Burman language belonging to the Bodo-Garo sub-group (Lewis, Simons and Fennig 2015). The Dimasa language is concentrated mainly in Assam and in some parts of the states of Nagaland, Manipur, Mizoram and Meghalaya in the north-east India. Hasao is the standard dialect which is spoken in Dima Hasao district in Assam. Dimasa is an SOV language and it is always head-final. It is rich in derivational morphology and it is highly suffixing than prefixing, as an agglutinating language.

Dima Hasao district of Assam, is the neighbouring district of Meghalaya, bordering Jaintia Hills in the east. Pnar dialect of Khasi is spoken in both of these districts. The Hasao dialect of Dimasa is spoken in Dima Hasao. In Figure 1, Dima Hasao is highlighted in grey, and the Khasi speaking regions as West Khasi Hills, East Khasi Hills, Ri-Bhoi and Jaintia Hills are highlighted in boundaries in Meghalaya.

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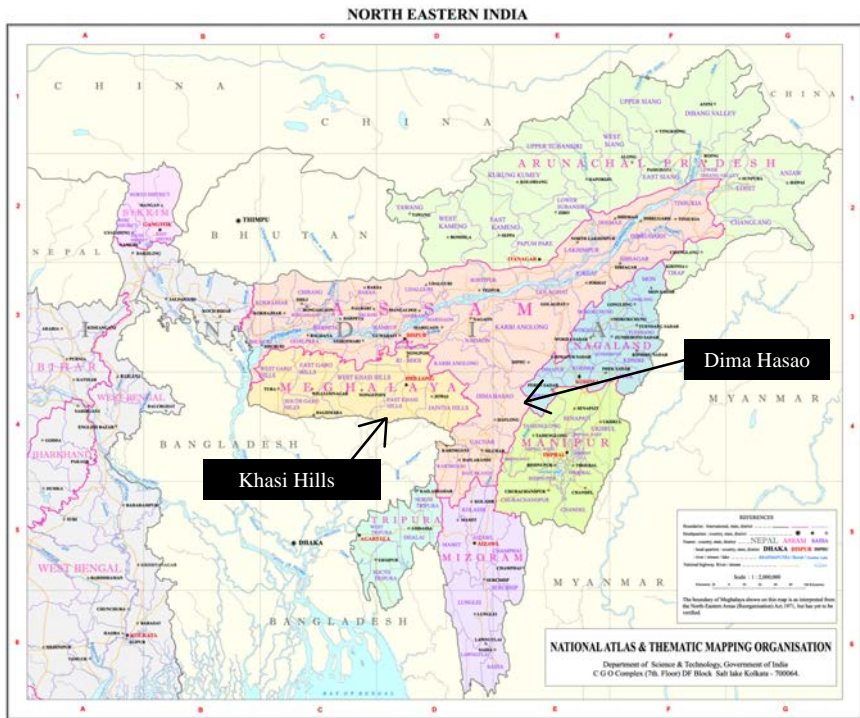


FIGURE 1 – Map showing Dima Hasao and Khasi speaking regions of Meghalaya (Government of India Dept. of Science and Technology 2015)<sup>2</sup>

The contact with the Jaintia kingdom (Khasian) historically dates back a long time, with the Dimasa Kachari kingdom established at Maibang as the capital (in Dima Hasao district) from 1536 A.D. – 1745 A.D. centuries after shifting from Dimapur (Barman 2007: 115–117). The two kingdoms had disputes related to autocracy and feudal system in the early part of the 17<sup>th</sup> and 18<sup>th</sup> centuries (Barman 2007: 112–114, Gait 2008: 304–305). Their contacts before that period perhaps, occurred, much earlier.

This chapter aims to provide a preliminary outline of the Khasi and Dimasa lexemes based on their cognates and some shared areal linguistic features from phonology, morphology, syntax and semantics, being the neighbouring languages, though genetically unrelated. The standard varieties of both the languages will be undertaken for the study though Pnar will be compared with Dimasa (standard Hasao) in some cases. Pnar is more closely associated with Dimasa due to the geographical boundaries. Their speakers are also found in

<sup>2</sup> The headquarters of Dima Hasao as Haflong, is represented in bold and Shillong, the capital of Meghalaya, is equally shown in bold in Figure 1.



- (5) *p<sup>hi</sup>*      *ja*      *lēʔkái*      (with rising intonation)  
 2PL      ACC      play  
 ‘You are playing?’

Tones (Dimasa):<sup>3</sup>

- (6) *t<sup>h</sup>iʔ*    ‘say’  
*t<sup>h</sup>ī*      ‘blood’  
*t<sup>h</sup>i̇*      ‘die’

Some interesting features found in shared phonological distributions of Khasi and Dimasa are discussed below:

## 2.1 Pseudo cluster formation

Cluster formation is a productive phonological process in both Khasi and Dimasa. Among the other Bodo-Garo languages, Dimasa has both onset and pseudo clusters which closely resembles the typical Austro-Asiatic feature found in Khasi.<sup>4</sup> The set of examples in (7) in both the languages show the combination of stop and nasal in the first set, and the sibilant and the nasal in the second set:

- (7) Khasi:      *k<sup>h</sup>nai*    ‘mouse’ (nai lum ‘rat’)  
 Dimasa:      *k<sup>h</sup>nai*    ‘hair’  
 Khasi:      *sɲi*      ‘sun, day’  
 Dimasa:      *ʃmau*    ‘move (trans.)’

## 2.2 Aphaeresis

Deletion of the initial consonants from the pseudo clusters occurs in certain words in Khasi. While *blaj* ‘goat’ changes into a compound word *laɲ-brot* ‘sheep’ with the deletion of /b/ from the pseudo cluster /bl/ by shifting to the second syllable *brot* in Khasi, such an occurrence is absent in the case of Dimasa. However, Dimasa carries consonant deletion in the initial word position in few cases as seen in the following examples in (8).

- (8) Khasi:      *blaj* ‘goat’ > *laɲ-brot* ‘sheep’      (Roberts 1891)  
 Dimasa:      *k<sup>h</sup>roʔ* ‘head’ > *roʔ* ‘comb (v)’  
 Khasi:      *kɪpa* ‘belly’ > *kpa* > *pa* ‘father’      (Roberts 1891)  
 Dimasa:      *bohoʔ* ‘belly’ > *hoʔ* > *hot<sup>h</sup>mai* ‘navel’

<sup>3</sup> The glottal stop /ʔ/ is a special phoneme in Dimasa since it occurs only word-finally having both low and high tones, and it loses its glottalisation during suffixation with other morphemes.

<sup>4</sup> Garo also shows the presence of pseudo cluster word formation in fast speech besides Dimasa, both being the neighbouring languages of Khasi.

## 2.3 Consonant alternation

Consonant alternation of lexemes between the two neighbouring languages is highly present as seen in the set of examples in (9):

- (9) Khasi: *kwai* ‘betel nut’ > *wai doŋ* ‘betel nut shop’  
 Dimasa: *gwai* ‘betel nut’  
 Khasi: *kulai* ‘horse’  
 Dimasa: *gorai* ‘horse’  
 Khasi: *pulei* ‘read’  
 Dimasa: *p<sup>h</sup>uri* ‘read’  
 Khasi: *blaŋ* ‘goat’  
 Dimasa: *brun* ‘goat’

In the examples in (9), these lexemes are possibly borrowed forms from the other neighbouring languages including the Indo-Aryan languages. Khasi uses the voiceless unaspirated stop /k/, while Dimasa uses /g/ in the loan word for ‘betel nut’ as *kwai* and *gwai* (Assamese *guwa*). The borrowed forms in the remaining examples show the occurrence of the voiced lateral approximant /l/ in Khasi which is regularly used as the voiced tap /ɾ/ in Dimasa.

## 3 Morphological features

Khasi is rich in both inflectional and derivational morphology, while Dimasa is highly rich in derivational morphology. Some common derivational features are the noun class terms attached with the bound roots, compounding, the numeral ‘one’ *fi*, the locative case *ha*, the emphatic particle ‘*se*’ and the existential verb *don/doŋ*.

### 3.1 Noun class terms

Noun class terms are mostly free lexemes which can be both prefixing and suffixing in Dimasa while they are only prefixing in Khasi. Noun class terms based on fruits, animals, excretion, time and clothes found in both the data are discussed in this section.

#### 3.1.1 Fruit

*soʔ* is the noun class prefixing term for fruit in Khasi as in *soʔ-namtra* ‘orange’, *soʔ-jew* ‘lemon’, *soʔ-p<sup>h</sup>an* ‘jackfruit’ while *bt<sup>h</sup>ai* ‘fruit’ is prefixed in Dimasa as *t<sup>h</sup>ai-* as in *t<sup>h</sup>ai-dzu* ‘mango’, *t<sup>h</sup>ai-fa* ‘lime’, *t<sup>h</sup>ai-lik* ‘banana’. However, few lexemes for fruits in Dimasa perhaps seem to be borrowed from Austro-Asiatic from the neighbouring Khasi noun class prefix as seen in (10).

- (10) Khasi: *soʔ-priam* ‘guava’  
 Dimasa: *fo-p<sup>h</sup>ri* ‘guava (loan word: IA > Bengali)’  
*fu-k<sup>h</sup>rem* ‘guava’

### 3.1.2 Animals

*mV-* is the typical noun class prefix for animals in Bodo-Garo languages, including Dimasa as in *mi-fi* ‘tiger’, *mi-juj* ‘elephant’, *mi-t<sup>h</sup>aj* ‘buffalo’ and so on. Khasi has several lexemes for animals as in *blaj* ‘goat’, *miaw* ‘cat’, *k<sup>h</sup>la* ‘tiger’ and others, though some animal names seem to have prefixing *mV-*, which is areally shared from the Bodo-Garo languages.

- (11) Khasi: *mi-rstaj* ‘fox’  
 Dimasa: *mo-sroj* ‘fox’  
 Khasi: *ma-si* ‘cow’  
 Dimasa: *mu-fu* ‘cow’

### 3.1.3 Excretion

The noun class prefixing *k<sup>h</sup>i* ‘excretion’ is a typical Bodo-Garo feature, present in Dimasa, as in *k<sup>h</sup>i-p<sup>h</sup>u* ‘anus’, *k<sup>h</sup>i-t<sup>h</sup>oj* ‘buttocks’, *k<sup>h</sup>i-t<sup>h</sup>ai* ‘penis’ and *k<sup>h</sup>i-lam* ‘genital area’. Excretion words like those for animals (§3.1.2) have different lexemes in Khasi such as, *t<sup>h</sup>li:w jinʃoj* ‘anus’, *sim* ‘penis’ and *firkait* ‘genital area (native lexeme)’ though *ki-pou* ‘genital area (loan word)’ is also used, which clearly is derived from the Bodo-Garo feature.

- (12) Khasi: *ki-pou* ‘genital area’  
 Dimasa: *k<sup>h</sup>i-p<sup>h</sup>u* ‘anus’

### 3.1.4 Time

The past time is expressed by using the *mV-* prefix to bound roots in Dimasa besides other Bodo-Garo languages, while it occurs as *min-* in Khasi which seems to morphologically resemble these languages as shown in (13).

- (13) Khasi: *min-nin* ‘yesterday’  
 Dimasa: *m-ja* ‘yesterday’  
 Khasi: *min snida* ‘day before yesterday’  
 Dimasa: *m-ja aqafi* ‘day before yesterday’  
 Khasi: *min-fwa* ‘before, earlier days’  
 Dimasa: *mə-naŋ* ‘before, earlier days’

### 3.1.5 Cloth

Cloths in general are morphologically expressed by using the lexeme *ri?* ‘cloth’ as a prefixing category in Dimasa as in, *ri-dʒamp<sup>h</sup>ain* ‘middle wrapper of women’, *ri-gu* ‘skirt’, *ri-fa* ‘male wrapper’ and others. In Khasi, cloths in general are

called *ri-am* ‘dress’ which seems to be similar with Dimasa as in *ri-d̥em* ‘dress’. However, a particular piece of cloth in Khasi seem to have *d̥ain* ‘cloth’ prefixing as in, *d̥ain-sem* ‘wrap around’, *d̥ain-siaŋ* ‘table cloth’ and *d̥ain-kup* ‘shawl’ where, *d̥ain* (Khasi) and *d̥em* (Dimasa) indeed have morphological coincidences. They are illustrated in (14).

- (14) Khasi: *ri-am* ‘dress’  
 Dimasa: *ri-d̥em* ‘dress’  
 Khasi: *d̥ain* ‘cloth’  
 Dimasa: *ri?* ‘cloth’

### 3.1.6 Meat

The chopped meat is lexically prefixed with *do?* in Khasi as in (15a). *do?* occurs with the glottal stop as a suffixing noun class term only for *bon* ‘wood’ as in *bon-do?* chopped wood, while it occurs without the glottal stop, when it functions as a numeral classifier in Dimasa to describe chopped objects such as *bon* ‘wood’ and *mgoy* ‘meat’ from (15b) to (15d).

- (15) (a) *do?-sniay* ‘pork’ (Khasi)  
*do?-k<sup>h</sup>le?* ‘mashed pork (cooked)’  
*do?-siar* ‘chicken’
- (b) *bon-do*            *do-fi* (Dimasa)  
 wood-chopped    woodCLF-one  
 ‘one piece of wood’
- (c) *mgoy*    *do-gin*  
 meat        CLF-two  
 ‘two pieces of meat’
- (d) *brun-hain*    *do-t<sup>h</sup>am*  
 goat-flesh    CLF-three  
 ‘three pieces of mutton’

*hain* ‘flesh (shortened form of *ba-ham* ‘flesh’, where *bV-* is the inalienable prefix)’ as seen in *brunhain* ‘mutton’ in (15d), is the noun class term for ‘meat’ in Dimasa.

## 3.2 Word derivation

In the data, the roots of some morphemes in Khasi probably originate from the Bodo-Garo languages and Dimasa exemplifies this feature as shown in (16):



- (16) Khasi: *pin-p<sup>h</sup>ai* ‘return’  
 Dimasa: *p<sup>h</sup>ai-p<sup>h</sup>in* ‘return’ (*p<sup>h</sup>ai* ‘come’, *p<sup>h</sup>in* ‘again’)

As seen in the case of *p<sup>h</sup>ai-p<sup>h</sup>in* ‘return’ which is clearly a Bodo-Garo word structure, this occurs as morphemic alternation in Khasi as in *pin-p<sup>h</sup>ai* ‘return’. Another verb root related to the domain of *p<sup>h</sup>ai* ‘come’ is *fo-p<sup>h</sup>ai* ‘arrive’ in Dimasa as given in (17) which is borrowed as *poi* ‘arrive’ as a result of front clipping in Khasi.

- (17) Khasi: *poi* ‘arrive’  
 Dimasa: *fo-p<sup>h</sup>ai* ‘arrive’ (*fo* ‘complete, total’, *p<sup>h</sup>ai* ‘come’)

The word for ‘sun, day’ in Khasi again seems to be borrowed from Bodo-Garo languages; *fain* (Dimasa/BG) > *sji* (Khasi). Burling (1983, 2003: 174) classifies Bodo-Konyak-Jingphaw as a ‘Sal’ language because of the presence of the lexical cognate for ‘sun’ as ‘*sal*’, ‘*wal*’ in most of these languages. Dimasa *fain* seems likely to be a cognate of ‘*sal*’. The second set of examples add some evidences to the fact that the compound word *tij-fain* ‘bright (Khasi)’ is indirectly borrowed from BG languages, having the stem *fain* (Dimasa/BG). On the other hand, Dimasa forms a new lexeme for ‘bright’ as *ɕna* ‘bright’, and can be compounded in a noun phrase as *fain ɕna-ba* ‘bright sun’ where *-ba* is the nominalising suffix. These examples are illustrated in (18).

- (18) Dimasa: *fain* ‘sun, day’  
 Khasi: *tij-fain* ‘bright’ (BG?)  
 Dimasa: *ɕna* ‘bright’

### 3.3 Numeral ‘one’

The numeral ‘one’ can be of three kinds in Khasi: *fi*, *wei* (masculine) and *uwei* (feminine). *fi* morphologically resembles the numeral ‘one’ in Dimasa (*-fi/fe*) and the other Bodo-Garo languages. *fi* is a bound morpheme as a prefix, while *wei* is a free morpheme in Khasi (Joseph 2010).

While counting ‘one’, *fi* is very productive in Khasi as in *fi-fiji* ‘one day’ and *fi-finoj* ‘one village’, and it employs *fi* in collective numbers (*fi-ginda* ‘one anna of four pice, four’) and in ordinals as in fractional numbers (*fi-pawa* ‘a quarter’), measures (*fi-k<sup>h</sup>am* ‘a hand breadth, four inches’) and reduplicative numerals (*fi-wad*, *fi-sin* ‘once’), while *wei* is used with distributive numerals (*mar-wei-wei* ‘one by one’) (Roberts 1891: 34–37).

Dimasa prefixes the numeral classifiers, both generic and specific, with *-fi* as in (19a) and (19b), while it does not require a numeral classifier in Khasi.

- (19) (a) *grau ma-fi*  
 word CLF (generic)-one  
 ‘something’

- (b) *fɔuɲ*      *fau-fi*  
 person      CLF (human)-one  
 'one man'

### 3.4 Locative case *ha*

The case markers in Khasi are prefixes (nominative  $\emptyset$ , accusative *ia*, genitive *dʒoŋ*, dative *ia*, *ia ha*, locative *ha* and instrumental *da*) (Roberts 1891), while in Dimasa, they are suffixes (nominative  $\emptyset$ , accusative *-k<sup>h</sup>e*, genitive *-ni*, dative *-ne/-t<sup>h</sup>ane*, locative *-ha*, instrumental *-dʒaŋ* and associative *-dʒaŋ*). Among the six cases in Khasi, the locative case *ha* resembles the suffixing locative case *-ha* in Dimasa, which is equally present in other Bodo-Garo languages (Bodo *-au*, Garo *-o*) as shown in the examples in (20) and (21).

- (20) *ŋa*      *fɔŋ*      ***ha-lor***      *fuki*      (Khasi)  
 1SG      sit      LOC-up      chair  
 'I sit on a chair'
- (21) *bo*      *mja*      ***no-ha***      *t<sup>h</sup>u-du*      (Dimasa)  
 that      boy      house-LOC      sleep-PRES  
 'That boy sleeps/ is sleeping at home'.

### 3.5 Emphatic particle *se*

The emphatic particle *fe* can occur with both noun and verb phrases in Dimasa as in (24a) and (24b), which functions in the similar manner in the Pnar variety of Khasi (spoken in Jaintia Hills) as *se* in (23). Standard Khasi uses *ma* to emphasize the NPs and VPs as in (22).

- (22) ***ma***      *ŋa*      *ba*      *le?*      (Standard Khasi)  
 EMPH      1SG      that      do  
 'I do it'.
- (23) *ŋa*      *wa*      *wai*      *ka*      *dwar*      ***se***      (Pnar)  
 1SG      RLVZ      open      3SGF      door      EMPH  
 'I opened the door'.
- (24) (a) [*aŋ-fe*]      *niŋ-k<sup>h</sup>e*      *loŋ-ba*      (Dimasa)  
 1SG-EMPH      2SG-ACC      call-PST  
 'I called you'.
- (b) [*bo*      *dʒɪ-k<sup>h</sup>a-fe*]      *de-ma*      (Dimasa)  
 3SG      eat-CND-EMPH      big-FUT.PROX  
 'He will grow only if he eats'.

### 3.6 Existential construction

The existential verb *don* in Khasi morphologically resembles the Bodo-Garo *doŋ*, which bears its roots from proto-Sino-Tibetan. The word-final /-ŋ/ in BG *doŋ* makes it different from the Khasi /n/ in *don*.

In non-existential constructions in Khasi, the negation *um* occurs before the existential *don* as shown in (25). Dimasa has a different lexeme *gri* to negate this kind of construction as illustrated in (26).<sup>5</sup>

- (25) (a) *u-m*                      *don*                      *ha*                      *i:ŋ*                      (Khasi)  
           3SGM-NEG                  EXIST                  LOC                  home  
           ‘He is not there at home’.

- (b) *u*                      *don*                      *ha*                      *i:ŋ*  
           3SGM                  EXIST                  LOC                  home  
           ‘He is at home’.

- (26) (a) *bo*                      *no-ha*                      *doŋ*                      (Dimasa)  
           3SG                  house-LOC                  EXIST  
           ‘She is at home’.

- (b) *bo*                      *no-ha*                      *gri*  
           3SG                  house-LOC                  NON. EXIST  
           ‘She is not there at home’.

## 4 Syntactic processes

This section discusses the particles *la* and *ba* found across Dimasa and Khasi as nominal/verbal reflexive and nominalizer/relativizer. The relativizer in Pnar as *wa* and in Dimasa as *-ja* are very similar which are briefly discussed in this section.

### 4.1 Nominal and verbal reflexives

The prefix *la* functions both as the nominal and verbal reflexive in Khasi as seen in (27) and (29), while it functions only as the verbal reflexive in Dimasa as shown in (28). The nominal reflexive is *ɽjar* in Dimasa in (28).

- (27) *ka*                      *ieid*                      *ja*                      *la-de*                      (Khasi)  
           3SG                  love                  ACC                  REFL-PTCL  
           ‘She loves herself’.

<sup>5</sup> The negation particle *um* prefixed with the existential verb in Khasi is a typical feature of the several Kuki-Chin languages where *um/om* is an existential particle negated with *-lou* as in *um-lou*.

- (28) *bo-la*      *ɔ̃ʒar-kʰe*      *ham-ɔ̃ʒau-la-ba*      (Dimasa)  
 3SG-TOP    REFL-ACC      good-PASS-REFL-PRES  
 ‘She loves herself (She good being felt by herself)’.
- (29) *u*      *ʃipai*      *u*      *siat*      *ja*      *la-de*      (Khasi)  
 3SGM    soldier    3SGM    shot      ACC      REFL-PTCL  
 ‘The soldier shot himself’.

## 4.2 Nominalization and relativization

The suffix *-ba* functions as a nominalizer and indefinite marker in noun phrases in Dimasa as in (30) while the prefix *-ba* functions as the relativizer in Khasi as in (31).

- (30) *mairiŋ*      [*lim-ba*]      *rau-bi*      (Dimasa)  
 Mairiŋ      sick-NMZ      hard-PRED  
 ‘Mairiŋ falling sick is very frequent’.
- (31) [*ka*      *kʰinna?*      *kintʰei*      *ka-ba*      *pʰet*]  
 3SGF      child      female      3SGF-RLVZ      run  
*ka*      *la*      *wan*      *pʰai*      *ʃa*      *i:ŋ* (Khasi)  
 3SGF      PST      come      return      towards      house  
 ‘The girl who ran away, came back home’.

The relativizing suffix is *-ja* in Dimasa and it occurs with verbs and verb-like adjectives followed by the indefinite marker *-ba* as in (32), modifying the head noun *mja* ‘boy’.

- (32) [*bo*      *mja*      *ʃu-ɔ̃ʒau-ja-ba*]      *dini*  
 that      boy      beat-PASS-RLVZ-INDF      today  
*kʰai-kʰa*  
 run-PFV      (Dimasa)  
 ‘The boy, who was beaten, ran away today’.

In Pnar, the relativizing particle is *wa* prefixing in the relative clause *u kʰinna? u wa cʰa? bom* ‘the boy who was beaten’ in (33), unlike the Standard Khasi *ba* as previously illustrated in (31). It appears to be phonologically similar to the relativizing suffix in Dimasa *-ja*, being areally closer in contact with Pnar.

- (33) [*u*      *kʰinna?*      *u*      *wa*      *cʰa?*      *bom*]      *da*  
 3SGM    boy      3SGM    RLVZ    PASS    beat      PST  
*pʰet*      *u*      *innei*      (Pnar)  
 run      3SGM      today  
 ‘The boy, who was beaten, ran away today’.

## 5 Semantics

This section discusses few lexemes found to occur in oppositeness in two ways: change in state and change in meaning. It briefly discusses some lexically similar and dissimilar words found in the data collected for both the languages.

### 5.1 Event and state

A few words are shared in Khasi and Dimasa based on event and state oppositeness. *dʒi* ‘eat’ is a verb of event in Dimasa and it phonologically occurs in several Bodo-Garo languages as *dʒa* (Bodo), *sa* (Rabha), *ca* (Garo). *dʒa* is an entity in Khasi and it means rice which probably seems to have shared the event vs state opposites.

- (34) Khasi: *dʒa* ‘rice’  
 Dimasa: *dʒi* ‘eat’

Another example is the process of drinking in Khasi and the entity, water, in Dimasa, namely, *diʔ* vs *di* thereby indicating some shared linguistic feature:

- (35) Khasi: *diʔ* ‘drink’  
 Dimasa: *di* ‘water’

The opposite meaning counterpart for ‘drink’ in Dimasa is *liŋ* and ‘water’ in Khasi is *um*, which are both typical features of the Bodo-Garo and Austro-Asiatic languages respectively.

### 5.2 Meaning and form opposites

Unlike the previous examples that are opposites in both the languages in terms of motion and states, some examples from Khasi and Dimasa are found to be lexical polar opposites as seen in (36) and (37).

- (36) Khasi: *foŋ* ‘sit’  
 Dimasa: *foŋ* ‘stand’

- (37) Khasi: *em* Negative  
 Dimasa: *om* Affirmative

*foŋ* ‘stand’ is a typical feature lexically present in Bodo-Garo languages as in Bodo, Garo, Rabha and so on. The borrowing in Khasi is interestingly a polar opposite as ‘sit’. The standard dialect Hasao in Dimasa affirms a word or statement by using the particle *om* besides using *ã*, while the other dialects use *ĩ* (Hawar), *au* (Dembra and Dijuwa). In case of *em* and *om*, the phonological alternation of the vowels /e/ and /o/ take place during the borrowing. The

affirmative *ho?* *oid* in Khasi bears resemblance with the Eastern Indo Aryan *hor* (Assamese) and *hē* (Bengali) while the negative *nija* (it can be shortened as *nja*, with /nj/ as the pseudo cluster) is a native Dimasa word.

### 5.3 Lexical similarities and dissimilarities

A few lexically similar and dissimilar words in Khasi and Dimasa are found in the data. They are illustrated in Table 1.

TABLE 1 – Lexical similarities

<b>Khasi</b>	<b>Dimasa</b>	<b>Gloss</b>
<i>fo?</i>	<i>fu?</i>	‘beat’
<i>t<sup>h</sup>ia?</i>	<i>t<sup>h</sup>u</i>	‘sleep’
<i>tap</i>	<i>t<sup>h</sup>ap</i>	‘cover’
<i>ti?</i>	<i>t<sup>h</sup>i?</i>	‘say’
<i>su?</i>	<i>fu</i>	‘sew’
<i>ɲa</i>	<i>aɲ</i>	‘I’
<i>k<sup>h</sup>o?</i>	<i>k<sup>h</sup>o?</i>	‘remove, peel’
<i>ksiar</i>	<i>gəɖzau/gzau</i>	‘gold’
<i>dain</i>	<i>dain</i>	‘cut’

Table 1 shows the irregular phonological occurrences of vowels and consonants in the lexically shared lexemes. The word for ‘sew’ *su?* in Khasi with the alveolar fricative /s/ occurs as the post-alveolar fricative /ʃ/ in Dimasa *fu*. The velar nasal /ŋ/ occurs in the alternating position as *ɲa* ‘I’ in Khasi and as *aɲ* in Dimasa. Most of the shared lexemes having voiced consonants in Dimasa (*gəɖzau/gzau*) occur as voiceless counterparts in Khasi (*ksiar*), those having aspirations in Dimasas (*t<sup>h</sup>ap*, *t<sup>h</sup>i?*) occur as unaspirated consonants in Khasi (*tap*, *t<sup>h</sup>i*), glottalisation may or may not occur for all similar examples in case of Dimasa (*fu?*, *t<sup>h</sup>u*, *fu* and *k<sup>h</sup>o?*) as seen in previous examples.

## 6 Conclusion

As seen from the above findings of the study, it makes a lexical comparison and shows a presence of borrowings and shared features of lexemes in terms of phonological and morphological features, syntactic processes, and semantic oppositeness and similarities, across Dimasa and Khasi, including Pnar in few cases, though they are both genetically unrelated languages. Diffloth (2008) shows the areally shared words in Khasi from Shafer’s list as probably originating from BG/TB languages, among which which *masi* ‘cow’, *ɲa* ‘I’ and *ksiar* ‘gold’ are found in the present data.

Since this paper is a preliminary study of the lexical and morphological comparison of Khasi and Dimasa, further research is required to compare these two languages as well as other related languages, and bring an understanding of the areal contact in these two language families, Proto-Bodo-Garo and Proto-Khasian.

## Abbreviations

1 First Person, 2 Second Person, 3 Third Person, ACC Accusative, CLF Classifier, CND Condition, EMPH Emphatic, EXIST Existential, F Feminine, FUT Future, INDF Indefinite, LOC Locative, MASC Masculine, NEG NEG Negative, NMZ Nominalizer, NON.EXIST Non Existential, PASS Passivizer, PFV Perfective, PL Plural, PRED Predicative, PRES Present, PROX Proximate, PST Past, REFL Reflexive, RLVZ Relativizer, SG Singular, TOP Topicalizer

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## 9

## Using Eastern Indo-Aryan borrowings in Tiwa to help model contact scenarios: A case study in loanword phonology<sup>1</sup>

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### 1 Introduction

The plains and lower hill regions of Northeast India have been a highly complex multilingual contact zone for at least last one and a half millennia (DeLancey 2012). Speakers of Tibeto-Burman, Indo-Aryan, Austroasiatic, as well as, further east, Tai-Kadai languages have had to communicate with each other, and this did not leave their languages unaffected. In this paper, our goal is to use loanword phonology to track how Tiwa, a Tibeto-Burman language of the Bodo-Garo branch with about 30,000 speakers, has been affected by contact with Assamese and/or Bengali, the dominant Eastern Indo-Aryan languages in Northeast India. While Assamese is currently the predominant lingua franca in the central state of Assam, Bengali has long had an important sphere of influence extending across the modern-day border with Bangladesh.

In the course of producing a Tiwa dictionary with just over 7,500 entries (Joseph 2014), Joseph was able to accumulate a list of almost 1,500 borrowings from Eastern Indo-Aryan (Assamese, Bengali) into Tiwa. The sheer mass of Indo-Aryan (IA) borrowings in Tiwa, at approximately one fifth of the lexicon, is an extreme case of contact between dominant IA languages and minority Tibeto-Burman (TB) languages in Northeast India. Nonetheless, smaller scale versions of this contact scenario are the rule and not the exception in the region.

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<sup>1</sup> We are grateful to Gitanjali Bez and to Zahid Akter for helping us with our Assamese and Bengali data, respectively. The first author would also like to thank the Tiwa dictionary team, who helped accumulate the loanword database that this study is based on: Horsing Kholar, Juliana Maslai, Alfred Maslai, Bibiana Maslai, and Simon Mithi.



Despite the pervasiveness of the phenomenon, our understanding of the mechanisms and consequences of this type of IA-TB contact, as well as the methodological issues that arise in trying to study them, have barely started to be discussed in the literature.

This study considers evidence from loanword phonology by examining the sound correspondences between the native Eastern Indo-Aryan and borrowed counterparts in Tiwa. We use Assamese orthography to have a historical record of the source languages, against which we can triangulate the modern data. Our case study aims to show how this kind of evidence can help model the contact scenarios over time, as well as what problems this approach runs into. In short, we try to show what we can gain from this kind of a study, and what its limitations are.

This paper has the following structure. The remainder of this introductory section briefly summarizes what we currently know about the history of the languages in the region (§1.1) and which methodology we used (§1.2). Section §2 offers an overview of Tiwa phonology and its development since Proto-Bodo-Garo as well as basic information on Assamese diachronic phonology. The next three sections §§3–5 discuss the data in light of three research questions. First (§3), what do the sound correspondences between native vs. loan words tell us about the source languages in the borrowing scenarios? Second (§4), what can we infer about different time periods of borrowing? And third (§5), how has Tiwa phonology been affected by this massive amount of lexical borrowing? A summary and conclusion of the study is provided in §6.

### 1.1 A brief history of the languages in the region

The history of Tiwa begins with its ancestral language, Proto-Boro-Garo (PBG). When speakers of this proto-language moved into the present day location in western Northeast India, they probably encountered and then had close contact with Austroasiatic languages, especially Khasi and Pnar (Kakati 1962 [1941]; DeLancey 2012). Building on research by Burling (2007), DeLancey (2012) argues that PBG was a lingua franca across the Brahmaputra Valley. The region has a long history of multilinguality, with ever-changing linguistic configurations, especially when the dominance of IA language speakers, i.e. speakers of the language that was to develop into Assamese, started. This unstable climate persisted as PBG started to diversify into the modern languages. Kakati, as an explanation for the considerable dialectal variation found in the western part of the Assamese-speaking area, writes,

Western Assam was never for a long period under any dominant power. It was the cockpit of several fighting forces, – the Koches, the Muhammedans, and the Āhōms, and political fortunes passed from one power to another in different times. A steady commanding central influence that gives homogeneity to manners as to speech was never built up by any ruling power in western Assam. Kakati (1962 [1941]: 15)

This kind of dynamic history certainly affected other languages as it affected Assamese. There is no doubt that there are multiple contact scenarios that over time have shaped Tiwa, located in the central-western part of present-day Assam.<sup>2</sup>

## 1.2 Methodology and limitations of this study

Not much is known about the contact scenarios between Tibeto-Burman and Indo-Aryan, which happened as part of a dynamic situation of complex multilingualism (but see the case study on Bishnupriya by Satyanath and Laskar (2008)). The prolonged history of contact has almost certainly involved Assamese and Bengali; other Tibeto-Burman languages besides Tiwa, both within and outside of Bodo-Garo; as well as Austroasiatic languages such as Khasi and perhaps Pnar. As we tackle this research agenda only via loanword phonology, this study has limitations, which we want to be clear about at the outset.

This paper is based on phonological correspondences in IA borrowings in Tiwa, extracting whatever evidence we considered helpful for understanding the contact scenario between Tiwa and Assamese/Bengali. Our primary resource was Barua's (1992) *Hem Kosha Assamese-English dictionary* (first edition published in 1900), supplemented, in some cases, with information from the online multilingual dictionary [www.xobdo.org](http://www.xobdo.org). There is no evidence to argue that the lexical items given in these dictionaries are always the source forms of the borrowings; in fact, in some cases, we argue below that they are not. However, Barua's (1992) dictionary was the reference work used by Joseph for the compilation of Eastern IA borrowings in Tiwa, and it represents a good resource for IA lexical items.

It has worked in our favor that Barua (1992) lists words that are no longer in use in Assamese. As a result, this dictionary provides an etymological record of the language, which makes it useful for the purpose of identifying Eastern IA words beyond those currently in use in modern Assamese.

## 2 Phonological preliminaries

### 2.1 Tiwa phonology

There are seventeen consonants that may occur as syllable onsets in Tiwa, as shown in Table 1. The phonemic representation (here and elsewhere in this paper) follows the IPA. Note that in the unaspirated stop series, there is a voicing alternation in complementary distribution: The voiced stops [b,d,j,g] occur intervocalically, whereas the voiceless stops [p,t,c,k] occur elsewhere. In the

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<sup>2</sup> Note that Kakati's work predates the partition of Northeast India into the seven states. 'Assam' previously referred to Northeast India as a whole.

Romanization of Tiwa used here, the [b,d<sub>ɹ</sub>,g] allophones are represented as such. Otherwise, the representation is fully phonemic.

Table 1 shows that there are two manner series of stops: voiceless unaspirated and voiceless aspirated ones. Voiceless unaspirated stops have voiced allophones that occur inter-vocally. The phonemic opposition between alveolar /s/ and postalveolar /ʃ/ is unique among the Bodo-Garo (BG) languages, and more generally very unusual for Tibeto-Burman languages of Northeast India. The best explanation for the existence of this phonemic opposition in Tiwa is contact with the neighboring Austroasiatic Khasi languages, where a /s-/ /ʃ/ contrast is common. Among the nasals, note that a velar nasal onset only occurs in *ŋá* ‘fish’ and compounds that include this stem. The other BG languages have lost syllable-initial /ŋ/ altogether.

TABLE 1 – Tiwa syllable-initial consonants

		Bilabial	Alveolar	Post-alveolar	Palatal	Velar	Glottal
<b>Stops</b>	unasp.	p[p~b]	t[t~d]		c[c~ɟ]	k[k~g]	
	asp.	p <sup>h</sup>	t <sup>h</sup>			k <sup>h</sup>	
<b>Fricatives</b>			s	ʃ			h
<b>Nasals</b>		m	n			ŋ	
<b>Lateral</b>			l				
<b>Rhotic</b>			r				
<b>Glides</b>		w			j		

Table 2 shows the much smaller inventory of consonants that may occur at the end of the syllable. There is only a voiceless unaspirated stop series in coda position and there is no palatal coda stop, which is common among Tibeto-Burman languages of the region. Likewise, three places of articulation for coda nasals are common. An uncommon coda consonant is the fricative /s/.

TABLE 2 – Tiwa syllable-final consonants

	Bilabial	Alveolar	Velar
<b>Stops</b>	p	t	k
<b>Fricatives</b>		s	
<b>Nasals</b>	m	n	ŋ
<b>Lateral</b>		l	
<b>Rhotic</b>		r	

Tiwa only has a five-vowel system of monophthongs, as shown in Figure 1. This is very unusual in BG, where most if not all other languages have six vowels, the ‘sixth’ vowel being a high back unrounded vowel throughout BG (Burling 2013).

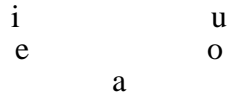


FIGURE 1 – Tiwa vowel monophthongs

As far as syllable structure is concerned, Tiwa allows certain onset clusters. In particular, sequences of stops with /r/ or /l/ occur, although never /tl/ or /tʰl/. For present purposes, more important than the internal structure of the syllable is the relationship between syllables and words. Significantly, a very large number of native Tiwa words are disyllabic. This deep-rooted preference for disyllables is a robust feature of Tiwa phonology and will be further discussed in §5.

Supra-segmentals do not play an important role in this study, but it should be noted that Tiwa has two tones: rising and falling;<sup>3</sup> vowel nasalization may be considered contrastive but minimal pairs are limited to ideophones.

## 2.2 Diachrony of Tiwa syllable-final consonants

Table 3 presents the Tiwa inventory of coda consonants, indicating their origin in native Proto-Bodo-Garo (PBG) consonants or in acquisition from Indo-Aryan (IA) loans (PBG developments from Joseph and Burling (2006)).

TABLE 3 – PBG &gt; Tiwa, syllable-final consonants

	Bilabial	Alveolar	Velar
Stops	*p > p	(IA > t)	(IA > k)
Fricative		(IA > s)	
Nasals	*m > m	*n > n	*ŋg > ng
Lateral		*l, *t > l	
Rhotic		*r > r	

Note especially that PBG \*-t and \*-k have disappeared in Tiwa, via deletion of \*-k and change of \*t > l.<sup>4</sup> Furthermore, the uncommon coda /s/ is not inherited from PBG but has entered via IA borrowings.

<sup>3</sup> Following the orthographic practice in Tiwa, monosyllabic roots with the falling tone are not marked for tone, while everywhere else tone is marked. The rising tone is indicated by /´/ and the falling tone by /˘/.

<sup>4</sup> There is still a trace of the PBG \*-t and \*-k codas in the form of the rising tone on the respective syllables in Tiwa.

### 2.3 Assamese and Indo-Aryan

Table 4 presents an overview of the transliteration of consonants from the Assamese script that is followed in this study. The transliteration does not represent modern Assamese phonemes but instead preserves etymological sounds (although not perfectly consistently, see the discussion in the next section). Having a historical record of Assamese phonology represented by the orthography gives us an important temporal anchor to help identify the source language from which the borrowing came and/or information about the time period of borrowing.

Table 5 is testament to the significant amount of restructuring of the phonological system that has taken place in the development of modern spoken Assamese: the retroflex series has merged with the dental series to a new alveolar series; the voiceless palatal stops have merged to /s/; the voiced palatal stops along with the palatal glide are now reflected in the areally characteristic allophony between the voiced palatal stop and the voiced alveolar fricative /ʃ~z/; and, importantly for the discussion below, we see a three-way merger in the debuccalization (i.e., moving from the oral cavity to a glottal or pharyngeal place of articulation) of the coronal fricatives < ʃ, s, ʒ > (Goswami and Tamuli 2003).

Compared to Assamese, Bengali has been more conservative. Phonemic contrasts that were merged in Assamese as shown in Table 4 are generally retained in Bengali. The only exception is that in Bengali, we also find that orthographic < ʃ, s, ʒ > in most modern dialects represent a single modern phoneme, typically /ʃ/, i.e., there was no debuccalization as in Assamese (Dasgupta 2003: 361).

TABLE 4 – Transliteration of Assamese consonants followed in this study using IPA symbols

ক (k)	খ (k <sup>h</sup> )	গ (g)	ঘ (g <sup>h</sup> )	ঙ (ŋ)
চ (c)	ছ (c <sup>h</sup> )	জ (ʒ)	ঝ (ʒ <sup>h</sup> )	ঞ (ɟ)
ট (t)	ঠ (t <sup>h</sup> )	ড (d)	ঢ (d <sup>h</sup> )	ণ (ɲ)
ত (t)	থ (t <sup>h</sup> )	দ (d)	ধ (d <sup>h</sup> )	ন (n)
প (p)	ফ (p <sup>h</sup> )	ব (b)	ভ (b <sup>h</sup> )	ম (m)
য (y)	ৰ (r)	ল (l)	ৱ (w)	
শ (ʃ)	ষ (ʃ)	স (s)	হ (h)	
ক্ষ (kʃ)	ড় (ɽ)	ঢ় (ɽ <sup>h</sup> )	য (j)	

TABLE 5 – Assamese consonants: Sound changes

Assamese letter	Transliteration	Modern Assamese phoneme
ট	<t>	/t/
ঠ	<t <sup>h</sup> >	/t <sup>h</sup> /
ড	<d>	/d/
ঢ	<d <sup>h</sup> >	/d <sup>h</sup> /
ণ	<n>	/n/
চ	<c>	/s/
ছ	<c <sup>h</sup> >	
জ	<j>	
ঝ	<j <sup>h</sup> >	/j~z/
য	<j>	
শ	<ʃ>	
স	<s>	/h/ <sup>5</sup>
ষ	<ʃ>	

### 3 Identifying the source language

While the modern day contact of Tiwa with Indo-Aryan is almost entirely through Assamese, we should not assume that all IA loans came directly from Assamese into Tiwa. Besides Assamese, Bengali is another likely contender for being the source language of at least a subset of the loanwords we find in Tiwa. Since Assamese and Bengali are closely related, it is difficult to sort out which language a particular word might have originated from, in particular when we also take dialect differences into consideration.

But the problem of distinguishing Assamese from Bengali is only one part of it. We know that the plains and adjacent areas of Northeast India have been high-contact regions, where ethnolinguistically diverse populations had to communicate with each other. Especially the status of Assamese as a lingua franca in modern history means that in addition to distinguishing between Assamese and Bengali origins, we also have to keep in mind that certain layers of loans might have entered Tiwa via a third language. This would have been either an Austroasiatic language, most probably Khasi, or another Tibeto-Burman language, most probably Karbi or perhaps another Bodo-Garo language.

These different source language scenarios are illustrated in Figure 2. Note that this diagram does not include Sanskrit and Hindi as source languages for certain borrowings. While there is no doubt that we find certain Sanskrit or Hindi forms in Tiwa, these would have entered the language not directly but through Assamese or Bengali.

<sup>5</sup> Some sources transcribe the debuccalized consonant as /h/, others transcribe it as /x/.

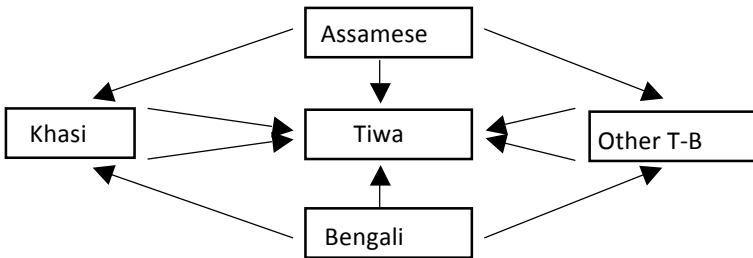


FIGURE 2 – Source language scenarios for Indo-Aryan borrowings in Tiwa

### 3.1 Distinguishing between Assamese versus Bengali origins

At the current stage of our research, we have not been able to identify phonological criteria to consistently distinguish between Assamese or Bengali origins of loanwords. Assamese has undergone several changes that Bengali has not undergone. Table 4 in §2.3 above lists the sound changes of Assamese vis-à-vis the writing system, which all involve merging sounds: the retroflex and dental stops into a single alveolar series; the lenition of \*/c/ and \*/c<sup>h</sup>/ to /s/; further, \*/j/, \*/j<sup>h</sup>/, and \*/j/ to a single phoneme /j~z/; and finally, the debuccalization merger of the three fricatives \*/s/, \*/s̺/, and \*/j/ into modern /h/. For all of these sound changes and in general, Bengali has been more conservative. Therefore, we have so far been unable to identify criteria to distinguish between whether a particular loanword is borrowed from Bengali or whether it is an old loanword from Assamese before Assamese underwent the particular sound change. Conversely, however, for loanwords that reflect a particular sound change specific to Assamese, we know that they have Assamese rather than Bengali origins.

Let us take as an example the debuccalization merger. In Table 6, correspondence sets (1) and (2) are words that in Assamese are spelled with an initial ঞ. This letter is transliterated with its original sound <s>, which has changed to /h/ in modern Assamese. The corresponding loans in Tiwa begin with /h/, which means that these must have been borrowed specifically from Assamese at a point in time after Assamese has undergone this sound change.

In the remaining five correspondence sets (3) through (7) we see a different pattern. The words are spelled again with ঞ, or with ঞ, transliterated with their original sound values as <s> and <ś>, phonemically /h/ in modern Assamese. But here, Tiwa has /s/, which corresponds to the original sounds prior to the debuccalization.

TABLE 6 – Assamese debuccalized fricatives

	Assamese	Tiwa	Gloss
(1)	সদায় <sada:j> /hɔdai/	/hɔdai/	‘always’
(2)	সাপ <sa:p> /hap/	/hap/	‘snake’
(3)	সকল <sakal> /hɔkɔl/	/sɔgɔl/	‘all’
(4)	সমান <sama:n> /hɔman/	/sɔman/	‘same’
(5)	সতিনী <satini:> /hɔtini/	/sɔduni/	‘concubine’
(6)	শ <ɕa> /hɔ/	/so/	‘hundred’
(7)	শগুন <ɕagun> /hɔgun/	/sɔgun/	‘vulture’

While the words in (3) through (7) may have come into Tiwa from an earlier stage of Assamese prior to the debuccalization, another possibility is that these are borrowings from Bengali. The standard variety of Bengali has merged the sounds represented by শ, স, ষ to /ʃ/, while other dialects have /s/ or /s~ʃ/ (Dasgupta 2003: 360). For example, ‘same, equal’ in (4) is *ʃɔman* and ‘hundred’ in (6) is *ʃɔ* in the standard variety. Tiwa could have therefore borrowed these words from a dialect of Bengali as /s/ at any time.

What the examples in Table 6 show is summarized in Table 7. There are two correspondence sets depending on whether Tiwa has /h/ or /s/. If it is /h/, we know that the borrowing is from Assamese after the debuccalization. If it is /s/, we do not know whether this is a borrowing from Bengali at an undefined point in time or whether it is from Assamese prior to debuccalization.

TABLE 7 – Two fricative correspondence sets

Proto-Form	Bengali	Assamese	Tiwa	Origin of form
*s	/s/	/h/	/h/	Assamese
*ɕ	/s/	/h/	/s/	Bengali or older Assamese

Since a goal of this study is also to report methodological issues, we want to illustrate a problem in connection with the debuccalization sound change. There actually is an instance of Assamese spelling not reliably representing original sounds (cf. Kakati 1962 [1941]).

Consider first Table 8, which shows entirely regular correspondence sets for Assamese initial ɕ <h> /h/, which is also /h/ in Tiwa, as expected.

TABLE 8 – Assamese &lt;h&gt; /h/ corresponding to Tiwa /h/

	Assamese	Tiwa	Gloss
(8)	হাতী <ha:ti:> /hati/	/hâdi/	‘elephant’
(9)	হুঁহু <hudu> /hudu/	/hûdu/	‘owl (variety)’



Compare this to Table 9, where ঞ <h> /h/ does not represent \*/h/, but instead one of the debuccalized fricatives. We know this because both Bengali and Tiwa have /s/ in these correspondence sets. Example (10) has this original \*S, an unidentified sibilant that is spelled <h> in word-initial position, examples (11) and (12) have it word-medially, and in (13), it's the coda. There are many more such examples.

TABLE 9 – Assamese <h> /h/, Bengali /s/ corresponding to Tiwa /s/

	Assamese	Bengali	Tiwa	Gloss
(10)	হিলৈ <hiloī> /hiloī/	(/bonduk/)	/sīlai/	'gun'
(11)	বাঁহী <bā:hi:> /bāhi/	/bāsi/	/paŋsī/	'flute'
(12)	খাহী <k <sup>h</sup> a:hi:> /k <sup>h</sup> ahi/	/k <sup>h</sup> asi/	/k <sup>h</sup> âsi/ <sup>6</sup>	'castrated'
(13)	ঘাঁহ <g <sup>h</sup> ā:h> /g <sup>h</sup> āh/	/g <sup>h</sup> ās/	/kas/	'grass'

Note that (10) is interesting because Bengali has an unrelated word here. Potentially then, this could remove the ambiguity and mean that Tiwa borrowed *sīlai* from an older form of Assamese rather than Bengali. However, it is still possible that *bonduk* is a relatively recent addition to the Bengali lexicon. Only philological work can solve this problem.

### 3.2 Evidence for a pathway through Khasi or another Tibeto-Burman language

In addition to the problem of identifying a loanword as being originally Assamese or Bengali, the issue gets more complicated as a particular set of borrowings might have entered Tiwa via a third language. Such a third language could be another Tibeto-Burman language, either another Bodo-Garo language, or an entirely different Tibeto-Burman language, particularly Karbi, which is spoken nearby to the east, covering a large area. But this third language could also be an Austroasiatic language, most probably Khasi but perhaps also Pnar, both spoken to the immediate west of the Tiwa-speaking area in the state of Meghalaya of Northeast India.

Let us start by examining a correspondence pattern that suggests a borrowing route via Khasi. What is necessary to know is that, first, the standard variety of Khasi does not have palatal stops /c/ or /c<sup>h</sup>/, and second, it does have a phonemic contrast between /s/ and /ʃ/. With that in mind, we can look at Table 10.

<sup>6</sup> Specifically, the corresponding Tiwa expression is *khâsi rîna* 'to castrate'.

TABLE 10 – Assamese <c, c<sup>h</sup>>, /s/ > Tiwa /ʃ/

	Assamese		Tiwa	Gloss
(14)	চকী	<caki:> /sɔki/	/ʃũgi/	‘chair’
(15)	চলন	<calan> /sɔlon/	/ʃõlon/	‘behaviour’
(16)	ছয়	<c <sup>h</sup> aj> /soi/	/ʃui/	‘six’
(17)	ছকনী	<c <sup>h</sup> e:kani:> /sekɔni/	/ʃáguni/	‘conical basket for sifting’

Table 10 shows two examples with orthographic <c> and two with <c<sup>h</sup>>, both of which have merged to /s/ in modern Assamese. Tiwa phonology includes both /c/ and /s/, but what corresponds to this consonant is actually /ʃ/. Looking at Bengali does not help here either. Some varieties have kept /c/ and /c<sup>h</sup>/. Others have [s] as an allophone of /c<sup>h</sup>/ in certain phonological environments<sup>7</sup> but never [ʃ] (Dasgupta 2003: 359). The best explanation seems to be that Khasi borrowed /c/ and /c<sup>h</sup>/ as /ʃ/ because /ʃ/ is closest to the palatal stops in Khasi phonology. Also on more general grounds, the phonemic contrast between /s/ and /ʃ/ in Tiwa must be from Khasi as neither the Indo-Aryan nor the Tibeto-Burman languages in the region have this contrast and, for example, are instead quite well-known for not being able to distinguish between the two in English loans.

If the correspondence pattern in Table 10 indeed constitutes evidence for borrowing via Khasi then this is very significant. Obviously, Tiwa would not have borrowed only palatal stop initial words from Khasi and the rest directly from Assamese and Bengali. Instead, if this is true, then we have to assume that there was a whole borrowing period during which Tiwa borrowed from Khasi. Furthermore, it is important to note that a large percentage of borrowings with word-initial or word-medial <c> and <c<sup>h</sup>> in Assamese spelling correspond to /ʃ/ in Tiwa: approximately 60% of well over 100 borrowings.

Indeed, we also find native Khasi words that were borrowed into Tiwa, such as (18)–(25) in Table 11. However, even though we have not examined Khasi borrowings systematically, it is clear that they exist at a much smaller scale than Assamese borrowings, at perhaps around a tenth of the number of Assamese borrowings. This is at odds with the 60% of Assamese <c> and <c<sup>h</sup>> instances corresponding to Tiwa /ʃ/, and future research will have to generate hypotheses to reconcile this.<sup>8</sup> Nonetheless, Table 11 additionally provides clear evidence that certain Assamese (and English) borrowings came into Tiwa via Khasi. Examples (26)–(28) are borrowings from Assamese and English, which entered Tiwa with the Khasi feminine article attached to them.<sup>9</sup> There is no

<sup>7</sup> An example is /bächte/ ‘to choose’ being pronounced as [bāste] because of the following /t/ (Dasgupta 2003: 359).

<sup>8</sup> One possibility is that there was at some point a Khasified version of Assamese that was used as a lingua franca.

<sup>9</sup> Borrowings into Khasi are categorized as feminine gender by default.

doubt that a careful examination of the role of Khasi in the contact scenarios will be the necessary next step to continue this research agenda.

TABLE 11 – Khasi borrowings in Tiwa

Khasi	Tiwa	Gloss
(18) /jem/	/cem/	‘soft’
(19) /jalap/ ‘to preach’	/jaláp rí-/	‘to proclaim’
(20) /k <sup>b</sup> aila/ ‘earring’	/k <sup>b</sup> âila/	‘kd. of earring’
(21) /k <sup>b</sup> et/	/k <sup>b</sup> et/	‘throne’
(22) /wai/	/wai/	‘contract work’
(23) /kərdan/ ‘status’	/kardân/	‘social status’
(24) /por/	/p <sup>h</sup> or/	‘time’
(25) /ka/ ‘FEMININE ARTICLE’ + /blei/ ‘goddess’	/kablâ/	‘name of a female deity’
(26) /ka/ ‘FEMININE ARTICLE’ + /man/ ‘weight’ ( <i>&lt; Asm /man/ ‘weight; measure’</i> )	/kamôn/	‘large weighing balance’
(27) /ka/ ‘FEMININE ARTICLE’ + /ut/ ‘camel’ ( <i>&lt; Asm /ut/ ‘camel’</i> )	/kaú/	‘camel’
(28) ka/ ‘FEMININE ARTICLE’ + /mok/ ‘mug’ ( <i>&lt; Eng mug</i> )	/kamók/	‘mug’

Moving on to further examples that bear on the question of borrowing via Khasi or another Tibeto-Burman language, consider how syllable-final palatal stops – voiced and voiceless – were borrowed in Tiwa in Table 12.

TABLE 12 – Assamese final palatal stops

Assamese	Tiwa	Gloss
(29) কবিৰাজ <kabira:j> /kəbiraj/	/kobirái/~ /kobirás/	‘physician’
(30) তাৰিজ <ta:bi:j> /tabij/	/tabís/	‘amulet’
(31) বাকচ <ba:kac> /bakos/	/pagôs/	‘box’
(32) ৰাইজ <ra:i:j~ra:j> /raij~raj/	/rat/	‘people, subjects’
(33) সাঁচ <sā:c> /hās/	/sat/	‘scar, mark’
(34) সাঁচ <sā:c> /hās/	/sos~sot kut <sup>h</sup> í/	‘seed’
(35) হজ <haj> ?/hɔj/	/hos/~hot/	‘work, labor’ <sup>10</sup>

<sup>10</sup> The Tiwa *hot* is found only in the echo formation *hot neng* (in the Amsai variety), but it is *hos neng* in the Marjong variety (which is the dialect of Joseph 2014); both mean ‘community work’. The corresponding Assamese word is *হজ* ‘manual labour’ according to Barua (1992), although it does no longer appear to be part of active Assamese vocabulary of at least the younger generation (Gitanjeli Bez, in personal communication).

There are two correspondence patterns such that we find either /-s/ or /-t/ in Tiwa, independent of the voicing status of the erstwhile palatal stop. This differential treatment in Tiwa is interesting for the following reason. Neither Khasi and related languages nor other Tibeto-Burman languages usually have coda /-s/. Some high-contact varieties have acquired this phonemic contrast, e.g., Mandi Garo spoken in Bangladesh (Burling 2004), but these are exceptions. Therefore, the fact that Tiwa has also acquired coda /-s/ confirms that we have to consider it a language in intense contact with IA. Moreover, the fact that there are additionally many instances of /-t/ corresponding to the palatal stop in Assamese means that these are either from an earlier period when the contact with IA was not intense, or that they have entered via Khasi or another Tibeto-Burman language that borrowed them as /-t/ and passed them on to Tiwa as such – or probably, that both are true for different words.

#### 4 Different borrowing periods

We have seen already various cases in which a particular letter – which we take to be a single diachronic phoneme<sup>11</sup> – corresponds to more than one phoneme in Tiwa across different borrowings. For example, we saw Tiwa /s/ and /h/ corresponding to the debuccalized fricatives in Assamese (§3.1); or the Assamese final palatal stops corresponding to Tiwa /-s/ or /-t/ (§3.2). In those cases, we know that one of two reasons for the differential correspondence hold. Either different source languages are responsible for the difference in correspondence, or we are dealing with different lexical strata that have entered Tiwa at different times. Of course, it is also possible that both are true.

When particular Assamese phonemes are borrowed into Tiwa in different ways, there is a chance that Tiwa ends up with double borrowings of the same original word. Three such examples are given in Table 13.

TABLE 13 – Double borrowings

	Assamese		Tiwa: Loan 1	Tiwa: Loan 2
(36)	নিয়ম	<nijam> /nijom/ 'custom; rule'	/nem/ 'religion'	/nijôm/ 'rule'
(37)	চিন্তা	<cinta:> /sinta/ 'anxiety'	/ʃinda/ 'concern'	/sînta/ 'worry'
(38)	কাম	<ka:m> /kam/ 'work'	/k <sup>h</sup> am/ 'cultural/ religious function'	/kam/ 'work'

Example (36) is idiosyncratic and it is not clear how Tiwa ended up with *nem*.<sup>12</sup> The more interesting cases are (37) and (38). In (37), *ʃinda* has initial /ʃ/ following the pattern shown above in Table 9, and [d] word-medially following

<sup>11</sup> This methodology has failed in the case of orthographic <h>, see §3.1.

<sup>12</sup> Note, however, that Karbi, an immediately neighboring Tibeto-Burman language (see §3.2), also has a word *ném* 'custom' (as well as *nióm* 'procedure').

the allophonic rule of stops (§2.1). The other borrowing *sînta* follows the modern Assamese pronunciation, keeping /s/ at the beginning, and giving up the allophonic rule to keep [t]. We know that the correspondence between Assamese <c> /s/ and Tiwa /ʃ/ is regular in the sense that more than half of the borrowings that have the Assamese sound end up in Tiwa with /ʃ/ in its place. This combined with the fact that the [d] follows the native allophonic rule suggests that *ŷinda* is an earlier borrowing and *sînta* a later one. The double borrowing given in (38) similarly suggests two borrowing periods. The case of stop onsets is discussed in the next section.

#### 4.1 Stop onsets

We will first discuss how in the majority of cases, Assamese stop onsets are borrowed into Tiwa, and then will describe divergent cases that provide evidence for two separate borrowing periods. First, consider the major correspondences for Assamese voiced stops in Table 14; Assamese voiceless unaspirated stops in Table 15; and Assamese voiceless aspirated stops in Table 16 (the correspondences with Assamese voiced aspirated stops are interesting in a different way and will be discussed separately in §5 below).

TABLE 14 – Assamese /b-/ , /d-/ , /j-/ , /g-/ > Tiwa /p-/ , /t-/ , /c-/ , /k-/

	Assamese		Tiwa	Gloss
(39)	বেলেগ	<be:le:g> /beleg/	/pelêk/	‘different’
(40)	বজাৰ	<ba:ja:r> /bɔ̃jar/	/paʃâr/	‘market’
(41)	বাৰ	<ba:ra> /barɔ̃/	/parô/	‘twelve’
(42)	বাউলা, বাউলী	<ba:ula, ba:uli> /baula, bauli/	/pawlâ, pawlí/	‘mad (m, f)’
(43)	দলঙ	<dalaŋ> /dɔ̃lɔŋ/	/tolôŋ/	‘bridge’
(44)	দস্তুৰ	<dastur> /dɔ̃stur/	/tustûr/	‘custom’
(45)	দিন	<din> /din/	/tin/	‘day’
(46)	ডাবৰ	<ɖa:bar> /dabɔ̃r/	/tabôr/	‘basin’
(47)	ডাঙৰি	<ɖa:ɳari> /daŋɔ̃ri/	/taŋrî/	‘sheaf (of paddy)’
(48)	ডুবি	<dubi> /dubi/	/tubî/	‘deep place in river’
(49)	জৰী	<jari:> /jɔ̃ri/	/curí/	‘rope’
(50)	জাত	<ja:t> /jat/	/cat/	‘tribe’
(51)	জোৰা	<jo:ra:> /jora/	/corã/	‘joint’
(52)	গীত	<gi:t> /git/	/kit/	‘song’
(53)	গৰাকী	<gara:ki:> /gɔ̃raki/	/korak <sup>hi</sup> /	‘master’
(54)	গাল	<ga:l> /gal/	/kal/	‘cheek’

TABLE 15 – Assamese /p-, /t-, /k-/ > Tiwa /p<sup>h</sup>-, /t<sup>h</sup>-, /k<sup>h</sup>-/

	Assamese		Tiwa	Gloss
(55)	পোন্ধৰ	<po:nd <sup>h</sup> ara> /pond <sup>h</sup> ɔrɔ/	/p <sup>h</sup> ɔndro/	‘fifteen’
(56)	পথাৰ	<pat <sup>h</sup> a:r> /pɔt <sup>h</sup> ar/	/p <sup>h</sup> ádar/	‘paddy field’
(57)	পিতল	<pital> /pitɔl/	/p <sup>h</sup> ídul/	‘brass’
(58)	পদুম	<padum> /pɔdum/	/p <sup>h</sup> údum/	‘lotus’
(59)	তৰোৱাল	<taro:wa:l> /tɔrowal/	/t <sup>h</sup> rúwal/	‘sword’
(60)	তিৰী	<tiri:> /tiri/	/t <sup>h</sup> íri/	‘woman’
(61)	তুলা	<tula:> /tula/	/t <sup>h</sup> úla/	‘cotton’
(62)	টেকেলা	<ɕe:ke:la:> /tɛkela/	/t <sup>h</sup> êgla/	‘messenger’
(63)	টেমা	<ɕe:ma:> /tɛma/	/t <sup>h</sup> êma/	‘small container (esp. for lime)’
(64)	কমাৰ	<kama:r> /kɔmar/	/k <sup>h</sup> âmar/	‘blacksmith’
(65)	কানি	<ka:ni> /kani/	/k <sup>h</sup> âni/	‘opium’
(66)	কোণা	<ko:ŋa:> kona/	/k <sup>h</sup> on/	‘corner’

TABLE 16 – Assamese /p<sup>h</sup>-, /t<sup>h</sup>-, /k<sup>h</sup>-/ > Tiwa /p<sup>h</sup>-, /t<sup>h</sup>-, /k<sup>h</sup>-/

	Assamese		Tiwa	Gloss
(67)	ফটিক	<p <sup>h</sup> a:ɕak> /p <sup>h</sup> atɔk/	/p <sup>h</sup> âdek/	‘prison’
(68)	ফটিকা	<p <sup>h</sup> aɕika:> /p <sup>h</sup> ɔtika/	/p <sup>h</sup> údiga/	‘distilled liquor’
(69)	খল	<t <sup>h</sup> al> /t <sup>h</sup> ɔl/	/t <sup>h</sup> ol/	‘lowlands’
(70)	খাল	<t <sup>h</sup> a:n> /t <sup>h</sup> an/	/t <sup>h</sup> an/	‘place’
(71)	ঠগ	<t <sup>h</sup> ag> /t <sup>h</sup> ɔk/	/t <sup>h</sup> ok/	‘feature; shape’
(72)	খাজনা	<k <sup>h</sup> a:jana:> /k <sup>h</sup> ajɔna/	/k <sup>h</sup> âjona/	‘tax’
(73)	খৰচ	<k <sup>h</sup> arac> /k <sup>h</sup> ɔrɔs/	/k <sup>h</sup> ôros/	‘expense’

Table 14 shows that voiced stops are borrowed as voiceless stops, following Tiwa phonology, which generally lacks voiced stop onsets (§2.1). In Table 16, we see that Assamese voiceless aspirated stops correspond to Tiwa voiceless aspirated stops, as we would expect. The surprising correspondence is with Assamese voiceless unaspirated initial stops. Table 15 shows that those correspond not to likewise voiceless unaspirated stops, but to voiceless aspirated stops.

The three stop onset correspondences are summarized in Table 17.

TABLE 17 – Correspondence in stop onsets

	Assamese	Voiced	Voiceless Unaspirated	Voiceless Aspirated
Tiwa Voiceless Unaspirated		X		
Voiceless Aspirated			X	X

It is important to further examine the unexpected correspondence of Assamese voiceless unaspirated stops with Tiwa voiceless aspirated stops despite the availability of a voiceless unaspirated series in Tiwa. While this is the regular correspondence, an apparently new trend is to borrow initial unaspirated likewise as unaspirated stops. In perhaps some common words, there is now variation between the older and the new pattern, e.g., *kidâp* ~ *k<sup>h</sup>idâp* for ‘book’, from Assamese *kitâp*, where *kidâp* is even far more common and *k<sup>h</sup>idâp* very rarely heard. Also recall the double borrowing of *kam* ‘work’ as *k<sup>h</sup>am* ‘cultural/religious function’ and *kam* ‘work’ above in Table 13.

A new borrowing pattern has been cropping up not only for the voiceless unaspirated but also for the voiced stops. Table 18 provides a list of words that begin with voiced stops in Assamese, which in Tiwa exhibit variation between the older voiceless stop initial and the newer voiced initial. Tiwa does not originally permit voiced stop onsets (§2.1). The examples below are thus expanding the native phonological system.

TABLE 18 – Loans with voiced stop initials

	Tiwa	Gloss
(74)	/tui/ ~ /dui/	‘two’ [ <i>ti-</i> ‘two’ (combining form)]
(75)	/torbar/ ~ /dorbar/	‘council’
(76)	/tos/ ~ /dos/	‘ten’
(77)	/parô/ ~ /barô/	‘twelve’
(78)	/conâ/ ~ /jonâ/	‘CLF: human’
(79)	/tolôŋ/ ~ /dolôŋ/	‘bridge’
(80)	/turjî/ ~ /durjî/	‘tailor’
(81)	/talî/ ~ /dalî/	‘lentil’
(82)	/tosôra/ ~ /dosôra/	‘another’

Table 19 summarizes how a small number of seemingly frequently used modern borrowings can be distinguished from what we may call pre-modern borrowings in the case of Assamese voiced and voiceless unaspirated stops. The modern borrowings are indicated by parentheses. In the case of voiced stops, modern borrowings are seemingly trying to expand Tiwa phonology. In the case of voiceless unaspirated stops, they match the Assamese with the already available Tiwa phoneme in contrast to the previously regular correspondence with Tiwa voiceless aspirated stops. It thus has to be emphasized that while the tabular format suggests that the two changes are parallel, the phonological reality is quite different. Loans with a voiced stop onset are transparent as being loans, whereas that is not the case for loans with voiceless unaspirated stop onsets.

TABLE 19 – Stop onsets: new correspondences in parentheses

Tiwa	Assamese	Voiced	Voiceless Unaspirated	Voiceless Aspirated
Voiced		(X)		
Voiceless Unaspirated		X	(X)	
Voiceless Aspirated			X	X

The case of stop onsets thus provides evidence for distinguishing a modern borrowing period from an earlier one.

#### 4.2 Coda /-k/

Now we will consider a small handful of loanwords that look like they have been borrowed a relatively long time ago. Consider the examples in Table 20, which all have a velar stop coda in Assamese.

TABLE 20 – Assamese final velar stops

	Assamese	Tiwa	Gloss
(83) ঠগ	<t <sup>h</sup> ag> /t <sup>h</sup> ɔŋ/	/t <sup>h</sup> ok/	‘shape’
(84) বাঘ	<ba:g <sup>h</sup> > /baŋ <sup>h</sup> /	/pak/	‘tiger, leopard’ <sup>13</sup>
(85) এক	<ek> /ek/	/ek/	‘one’
(86) দুখ	<duk <sup>h</sup> > /duk <sup>h</sup> /	/tuk/	‘sickness, pain’
(87) থাক	<t <sup>h</sup> a:k> /t <sup>h</sup> ak/	/t <sup>h</sup> á/	‘stay’
(88) শাক	<sa:k> /hak/	/sá/	‘vegetable’
(89) ?	? <hok>	/hó/	‘on behalf of’

The first four lexemes in (83) through (86) exemplify the regular correspondence exhibited by almost all borrowings with a velar stop coda: Tiwa does not distinguish the various series<sup>14</sup> but invariably matches them with /-k/. However, we also know of three words, (87) to (89), in which Assamese final /-k/ corresponds to an open syllable with rising tone<sup>15</sup> in Tiwa. As the native phonological system of Tiwa had lost /-t/ and /-k/ codas since its development from Proto-Bodo-Garo, the three loans in (87) to (89) represent expected adjustments according to Tiwa phonology. We can infer that these three lexemes were borrowed at an earlier time compared to all the other words with an As-

<sup>13</sup> The word *pak* ‘tiger, leopard’ is used only in compounds as in *pak rajâ* ‘lion’ (literally, ‘tiger-king’) and in fixed expressions such as *pake k<sup>h</sup>úw k<sup>h</sup>úw palúke k<sup>h</sup>úw kóna* ‘to fall a prey to tigers and bears’. The regular Tiwa word for ‘tiger’ is *mejá*.

<sup>14</sup> According to Goswami and Tamuli (2003: 405), modern Assamese still distinguishes the different stop series in coda position.

<sup>15</sup> Likewise, the loss of native Proto-Bodo-Garo \*-t and \*-k codas is synchronically reflected by the rising tone in Tiwa, see fn. 3.



samese velar stop coda that keep their coda in Tiwa, such as (83) through (86). Since there are only three such words without the coda, this furthermore suggests that this was during an early borrowing period in which overall only relatively few words were borrowed.

## 5 Stability of the phonological system: Noun disyllabicity

As the previous sections showed, Tiwa phonology has undergone some change at the segmental level due to contact with Assamese. In particular, a number of syllable-final consonants are permitted in borrowed words that are not found in native words. However, evidence presented in this section suggests that the deeper, supra-segmental phonological system has remained unaffected by the contact situation. The data in support of this claim show that Assamese voiced aspirated stop onsets are borrowed in two regular ways. First, consider the examples in Table 21, which includes only Assamese monosyllabic stems.

TABLE 21 – Assamese monosyllabic stems with voiced aspirated stop onsets

	Assamese	Tiwa	Gloss
(90)	ভাঙ <b <sup>h</sup> a:ŋ> /b <sup>h</sup> aŋ/	/pahâŋ/	‘hemp’
(91)	ভাগ <b <sup>h</sup> a:g> /b <sup>h</sup> ag/	/pahâk/	‘share; portion’
(92)	ধাৰ <d <sup>h</sup> a:r> /d <sup>h</sup> ar/	/tahâr/	‘edge’, ‘loan’
(93)	ঝাক <j <sup>h</sup> a:k> /j <sup>h</sup> ak/	/cahâk/	‘herd’
(94)	ঘাই <g <sup>h</sup> a:i> /g <sup>h</sup> ai/	/kahâi/	‘chief person’
(95)	ঘৰ <g <sup>h</sup> ar> /g <sup>h</sup> ar/	/kohôr/	‘house-hold’

Table 21 shows that voiced aspirated stop onsets in monosyllabic stems are treated as clusters which are broken apart in Tiwa by filling in an epenthetic vowel that copies the vowel of the stem: /b<sup>h</sup>/, /d<sup>h</sup>/, /j<sup>h</sup>/, /g<sup>h</sup>/ become /pVh/, /tVh/, /cVh/, /kVh/. Due to this process, the resulting loan of a monosyllabic Assamese word is turned into a disyllabic noun in Tiwa, thus accommodating the preference for disyllabic roots of Tiwa that is evident from the large number of native disyllabic roots in the language.

The second regular way voiced aspirated stops are borrowed into Tiwa concerns stems that are originally disyllabic (or multisyllabic) in Assamese, as exemplified in Table 22.

TABLE 22 – Assamese multisyllabic stems with voiced aspirated stop onsets

	Assamese	Tiwa	Gloss
(96)	ভালুক <b <sup>h</sup> a:luk> /b <sup>h</sup> aluk/	/palûk/	‘bear’
(97)	ধৰণ <d <sup>h</sup> araŋ> /d <sup>h</sup> ɔɾɔŋ/	/torôŋ/	‘method’
(98)	ধাতু <d <sup>h</sup> a:tu> /d <sup>h</sup> atu/	/tat <sup>h</sup> û/	‘breath; life; spirit’
(99)	ঢেলা <d <sup>h</sup> e:la:> / d <sup>h</sup> ɛla /	/telâ/	‘pale; cloudy’
(100)	ঢেকী <d <sup>h</sup> e:ki:> /d <sup>h</sup> eki /	/tiŋk <sup>h</sup> î/	‘mortar (leg-operated)’
(101)	ঘণ্টা <g <sup>h</sup> aŋʈa:> /g <sup>h</sup> ɔnta/	/kondâ/	‘hour’
(102)	ঘিলা <g <sup>h</sup> ilâ:> /g <sup>h</sup> ila/	/kilâ/	‘wheel’
(103)	ধেমালি <d <sup>h</sup> e.ma:li> /d <sup>h</sup> emali /	/temali/	‘light-hearted; simple’
(104)	ঘুগুৰা <g <sup>h</sup> ugura:> /g <sup>h</sup> ugura/	/kugurâ/	‘small tinkling bell’
(105)	ভলুকা-বাহ <b <sup>h</sup> aluka:-ba:h> /b <sup>h</sup> ɔluka-bah/	/pulkhû wathî/	‘bamboo (variety)’
(106)	ঘুমটি <g <sup>h</sup> umaʈi> /g <sup>h</sup> umɔti/	/kum <sup>h</sup> î/	‘sleep’
(107)	ঢেকীয়া <d <sup>h</sup> e:ki:ja:> /d <sup>h</sup> ekija /	/teŋk <sup>h</sup> já/	‘fern’

In the disyllabic examples (96) through (102), the voiced aspirated stops simply correspond to voiceless unaspirated stops in Tiwa. As such, disyllabic Assamese words remain disyllabic in Tiwa and fulfill the Tiwa preference for disyllabicity. Examples (103) through (107) further show that voiced aspirated stop onsets in stems with more than two syllables are also borrowed according to that same rule: the Assamese voiced aspirated stops correspond to voiceless unaspirated stops in Assamese. In (103) and (104), the resulting words of more than two syllables are tolerated in Tiwa. However, we again see the preference for disyllabicity, as the three-syllable stems in (105) through (107) undergo syncope to become disyllabic.

We also find examples of voiced aspirated stop onsets that were not borrowed following these rules. Some of these instances are given in Table 23.

TABLE 23 – Assamese stems with voiced aspirated stop onsets: Exceptions

	Assamese	Tiwa	Gloss
(108)	ভাৰা <b <sup>h</sup> a:ra:> /b <sup>h</sup> ara/	/pahâra/	‘rent, fare’
(109)	ধৰ্ম <d <sup>h</sup> aram> /d <sup>h</sup> ɔɾɔm/	/tohôrom/	‘religion, correctness’
(110)	ঘিউ <g <sup>h</sup> iu> /g <sup>h</sup> iu/	/k <sup>h</sup> iw/	‘ghee’
(111)	ঘাঁহ <g <sup>h</sup> â:h> /g <sup>h</sup> âh/	/kas/	‘grass’
(112)	ভিন <b <sup>h</sup> in> /b <sup>h</sup> in/	/pihîn/~/pihîni/	‘another, different’

While all borrowings in Table 23 represent exceptions to the rules we have identified above, the first two examples (108) and (109) actually inform these rules further. In both cases, Assamese disyllabic stems were borrowed into Tiwa with three syllables instead of just two. Therefore, they follow the monosyllabic (and not the disyllabic) pattern shown in Table 20 above: Assamese /b<sup>h</sup>/ and /d<sup>h</sup>/ correspond to Tiwa /pVh/ and /tVh/ (and not to plain /p/ and /t/). The fact that such examples exist may be used to argue that there is only one phonological rule for borrowing voiced aspirated stop onsets, which is that they are always treated as clusters and broken up by an epenthetic copy vowel, i.e., /b<sup>h</sup>/ as /pVh/; /d<sup>h</sup>/ as /tVh/; and so on. In order to account for the regular correspondence of voiced aspirates with Tiwa voiceless unaspirated stops (i.e., /b<sup>h</sup>/ and /p/, etc.) in disyllabic stems in Table 22, a second phonological rule can be stated: Trisyllabic stems are subsequently truncated to disyllabic ones.

The remaining cases in Table 23 appear to represent more idiosyncratic exceptions. Examples (110) and (111) represent monosyllabic stems that were borrowed as monosyllabic stems in Tiwa, one with the aspirated, the other with the unaspirated stop. In (112), an Assamese monosyllabic stem originally corresponds to a disyllabic stem in Tiwa although more recently, the three-syllable version has become more frequently used.

In summary, the two ways in which voiced aspirate stop initials are borrowed illustrate the preference of Tiwa for disyllabic stems: monosyllables become disyllables, disyllables stay disyllables, and there are even some cases of trisyllables becoming disyllables. Therefore, while the segmental inventory of Tiwa phonology shows a number of signs of contact with Assamese, as shown in the previous sections, we can argue that the more opaque, supra-segmental characteristics of Tiwa phonology have remained unaffected by the huge influx of Indo-Aryan (and other) borrowings.

One final observation on the note of disyllabicity is in order, however. It seems that at least the Western variety of Assamese (i.e., ‘Lower Assamese’) itself has undergone changes to favor disyllables. Where Eastern (‘Upper’) Assamese has *komóra* ‘pumpkin’ and *kóríbo* ‘s/he will do’ with medial stress, Western Assamese has *kúmra* and *kórbo* with initial stress (Goswami and Tamuli 2003: 400). Apparently, the stress shift has made it possible for Western Assamese to change trisyllabic words into disyllabic ones. It is not inconceivable that Tiwa in some borrowings (other than cases of voiced aspirate stop onsets) did not actually have to create disyllables but that they were already in the variety that Tiwa was borrowing from.

## 6 Conclusion

The evidence from IA borrowings examined in this study lets us generate hypotheses about source languages and time periods of borrowing, and it shows how Tiwa phonology has and hasn’t changed as a result of the massive influx of

borrowings. Specifically, evidence from loans with Assamese <c, c<sup>h</sup>> /s/ that are borrowed into Tiwa as /ʃ/ suggests that Khasi (Austroasiatic) was involved. Moreover, the differential correspondences with stop onsets and coda /-k/ in Assamese suggest that these are from at least three different time periods of borrowing, one modern; one ‘pre-modern’; and one considerably before that. Finally, the evidence from voiced aspirated stop onsets suggests that in the supra-segmental domain of a preference for disyllabic roots, Tiwa phonology has shaped a large number of borrowings. This is in contrast to the segmental phonology of Tiwa, which in many ways has itself been shaped by the large number of Assamese borrowings.

The next step for this work on loanword phonology is the systematic inclusion of corresponding lexical items in Bengali as well as Khasi. An interesting research question arising out of the data presented here is to what extent it is possible to tease apart contact between Tibeto-Burman and Indo-Aryan from contact of both with Austroasiatic in this geographic area.

For the ultimate goal of investigating the contact scenarios with IA (and Austroasiatic), it is clear that loanword phonology can only contribute a small piece of the puzzle. Using the loanword database, the next steps will be to consider semantic information as well as surveying which morphosyntactic markers have also been borrowed from IA sources. All these will help shed more light on questions concerning the source languages and time periods of borrowings that were raised in this paper.

## Abbreviations

Asm Assamese, Eng English

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## 10

An obscure word for ‘ancestral deity’ in some  
East Bodish and neighbouring Himalayan  
languages and Qiang:  
Ethnographic records towards a hypothesis<sup>1</sup>

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## 1 Introduction

**D**uring documentation of a specific community festival staged at Himalayan sites across eastern Bhutan and immediately adjacent districts of Arunachal Pradesh (India), I recorded a previously unnoticed word best understood as meaning ‘ancestral deity’ or ‘ancestral being’. Across a range of neighbouring languages in this region, the word’s variable spoken forms include *se/ce/zhi* (Dzala, Dakpa, Kurtöp), *zhe* (Khengkha, Chocha-ngacha) and *chi/chis* (Tshangla). Moreover, in local manuscripts used during the same type of festival by communities speaking all of the aforementioned languages, the Tibetan script orthographies *se*, *zhi*, *[g/b]zhe[s]*, *[r]je*, *pyi* and *phyi* occur for the same word. What appears to be the same or a closely related word occurs among speakers of as yet unclassified languages/dialects in far western Arunachal Pradesh with the spoken forms *chik* (Rahung Sartang), *khik/khit* (Mey/Sherdukpen) and highly likely also *tchat* (Bugun). These latter occurrences, too, are all related to the same type of festival. The word is found used as a stand-alone substantive or in compounds, and is regularly appended to formal proper names

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<sup>1</sup> Fieldwork undertaken between 2009 and 2014 was funded by the Deutsche Forschungsgemeinschaft, the Humboldt University of Berlin and the Australian Research Council for a series of projects investigating aspects of culture, social organisation and ritual among communities speaking East Bodish languages and some of their immediate neighbours who share similar patterns and practices. I thank the Centre for Bhutan Studies (Thimphu) and the State Government of Arunachal Pradesh for their ongoing support of my research. I am grateful to my research associate Gwendolyn Hyslop for helpful comments on a draft version of the paper, and to Johanna Prien for her proof-reading.

as a final, classificatory suffix. However, the distribution of both types of usage in speech and written texts is particular to certain language communities.

Herein I provide a brief survey of occurrences and possible cognates of this particular word for 'ancestral deity'. My own records are based upon systematically gathered ethnographic data sampled from highland populations dwelling between Bhutan's Jamkhar Chu river valley in the west, and the Tawang and West Kameng districts of Arunachal Pradesh in the east. While the word's forms and their application are certainly of interest, the social and cultural contexts in which they are embedded and meaningful are just as crucial. I will use both to propose a hypothesis about why this word is only in use among a specific set of neighbouring peoples occupying a well-defined geographic zone of the eastern Himalayas, and that it and other evidence demonstrate an older Qiangic-speaking ancestor population in the same region.

For the sake of brevity, and to address a wider readership here, a large volume of complex ethnographic data is merely summarized from my existing publications and forthcoming monograph detailing ancestral cults and revitalization rites in this part of the Himalayas.<sup>2</sup>

## 2 Ritual and social context

Regardless of the spoken languages sampled for this word meaning 'ancestral deity', or the location of any manuscripts in which it is written, the ethnographic context for its occurrence across its known range is highly consistent and exclusive. I will now briefly outline this. To my present knowledge, occurrences of the word are primarily in relation to calendric, community festivals with rites oriented towards vitality, fertility and success in production. The word always classifies and/or forms a name element of the principal deities or beings reckoned as the ultimate providers of those life-supporting powers and benefits. The main examples of such festivals at any site are mostly performed during Winter, but they can occur as post-harvest events anytime between the 10<sup>th</sup> and 2<sup>nd</sup> lunar months. In the midland to highland eastern Himalayas and neighbouring Tibetan Plateau lands to the north, this represents the annual period of transition in the production cycle, when rites of revitalization and renewal are typically enacted for the coming year.

Where this word for 'ancestral deity' occurs among speakers of East Bodish languages, and certain communities of their immediate neighbours who speak Chocha-ngacha and Tshangla,<sup>3</sup> we have strong correlative data in the

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<sup>2</sup> See Huber (2013, 2015a, 2015b, 2015c, 2015ms, in press).

<sup>3</sup> Concerning these languages, the East Bodish group (including Dakpa, Dzala, Khengkha and Kurtöp discussed herein) are "closely related to, but not directly descended from Classical Tibetan" (see Hyslop 2013 for a recent overview), while Chocha-ngacha is a form of Tibetan or 'Tibetic' (Tournadre 2014) and Tshangla currently remains unclassified in relation to neighbouring Tibeto-Burman languages.

form of narratives of origin, associated rites and honorific titles that the principal *se/ce/zhi/zhe* and *chis/chik/khik/khit/(?)tchat* beings addressed during the same festivals are regarded as ancestors of local human descent groups. In the regional rhetoric of relatedness, descent groups here includes persons who ‘share the same bone’ or a common, inherited agnatic transmission. While expressions of ‘bone sharing’ group social organisation can vary according to context – as clans, lineages, agnatic collectives or natal households – they always form the main ceremonial groups worshipping in such festivals, which have been described as ‘clan’ ceremonies by the few observers who took note of them. During the period between 2009 and 2014, I recorded both living and defunct forms of this type of festival at more than seventy sites across the region, with the ‘ancestral deity’ word used in the context of more than fifty of them. To date, only a few, basic accounts of these festivals have become available, with the ‘ancestral deity’ word recorded in only two cases.<sup>4</sup>

This ‘ancestral deity’ type only exists within a specific cosmological context, which in turn informs all narratives and myths about these beings, as well as the festivals for their calendric worship. Such beings are invariably associated with the upward vertical axis, which by extension is the ultimate source of all the revitalizing powers and benefits worshippers aspire to. Most examples of this ‘ancestral deity’ type throughout the western and northern range where festivals dedicated to them occur are considered to dwell at the top of the sky arranged in a series of nine, thirteen or more ascending levels. In far eastern areas, the same beings have often become hypostatized onto highland topographical features – upland catchment areas, ridges and hilltops – but equally seem to dwell in the skies surrounding them according to local descriptions. Such ‘settlement’ of ancestral or clan deities, and their concomitant redefinition over time as land or territorial numina, is commonplace along the Himalayas, being a typical indicator of historical migration into an area by the community in question.<sup>5</sup> At certain sites around Dirang, for example, myths and rites for the ‘ancestral deity’ type clearly demonstrate such transitions having occurred there in the past, since aspects of both older ‘sky’-based and more recent ‘land’-based identities survive for the same deities.

Most of the descent groups worshipping this ‘ancestral deity’ type have a dedicated and usually hereditary ritual specialist who conducts the calendric festival, and again the cosmological context determines the specific rites they conduct. For example, for a wide range of these festivals, the specialists must invite the ‘ancestral deity’ down to the ritual site by reciting verbal ritual journeys with upward/upstream and/or vertical itineraries followed by a return

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<sup>4</sup> See Dollfus and Jacquesson 2013 based upon participant observation of Khiksaba at Rupa, and Ugyen Pelgen 2004 who only reports informant reconstructions for Khar phud at Tsamang. Other reliable descriptions are Billorey 1976 and 1978 on Pla at Lhau, Lham Dorji 2004 on Roop at Goleng, and Dorji Penjore 2004 for Kharpu at Wamling.

<sup>5</sup> See, for example, Diemberger (1997: 315–316). See also Diemberger (1993: 97) on the Kumbo of east Nepal.



journey. These festivals, their rites and their ritual specialists are usually closely associated with the word *bon* meaning ‘rite’, and the identity Bon defining a certain mythological background. However, they have no documented connection with the organized, historical Tibetan religion calling itself g.Yung-drung Bon, and represent a unique development existing parallel to it.

In summary, we can best describe the cultural pattern within which the *se/ce/zhi/zhe/chi/chis/chik/khik/khit/(?)tchat* word occurs as a form of ancestor propitiation for revitalization of descent groups. Its dynamics not only represent what Guntram Hazod identifies as the ‘invitation principle’<sup>6</sup> characteristic of the older cultic system evident in Tibet around the start of the second millennium, they also strongly evoke Maurice Bloch’s concept of the ‘transcendental social’.<sup>7</sup>

### 3 Occurrences

#### 3.1 Speakers of East Bodish languages and Chocha-ngacha

The oldest known occurrence of this ‘ancestral deity’ word is the *-se* classificatory suffix in the name Gu-se lang-ling<sup>8</sup> recorded in *rGyal rigs* manuscripts first composed in 1688 and written in Classical Tibetan.<sup>9</sup> Although the earliest record we have, this *-se* form is linguistically the most innovative,<sup>10</sup> and thus must represent a particular artefact of the recording of the *rGyal rigs* itself.<sup>11</sup> In the section on gDung origins in this text, Gu-se lang-ling appears as an emanation of the male ‘sky-deity’ (*gnam-lha*) ‘O-de gung-rgyal, who himself is something

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<sup>6</sup> See Hazod 2014, who contrasts it with “ritual discourses of barbarizing and civilizing” typical of post-imperial Tibetan religions.

<sup>7</sup> Bloch 2008.

<sup>8</sup> The single source for the *lang-ling* element in the name remains the *rGyal rigs*, and its currently unidentified sources for the gDung narratives (the vexing mention of *bon thang la 'od dkar gyi yig gter* in the *rGyal rigs* finds no parallel reference in the more than one hundred local manuscripts related to the cult I examined in Bhutan and the Mon-yul Corridor). Tibetan *lang[-ma]-ling* and its local variants have poetic associations with bird flight, fish and river water, and trees swaying and in this manner occur as an embellishment in myths about regional ancestral deities. *Lang-ling* also occurs in Old Tibetan names for primordial characters associated with the ‘south’ (lHo) in ‘ritual antecedent narratives’ (*rabs*) recorded in pre-11<sup>th</sup> century documents; see Huber 2015 ms.

<sup>9</sup> Most known *rGyal rigs* manuscripts and their content have been critically evaluated by Aris 1979, 1986, Ardussi 2004, 2007, 2009, and Hazod 2006.

<sup>10</sup> Gwendolyn Hyslop informs me that “For reasons of mechanical physics, the change of *k > ch > sh > s* is very common cross-linguistically but there is no basis for a change to happen the other way around” (personal communication, August 2015).

<sup>11</sup> According to available information on the author/compiler of the *rGyal rigs*, a Buddhist cleric named Ngag-dbang, he was no doubt a Tsanglha speaker from the Kha-gling area of far east Bhutan in a region completely outside of the distribution zone of the ancestral cult we are dealing with herein. Moreover, the vagueness of transcriptions into Classical Tibetan by non-Tibetans is already well attested in Himalayan regions.

of an ‘alpha’-progenitor in older Tibetan myths. He is always categorized as a *lha* which refers to beings dwelling up the vertical cosmic axis, as well as a *pho-lha* meaning the deity of persons and groups who share the same ‘bone’ transmission, and thus have a common agnatic unit or patriclan. ‘O-de gung-rgyal sends his ‘*lha* son’ Gu-se lang-ling down to earth to become the eventual ancestor of human gDung lineages, who are represented by speakers of the East Bodish languages Bumthap and Khengkha in this particular narrative. This deity also takes the Tibetan *lha*, *gnam-lha* and *pho-lha* designations of his ‘father’, ‘O-de gung-rgyal. Today, the name and the cult – or its surviving traces – of the old deity Gu-se, who is locally called Guzhi/Guse/Guzhe/Gurce/Gurzhe/Guruzhe/Gurse (variously written Gu-zhi, Gu-se, Gur-[r]je, Gur-[b]zhe[s], Gur-se and so on), occurs at scores of sites distributed east to west from Tawang across to the Jamkhar Chu valley in Kheng Chikor, and north to south from Kurtö down to Kheng Bjoka.

It is important to note that the old Gu-se deity is subject to a double classification. For example, if one attends a festival staged by Chocha-ngacha speakers, and hears ‘*lha* Gurzhe’ chanted in an oral ritual text, or reads *lha* Gurbzhe in the local manuscripts, this represents the being named Gu classed as both a *lha* of the upper world and an ‘ancestral deity’ here marked by spoken *zhe* and written *-bzhe*. This classificatory doubling is found everywhere the word for ‘ancestral deity’ occurs. It is a strong indicator of how the whole cult of ancestral beings within the region has an older substratum, reflected in the *zhe* or *-bzhe* and other local equivalents, which has been articulated with or overlaid by a later, more explicitly Tibetan substratum, represented by the *lha*.

The majority of communities who still worship this old Gu-se deity speak East Bodish languages, although a significant minority of Chocha-ngacha-speakers along the west bank of the mid-Kuri Chu river valley do as well. This latter group have long lived adjacent to, and had contacts with, speakers of East Bodish languages to their north (Kurtöp, Dzala), west (Bumthap) and south (Khengkha) who also maintain the Gu-se cult. It remains an open question whether Chocha-ngacha-speakers acquired the Gu-se cult from East Bodish-speaking neighbours via migration and/or uxorilocal marriage – the only possible transmission mechanisms for hereditary cults of agnatic ancestors – or whether they had a much older, ancestral basis for it. However, concerning presence of the Gu-se cult in any Tshangla-speaking environment we have far more certainty. In such cases it is strictly an epiphenomenon, always traceable to contacts via historical migrations and affinal alliances with speakers of East Bodish languages and Chocha-ngacha. It is also noteworthy that, within this distribution, it is only in the Dzala and Dakpa speaking zone<sup>12</sup> that we find any

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<sup>12</sup> Following van Driem’s 2007 treatment of Dzala and Dakpa as separate languages forming a coherent sub-group within East Bodish, Hyslop and Karma Tshering 2010, Bodt 2012: 288–290 and Hyslop 2013: sec. 3 and fig. 2 have promoted the idea that all Dzala and Dakpa dialects might better be grouped as a single language.

evidence of *se/ce/zhi/zhe* (written *se*, [r]je, zhi, [g/b]zhe[s]) actually used as a substantive, rather than merely as the suffix on the name Gu-se and its local variants.

Moreover, with a bulk of new ethnographic data available, it appears that the wide-spread but singular cult of Gu-se represents a regional exception. Indeed, the highest concentrations of ‘ancestral deities’ with the classificatory name suffix in question only occur in the myths and rites of Dzala and Dakpa speakers settled in parallel valleys along the Khoma Chu and upper Kolong Chu river catchments in northeast Bhutan, and in the Tawang district to the east. Thus, in local oral chants and ritual manuscripts used in these valleys to celebrate both surviving and recently defunct festivals for ancestral deities, in addition to occurrences of Gu-se name variants we find the written names Khu-brang-zhe, Chus-zhes, Tha’u-rje, ’Thing-se-zhe, [m]Tho’u-[g/b]zhe[s] (also Tho’u-je), [g]Nam-['r]dor-zhe (also Nam-’dir-zhe), rNa’u-rje, Phong-phong-zhe, Mo-bzhe and Yo-long-rje. They all feature in myths and rites as clan ancestor beings who descend from the sky. Moreover, in most communities where these deities are still worshipped, clan social organization is evident until today, including groups settled in parts of the upper Khoma Chu and Kolong Chu river valleys within Bhutan.<sup>13</sup>

So far, the data indicate that occurrences of this ‘ancestral deity’ word and its attendant cultural context are primarily related to speakers of East Bodish languages, and secondarily to those speakers of other languages within their immediate socio-historical orbits. Overall, the phenomenon is more highly developed in far northern areas compared with what is found as one moves southwards. Data collected south of the Ze La pass, and thus south of the main Dakpa-speaking zone within the historical Mon-yul Corridor (today’s Tawang district), repeats these patterns. South of the Ze La we find no evidence of the older cult of Gu-se, yet that of his ‘father’, *lha* ’O-de gung-rgyal, is certainly present, as it is also in parts of Tawang to the north.

### 3.2 Speakers of Dirang Tshangla

Examples of the same festivals I defined as ‘ancestor propitiation for revitalization of descent groups’ also exist in the Dirang circle of West Kameng district. Yet, there the phenomenon is restricted to very specific sites and groups. This area has the most complex social-historical landscape of any within my research region. Most communities are composed of strata of migrant residues representing both arrivals and settlements in different waves and via gradual diffusion, and the cultural and linguistic traces of this are everywhere in evidence. Among those communities whose main language today is the Dirang dialect of Tshangla, the festival type that concerns us is celebrated at only a handful of

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<sup>13</sup> One makes this point since it is generally assumed that living clan organisation ceased long ago in Bhutan, and that mere historical or mythical traces of it remain.

sites. Those worship communities each have a documented historical settlement record of at least three to six centuries in depth, but many are certainly older. In every case they have origin and migration narratives claiming descent from Dakpa-speakers in Tawang or from specific Tibetan Plateau peoples/regions. They also share a form of two-tiered social and ritual organization based upon both clan and status group membership typical of complex migrant societies. This not only regulates affinity and other relations, but also strongly determines that only those agnatic groups whose claims of ancestry from the ‘north’ are accepted are included as ritual sponsors in communal worship of ancestral deities. Finally, in both the oral and written ritual texts used during their ‘clan’ festivals, the basic Tibetan liturgical language employed is influenced by a whole range of distinct Dakpa terms and expressions not evident in any form of Tshangla.

Among these Dirang Tshangla-speaking worship communities, the spoken term to refer to their ‘clan’ deities is *chis* (rarely *chi*),<sup>14</sup> written somewhat idiosyncratically as both *pyi* and *phyi* in local documents using Tibetan script. Thus, their ‘clan’ festivals are colloquially referred to as *chis*, *chisöshe* or *chisöwen*, generally meaning ‘propitiation of the *chis*’. There are simple stone altars termed (*sa*) *narang*, literally ‘(place to) rest on a journey’ – a word of Dakpa origin<sup>15</sup> – located in the sacred groves beyond the village precincts where such festivals are celebrated, and to which the deities are conducted down along the vertical axis with a verbal ritual journey to be hosted and addressed. During festivals, these altars are termed *chis narang*, ‘rest on the journey [for] the *chis*’. The same double classification of ancestral deities we noted for Gu-se to the west is also evident for *chis* in Dirang. A *chis* being worshipped during a *chisöshe* festival can also be titled *lha* and the event termed alternatively *lhasöshe*; these usages are interchangeable in colloquial speech. The same deities also have a parallel, local cosmological classification as *phu* (‘upland’), but it is telling that this latter category name is never exchanged with *chis* in the manner that *lha* is.

In summary, the data from Dirang for attestably long-established communities nowadays speaking Tshangla indicate an older cultic substratum of ancestral worship occurring together with a certain type of social organization and ritual language, all of which is shared with – and highly likely originated within – the East Bodish zone further north. Concomitantly, and as is evident in Bhutan, there appear to be no inherent connections with this cultural pattern in any Dirang Tshangla-speaking groups who lack ancestral connections north-

<sup>14</sup> The respectful, oral address to these same deities during rites is the Dakpa kin term *achi*.

<sup>15</sup> Derived from Dakpa *sa* ‘earth/land’ or ‘place’ (*sacha*), *ngai* ‘rest’ with *rang nang* ‘road’ or ‘way’. Note that *sa narang* has many cognates in communities of East Bodish and Chocha-ngacha speakers at sites where the same ancestral cult festivals include verbal ritual journeys, e.g. *nasa*, *ngalsa* and *ngetsosa* (written *sna sa*, *ngal sa*, also *ngal ’tsho sa*; cf. Tibetan *ngal ba* ‘tiredness’, *ngal gso ba* lit. ‘to cure tiredness’).

wards. Negative evidence can also be added here for anomalous populations who have no discernable roots in the region, such as the Brokpa, Lishpa and Chugpa. Brokpa groups speaking a form of Tibetan and representing descendants of later migrants<sup>16</sup> into the region from the north are settled around the highland margins of, and within Dirang and Tawang districts. The Lishpa and Chugpa speaking as yet unclassified language/dialects – albeit often held to share affinities with Mey/Sherdukpen, Sartang and Bugun – are settled at the village site named Lish and in the adjacent Chug valley, although, as actual social entities and identities, they have left no traces in any historical documents prior to the 20<sup>th</sup> century. Affinal relations with these small groups have been shunned by long-established Dirang communities, a sure sign of their standing as more recent migrants with no position in the older clan and status hierarchy. As we would expect, the Brokpa, Lishpa and Chugpa neither have any form of the ‘ancestor propitiation for revitalization of descent groups’ cultural pattern, nor the social organization and language that goes along with it.

### 3.3 Speakers of Sartang, Mey/Sherdukpen and Bugun

My regional ethnographic survey of ancestral cults and festivals extended to the Rahungpa community who speak a language/dialect recently called Sartang (i.e. formerly But Monpa). I documented the annual winter ‘clan’ festival named Chiksaybu celebrated at the old – and now mostly abandoned – Rahung village site just to the north of the Bomdi La pass in Dirang district. The Rahungpa themselves say they speak a dialect of the same language known as Mey/Sherdukpen found south of the Bomdi La. These two communities split following a major conflict documented at the beginning of the 19<sup>th</sup> century, with the Rahungpa subsequently maintaining a longer period of client relations with Tshangla-speaking patrons across the valley at Thempang.<sup>17</sup> Having documented Thempang’s ‘clan’ festival, I compared it and other examples of the *chisöshe* type of festivals celebrated to the north around Dirang with the organization and rites of the Rahungpa’s Chiksaybu festival. These are socially and ritually close in various respects. Chiksaybu is explained as ‘worship of the *chik*’, and is a cognate of *chisöshe/chisöwen* elsewhere in Dirang. The two *chik* deities addressed during the festival, Manjang and Mani, are also co-classified as *phu* like the *chis* elsewhere in Dirang.

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<sup>16</sup> Bodt’s (2012: 327) claim of a southward Brokpa migration ‘safely dated to the second half of the 14<sup>th</sup> century’ has no historical basis. The oldest mention of this group in a *rGyal rigs* manuscript cannot date earlier than 1688 (Ardussi 2007), while the oldest known *Khyung gdung rabs* manuscript detailing the group’s own migration dates to 1756 (*rab byung bcu gsum pa’i me pho byi ba’i lo*), and we have precious little idea of what transpired in this region during the intervening four and a half centuries.

<sup>17</sup> On the events in 1810–1811, See Blo-bzang Thabs-mkhas ca. 1826: 11b–12b; cf. MacKenzie 1884: 19 on the impacts of this conflict on Thempang’s relations with Asam. Collective memories of the conflict are preserved in the oral folk histories of both Thempang and Rahung.

While the ceremonial groups and many of the rites performed during Chiksaybu parallel those used to the north, none of the chants in that festival was based upon a Tibetan or Dakpa liturgical language. This is highly likely due to the fact that the present hereditary lineage of *chopji[do]* ritual specialists who oversee the rites of Chiksaybu are not from any Rahungpa clan, but had been brought in following the 19<sup>th</sup> century Rahungpa split with the Sherdukpen. The *chopji[do]* originally hail from But (a.k.a. Jirigaon), the easternmost of the four Sartang-speaking communities, and are thus further removed from the historical influence of Tibetan and Dakpa speakers along the main premodern trade routes of the Mon-yul Corridor.

A short ethnographic account of the winter ‘clan’ festival named Khiksaba celebrated at Rupa south of the Bomdi La pass by Mey/Sherdukpen speakers was recently published. The authors of that study noted both *khik* and *khit* as terms meaning ‘deity’ in the context of Khiksaba, which itself is glossed as ‘Khik ritual/festival’.<sup>18</sup> The clan-based ceremonial groups at the event address two beings named Sung Khit/Khik and Soro Khit. In these names, it appears *khit* functions as a classificatory suffix or postposition marker, as do cognate terms for ‘ancestral deity’ further north and west. As with all the other cases cited above, these deities are co-classified as *phu*<sup>19</sup> and also *lo*, with Mey/Sherdukpen *lo* being spoken for occurrences of Tibetan *lha* in their ritual vocabulary which is essentially the same as that found everywhere to the north, for example *loyak* for *lhayak* (*lha-g.yag*, the sacrificial bovine presented to the deity), *lochang* for *lhachang* (*lha-chang*, the sacrificial beer for the deity), *lo-blang* for *lhabrang* (*lha-brang*, the ritual shelter for hosting the deity), and so on.<sup>20</sup> The term designating the only indigenous Sherdukpen ritual specialist, and the one who presides over Khiksaba, is *zizi* also reported as *jiji*, *chizi* and *khikzizi*.<sup>21</sup>

Comparing the data on the Sherdukpen Khiksaba with my own on Rahung Chiksaybu and other festivals celebrated throughout Dirang and Tawang, there is no doubt they are all derived from the same set of social and cultural patterns. This is particularly evident within the Sherdukpen festival. While Khiksaba includes ‘indigenous’ components of purely local significance, many of its key rites, ritual actors and their costumes and titles are simply identical with those occurring in the once common – now nearly defunct – Pla festivals around Tawang, as well as in festivals further west in the Dzala-speaking zone. Like other festivals of ‘ancestor propitiation for revitalization of descent groups’ everywhere else throughout the region, Khiksaba features a great deal of sung ritual texts performed by different types of actors. For all other festivals, these ritual

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<sup>18</sup> Dollfus and Jacquesson 2013: 4, 145.

<sup>19</sup> See Sharma 1961: 75 “Phu Sawang Sorra: It is a deity residing in the Rupa area.”

<sup>20</sup> Dollfus and Jacquesson 2013: 4, 145.

<sup>21</sup> See Elwin 1958: 243, Sarkar 1980: 65, Rinchin Dondrup 1988: 52, Dollfus and Jacquesson 2013: 4, 145.

texts provide key comparative evidence for understanding such events from cultural-historical and linguistic perspectives, and it is a source of regret that the recent study of Khiksaba includes but a half dozen lines of original song text from such a large and rich corpus. What the authors of the study do report on these song texts is an important piece of information which I was also told repeatedly at Rahung by those familiar with the Khiksaba festival: the main language of the Khiksaba songs is not Mey/Sherdukpen, or any other related language for that matter. Rather, it is Dakpa, or ‘Brahmi’<sup>22</sup> – as Dakpa is commonly named in this part of the Mon-yul Corridor – albeit slightly influenced in places by Mey/Sherdukpen.

The final, relevant record is the word variously recorded as *cha/chak/chchak/kashyat/tchat* among Bugun speakers who are direct neighbours of the Sherdukpen. This word occurs in the name of a single Bugun winter festival celebrated over the past half century that we know of at both Wanghoo and Singchung villages. The few available descriptions of the festival reveal that it generally fits with the ‘ancestor propitiation for revitalization of descent groups’ pattern, and that ‘clan’ units had been a central feature of its internal organization.<sup>23</sup> Different writers have named these Bugun festivals Chasoai, Chak-Sowai, Chchaksowa or Kashyat-sowai, with the latest version, Tchat Sowai, proposed by Vanessa Cholez, whose recent research includes some observation of these festivals.<sup>24</sup> Apart from this, I do not know what status the word *tchat* might have in Bugun language more generally. The few records of spoken Bugun available include *jab-riet* ‘propitiation’ and *mise-siya* ‘worship’, while *sowai* and *sabo* appear to be verbs designating only certain Bugun festivals and not others.<sup>25</sup> These latter verb forms are cognate with *söshe*, *söwen*, *saybu* and *saba* in all the cases of ‘ancestral deity’ festivals we examined further north, and all relate to Tibetan *gsol-ba*<sup>26</sup> (pronounced *solwa*, *söwa*) occurring in the ritual vocabulary of festivals in the Dakpa and Dzala areas. A final point of interest is that while Bugun Tchat Sowai festivals certainly share elements in common with Sherdukpen Khiksaba, both the Tchat Sowai and the

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<sup>22</sup> Dollfus and Jacquesson 2013: 101 n.10 state of Brahmi “This term certainly refers to a form of Sanskrit or Pali.”, although the Brahmi = Dakpa equation has long been known; cf. Barua 1995: 243, van Driem 2001: 916–917, Duarah 1990: 6.

<sup>23</sup> The few published details can be found in Deuri 1971, Dhar 1995: 188, Ghosh 1992: 71–74, Grewal 1997: 89–94, Pandey 1991: 87, Pandey 1996: 81, 83, 85–88 and Rinchin Dondrup 1990: vi, 100.

<sup>24</sup> Vanessa Cholez (personal communication) attended Tchat Sowai festivals as an aspect of her doctoral dissertation research in progress. Photographs Vanessa kindly sent me from the Wanghoo Tchat Sowai celebrated during 2012 clearly revealed its material affinity with both the Sherdukpen Khiksaba and Rahung Chiksaybu festivals.

<sup>25</sup> Rinchin Dondrup 1990: vi, 56, 100, Pandey 1996: 82–83.

<sup>26</sup> This Tibetan verb is often glossed as ‘worship, propitiation’, which is generally acceptable, while in contexts of ancestral festivals it more specifically means ‘request, take [i.e. life-powers and support of ancestral deities]’ and ‘give, serve [i.e. in respectful hosting of ancestral deities]’.

Chiksaybu at Rahung share aspects in common which are not – or no longer – represented in Khiksaba.<sup>27</sup>

The available Bugun data remains ‘thinner’ than all other cases cited above, and caution is prudent when drawing any conclusions. It does however suggest that *tchat* occurring in a social and ritual context more or less identical to other festivals in the region represents the southernmost form in an existing *chis/chik/khik/khit* continuum found to the north.

## 4 Qiangic and Naic cognates

Beyond the communities and their languages included within my survey above, I was unable to identify convincing cognates for these ‘ancestral’ deity words in other spoken languages within this general region of the eastern Himalayas. Similarly, those Tibetan dialects spoken in immediately adjacent regions of the Plateau system to the north, feature nothing comparable. Neither Old Tibetan<sup>28</sup> nor Classical Tibetan lexical funds offer anything cognate. This last result was the more surprising. Beyond consulting lexicons, for Tibetan sources I specifically investigated documents we know were composed or circulated in the southern Tibetan borderlands immediately north of the research region, as well as a range of narratives which are philologically proven source materials for many details of the cults of ’O-de gung-rgyal, Gu-se and other deities worshipped during the festivals that concern us.

A closely cognate term for ‘deity’ and ‘ancestral deity/being’, and one used as both a classificatory suffix on names and a substantive, occurs in dialects of the Qiang language spoken in the Min Shan mountains and associated river valleys, and nowadays divided into Northern Qiang and Southern Qiang. Interestingly, the word occurs there with a similar phonetic variation to that attested in data from my research area. Here one can usefully cite the early 20<sup>th</sup> century observations by David C. Graham on the names of, and classification for the major ancestral deity of premodern Qiang populations:

[. . .] in nearly all communities he is called Mu-bya-sei, Mu-byei-sei, Mu-bya-shi, Mu-ta-be-ts’e, M-byei-sei, or Ma-byei-chi. Ch’i, sei, shi or ts’e

<sup>27</sup> The best example is the significant role of the *massi* (Bugun) or *mashee* (Rahung) ritual actor; see Pandey 1996: 85–87, Huber 2015 b.

<sup>28</sup> The sole candidate would have been Old Tibetan *gsas* (today pronounced *say*). See the single occurrence in the divination text ITJ 738: 3v44–45: *khyim gi lha bzang po ’am pha myes gsas bzang po*, ‘a good/positive *lha* of the house, or a good/positive *gsas* [of] the paternal ancestors’. However, this is not supported by *gsas* occurrences elsewhere in the Old Tibetan corpus, which indicate auxiliary beings for ritual specialists as well as such specialists themselves (often appearing as primordial archetypes in myths), and there *gsas* is often qualified by *drag* ‘strong’, ‘intense’. Old Tibetan *gzhe* may be relevant, but is similarly inconclusive. In context it appears to mean a ‘past time’ of some unit (e.g. year), as in later Classical Tibetan *gzhes*; see notes on Old Tibetan *gzhe* in Dotson 2013: 336 n.32.



means 'god,' and the other two syllables mean 'sky.' Literally it means sky god. At least at Mushang-chai, Lung-ch'i-chai, and Tung-men-wai, where Christian influence has been strong, he is called Abba Ch'i. Abba means 'father' [. . .] in most localities among the Ch'iang it may be used with any god, and is always applied to the male ancestor god, Abba Sei. (Graham 1958: 45)<sup>29</sup>

In their transcriptions of, and notes on premodern Qiang ritual texts and rites, both Graham and his contemporary Hu Chien-min recorded the names of dozens of individual Qiang deities bearing forms of this same *ch'i/sei/shi/ts'e* 'deity' term/suffix.<sup>30</sup> The range of Qiang spoken forms and meanings noted by Graham, Hu Chien-min and Wen Yu<sup>31</sup> prior to the 1950s have all since been recorded by linguists who more recently studied dialects of Qiang spoken throughout the Min Shan region within western Sichuan.<sup>32</sup> Demonstrating that these Qiang terms for 'deity' and 'ancestral deity' are more than a coincidence in relation to the 'ancestral deity' word in my research area is not difficult using ethnographic data.

If 'ancestral deity' terms from both Bhutan and the Mon-yul Corridor and the Qiang area represent true cognates that have survived through time from some common origin, we would also expect common identities for ancestral beings to have also survived along with the terms. There are in fact several strong candidates. Let us first recall that the older written name Gu-se and its later variants from Bhutan and the Mon-yul Corridor all literally mean 'Gu ancestral deity/being', and that this ancestral identity is the most wide-spread within the region, indicating that at some point during the past Gu must have been considered an important ancestor for the migrant peoples who carried his cult with them. According to origin narratives recorded during the early 20<sup>th</sup> century among Northern Qiang and Southern Qiang speakers, Gu La (or Gula) was the identity of the old, ancestral Qiang themselves, at the time they migrated southwards down the eastern Marches of the Tibetan Plateau system, to settle in their present territory of the Min Shan ranges.<sup>33</sup> Additionally, the name recorded as Gkow-la-tsu also named this early Qiang ancestor.<sup>34</sup>

The above forms of the Gu mythological name do not only occur within the Min Shan ranges, but are found as well in other neighbouring areas where

<sup>29</sup> Graham's system of assigning tones using superscript numbers is omitted here.

<sup>30</sup> See Graham 1958: 45–52, 69–70, Hu Chien-Min 1941: 5–14.

<sup>31</sup> On the so-called Chiu Tzu Ying dialect, see Wen Yu 1950: 25 *ts'e* 'god', spirit, cf. 36 *yo p'xi ts'e* 'white stone god', cf. also Hu Chien-Min 1941: 5.

<sup>32</sup> See Evans 2001: 125, 356 (cf. also 301–302 on entires for 'soul') who treated six different Qiang dialects, and LaPolla 2003: 170 *xsi* 'diety (family god)' in the dialect in Mao County.

<sup>33</sup> Graham 1958: 7, 100. Note also the Qiang deity name Shi-gu-tzé record by Hu Chien-min 1941: 10.

<sup>34</sup> Rock 1948: 9 n.2, Rock 1952, II: 581 citing data collected by T. Torrance at Li-fan hsien. Whenever citing Rock's transcription of Naxi, I have adopted the conversion used in Oppitz and Hsu 1998: 19 to replace Rock's superscript numbers registering tones.

Qiangic and related Naic languages are spoken today. We have written Tibetan records of the already ‘deified’ form Gu-se or Gu-zi as toponyms and mythological motifs in parts of far eastern Tibet where Qiangic languages such as Muya/Munya (earlier Minyak) are spoken further westwards of the Min Shan ranges.<sup>35</sup> The Gkow-la-tsu form is also found preserved as Gkâw-là-ts’ú’ in Naxi ritual texts to designate the apical ancestor of the four primordial Naxi clans.<sup>36</sup> This common ancestor claimed by both peoples is not surprising, since the Naxi are widely considered by themselves and outside observers to be migrants from the north, and a branch of an earlier Qiang ancestor population. It is noteworthy that, along with Gu, these Gkow/Gkâw variants are also of interest in my research region since origin myths, clan names and toponyms – which together represent the ‘classic’ cultural domains for preservation of ancestral identities – in the parallel valleys settled with Kurtöp, Dzala and Dakpa speakers feature so many significant Ku, Khu, Ko and Kho names.

Concerning further identities possibly shared between ancestral worship in Bhutan and the Mon-yul Corridor and among the Qiang, the name Mo-bzhe occurring in manuscripts from the Dakpa- and Dzala-speaking zone is also of interest. Mo-bzhe meaning the ‘Mo ancestral deity/being’ can be compared with the Qiang deity Mo-ts’o described by Graham as being ‘male, regarded as the equivalent of the ancestors’, while the deity Mo-bo-sei (and Mo-go-i-shi) also has intimate ancestral associations as the god of the hearth place, represented by one of the three hearth stones or tripod legs surrounding the fire place (the other two stones/legs are ‘A-ba-sei, the male ancestor, and A-ta-sei, the female ancestor’).<sup>37</sup> A final example is Tho’u-zhe, the ‘Tho’u ancestral deity/being’, who is significant in ritual texts from the Khoma Chu and upper Kholong Chu river valleys of far northeast Bhutan, and who can be compared with a Qiang deity named Do-dzu-sei, whom Graham identifies as the ‘door god . . . who keeps demons out of homes’.<sup>38</sup>

In addition to claiming cognates for words and exploring name-matching, a great deal of ethnographic data from all the populations just cited can be subject to rigorous comparison. To briefly cite just one among a range of examples explored in my forthcoming monograph (Huber 2015 ms), and an example I already laid out a set of reference points for appreciating above, we can take the contexts, actors, exterior forms and symbolic content of communal festivals. Among the Naxi and the Qiang, who are claimed to be branches of an earlier

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<sup>35</sup> When first discussing the Gu-se name in the *rGyal rigs*, Aris 1979: 127 pointed out that Rolf Stein identified the toponym Gu-se or Gling Gu-se (also written ‘Gu-zi, mGu-zi) in the far east of the Tibetan Plateau, in association with the Gesar epic and the Rlangs clan. Stein 1959: 128, 174 n.75 also noted that Gu-se or ‘Gu-zi skya-rengs and ‘Gu-zi shong-dkar are all names occurring in the Gesar epic.

<sup>36</sup> Rock 1955: 151 n.10, and Rock 1952, II: 581 who made the equation between the Qiang and Naxi ancestor figures.

<sup>37</sup> Graham 1958: 48–49, cf. 46 fig. 3, plate 15 caption.

<sup>38</sup> Graham 1958: 48.

common population, we find that both peoples share their oldest form of communal, calendric rite, the so-called ‘Propitiation of Heaven’ festival (*Muân bpò*’ in Naxi).<sup>39</sup> Such festivals – at least in all the records for premodern occurrences of them – were organized on the lines of clan-based, ‘bone sharing’ descent units who formed the main ceremonial groups. The major annual events were staged during Winter around the lunar new year, in sacred groves at simple stone altars on the outskirts of villages, and at which these ceremonial groups addressed sky beings reckoned as ancestors to ensure their annual revitalization. This is the exact cultural pattern we find in the research data from east Bhutan and the Mon-yul Corridor. As an interpretive exercise, I compared my own ethnographic documentation of ‘clan’ festivals in certain parts of the Mon-yul Corridor with accounts of the Naxi ‘Propitiation of Heaven’ festivals, while I consulted the less extensive Qiang data on the same festival type in parallel. There are some differences, yet the overall result is that the festivals from the two distant regions are almost identical right down to fine details. The same positive results can be obtained by comparing cosmologies, myths, other types of rites and cultural practices, items of material culture unique to both areas, and so on, as I do in detail in my forthcoming monograph (Huber 2015ms). The specificity in those comparisons across such a wide range of indices is impressive. To be sure, it far exceeds the usual, cautious references to ‘family resemblances’ mooted by anthropologists when comparing features from distant societies speaking Tibeto-Burman languages.

Qiangic and Naic languages are not considered closely related to those in the East Bodish group.<sup>40</sup> If convincing evidence of significant past links between their speakers can be established, this may have potential ramifications for our understanding of Tibeto-Burman historical linguistics.

## 5 Summary and hypothesis

My survey results for the word meaning ‘ancestral deity’ roughly define two ‘paths’ along which forms of the word are distributed (see figure 1). One path of *se/ce/zhi/zhe* forms extends in an approximate arch west from Tawang, across to Kurtö and down the Kuri Chu to points in southernmost Kheng, while the other path of *chis/chik/khik/khit/(?)tchat* forms runs down the Mon-yul Corridor between the southern flanks of the Ze La pass and the southern flanks of the Bomdi La pass. It is to be noted that these two paths basically move around either side of, and therefore completely by-pass, what is today’s large, core area of Tshangla-speakers. There are three findings I can demonstrate beyond doubt:

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<sup>39</sup> See Rock 1948, McKhann 1992, Rock and Oppitz 1998.

<sup>40</sup> See Jacques and Michaud 2011 for the most recent review of Qiangic and Naic languages.

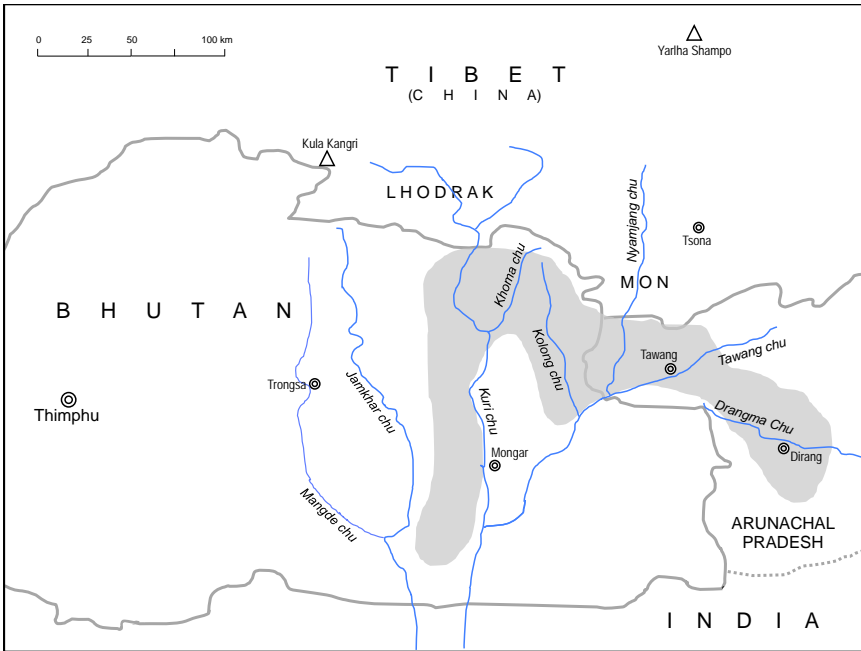


FIGURE 1– Distribution region for ‘ancestral deity’ word forms

- i. All forms of the word are closely nested within, and more or less exclusive to, a shared and very specific social and cultural pattern I have described herein as ‘ancestor propitiation for revitalization of descent groups’;
- ii. The Dzala and Dakpa speaking valleys to the north appear to be the historical centre of gravity for preservation or sophisticated development of the same social and cultural pattern, and, in the case of the Dakpa-speakers of Tawang, they also appear to have been migratory carriers – and possibly also a source for local emulations – of significant aspects of this pattern southwards down the Mon-yul Corridor, at least as far as the Sherdukpen settlement region just south of the Bomdi La;
- iii. Ancestral deities originally classified by both *se/ce/zhi/zhe* and *chis/chik/khik/khit/(?)tchat* forms of the word were co-classified with Tibetan (e.g. *lha*, *pho-lha*) and possibly local cultic categories (e.g. *phu*). This is regionally evident. These might best be understood as traces of syncretic moments, when an integral and inherently conservative cult of ancestral deities was accommodated both with what was there before it arrived, and what came along later in its wake.

The above points, taken together with the Qiang and Naxi cognates and comparisons I explored, encourage me to propose a hypothesis with the following points:

- i. Some earlier population stratum sharing common ancestral roots with the Qiangic and Naic speaking peoples along the south-eastern Marches of the Tibetan Plateau system was once established in the series of parallel highland valleys of what is today far north-eastern Bhutan and the Tawang district of India.
- ii. They, or their already locally assimilated descendants, spread southward, most likely incrementally via micro-migrations<sup>41</sup> and intermarriage, along the two 'paths' indicated by the presence and traces of their ancestral cult today.

This hypothesis has both limits and potential for development to address outstanding questions. Firstly, while it is Dzala and Dakpa speakers who nowadays occupy the valleys where a hypothetical ancestral population with Qiangic and Naic roots seems most likely to have been concentrated in and spread out from, we are unable to address the question of how the former and the latter once stood in relation to each other – which was there initially, or were they one and the same, or was one assimilated into the other, and so on?

Furthermore, Rolf Stein already proposed that Qiangic speakers, namely the somewhat amorphous 'ancient Ch'iang' and the Minyak, were components among various proto-Tibetan ancestral populations who migrated from east to west onto the Plateau, and whose descendants together with others eventually became the 'Tibetans' of the historical period. Realizing there could be no conventional historical accounting of such early Ch'iang and Minyak migrants, Stein drew together various indicators from Chinese historiography, narratives about Tibetan 'proto-clans', locations of old stone-tower architecture, and some conceptual-linguistic comparisons.<sup>42</sup> Rather than puzzling over vague, contradictory and mostly rather late Tibetan historiographic texts, as has been the trend in scholarship since Stein's proposal, his ideas about these proto-Tibetan ancestral populations will best be demonstrated with a specific geographical focus and empirical evidence, as I have attempted to begin herein.

Finally, the vaguely known peoples of southernmost central Tibet who were collectively labelled *Dung* or *Dung-reng* and represented as aggressive misfits by mediaeval Tibetan historians, have already featured in various explorative discussions about migration, language and social and cultural history

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<sup>41</sup> Micro-migrations are the most realistic model we have for conceiving premodern population movements within eastern Himalayan environments; see Huber 2012.

<sup>42</sup> Stein 1951, 1957, 1961, 1972.

within my research region.<sup>43</sup> For a variety of reasons – which would require another substantial article to do justice to – the so-called Shar Dung of Lhodrak (see figure 1), who migrated southwards into my research region during the mid-14<sup>th</sup> century, emerge as the most likely candidate population with probable Qiangic and Naic roots to fit in my hypothesis. That is a topic I explore in my forthcoming monograph *Source of Life* (Huber 2015ms).

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<sup>43</sup> See, for examples, Aris 1979: chapt. 5, fig. 4, Ardussi 2004, Bodt 2012: 326–327, Karma Phuntsho 2013: 120–133.

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## 11

## Tones in Northeast Indian languages, with a focus on Tani: A fieldworker's guide<sup>1</sup>

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### 1 Introduction

This chapter is about the tone systems found in many Northeast Indian languages, with a special focus on the Tani branch of Trans-Himalayan [Tibeto-Burman]. It is aimed primarily at fieldworkers who are beginning research on a Northeast Indian tone language, and need a way of quickly contextualizing their work and of developing ideas and techniques that may help to make sense of their data. That said, there should also be enough information here to give typologists or anyone else with an interest in the tone systems of Northeast Indian languages some material to work with. It thus takes two important cues from Burling's recent research on Bodo-Garo languages: one, Rob's determination to continue working on, and publishing on, the tone systems of North East Indian languages despite the many analytical challenges these languages have posed to him and other researchers; two, Rob's impatience with the ivory towers of international academia, and his determination to produce materials which are of value to a broad range of people, in particular students and language communities. Although the present chapter represents only a tiny step forward in terms of the understanding of its subject matter, I hope it will at least pass those two Burling Tests. After a brief discussion of tone from a general perspective in §2 and Tani languages in §3 and §4, §5 outlines the tone systems of four Tani languages: Apatani, Galo, Minyong and Tangam. §6 summarizes the presentation with a 'fieldworkers guide', and §7 presents some comparative-historical closing remarks.

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<sup>1</sup> I would like to thank Stephen Morey and Jonathan Evans for their helpful comments on this chapter, while absolving them from any errors.

## 2 Tone and the languages of Northeast India

We don't yet know how many Northeast Indian languages have lexical tone systems, but it is certainly a significant number, and it may be the majority. By a 'lexical tone system', I mean a system in which particular pitch contours are assigned to the lexemes of a language, and produce meaning contrasts among lexemes in more or less the same way that segments do. A clear example of a Northeast Indian language with a lexical tone system is Apatani, which contrasts the lexeme *nóo* 'you' (high pitch/tone) with a segmentally-identical lexeme *nòo* 'where' (low pitch/tone) on the sole basis of a systematic difference in pitch. All Apatani morphemes are specified for one of these two lexical tones, and as a result there are hundreds of segmentally-identical minimal pairs on tone such as the above in Apatani. A lexical tone system, in this sense, is different from an intonation or an accent system. In an intonation system, a rising pitch on a word (for example) can indicate that the sentence in which it occurs is a question; the same contour will occur over a different word in the same position, and will not occur over that same word when it is in a different position. In an accent system, certain syllables or syllable types may be required to occur with a certain pitch, but this is not a specified feature of all syllables, or of all lexical items, in the language. Although intonation and accent systems can co-exist with lexical tone systems, they are not themselves lexical tone systems, and so will generally be excluded from consideration in this chapter. In the rest of this chapter, I will call lexical tone systems simply 'tone systems' or 'tone(s)'.

So far as I am aware, tone in Northeast India (NEI) is limited to the languages of two families: Tai and Trans-Himalayan (= Tibeto-Burman). No Indo-Aryan or Austroasiatic languages of NEI appear to have developed tones. The modern-day NEI Tai lects all seem to have tone systems that are similar to those found in related Tai languages of Thailand, Myanmar, Laos and Southwest China. They can accordingly be described using the standard set of East/Southeast Asian analytical techniques, as has in fact been done by Morey and colleagues (Morey 2005, Morey and Schöpf 2011); I will briefly review some of these techniques below.

On the other hand, NEI tone languages of the Trans-Himalayan family have presented a number of analytical challenges, and the reasons for this are not immediately clear. According to Burling (2003: 173), 'only rarely are tones indicated in the available publications [on NEI Trans-Himalayan languages] . . . the apparent rarity of tones in some areas may be due to the genuine rarity of people looking for them.' It may indeed be the case that at least some analysts may have completely failed to recognize tones in their descriptions of at least some NEI Trans-Himalayan lects. More commonly however, what we seem to find is a situation in which it is clear that a given lect has tones – in some sense or another – but it is much less clear how its tone system should be analysed. Unlike in NEI Tai lects, the tone systems of NEI Trans-Himalayan languages

often seem quite different from those of the better-understood East/Mainland Southeast Asian languages.

## 2.1 Tone in East and Southeast Asian languages

Most East and Mainland Southeast Asian (E/SEA) tone languages have **syllable tone** systems, in which around 4–6 contrastive ‘tonemes’ work together with segmental features to distinguish among morphemes/words. The most famous example of such a language is Mandarin Chinese, a Sinitic language, but similar systems are found in Thai and Vietnamese, from the Tai and Austroasiatic families respectively, as well as in Trans-Himalayan languages such as Lahu and Lisu (spoken in the China/Thailand/Burma/NEI border areas). In a syllable tone system, the tone bearing unit, or ‘TBU’, is a monosyllable which is also usually a morpheme and/or word. A standard set of examples from Mandarin Chinese is in Table 1; here, four segmentally identical morphemes/words are distinguished by having either one of four distinct pitch contours, or in lacking a tone (i.e., in being tonally ‘neutral’). Lacking or being neutral to tone is often a property of grammatical morphemes in a syllable tone language.

TABLE 1 – The basic tones of Mandarin Chinese

Tone	Form	Gloss
1	<i>mā</i>	‘mom’
2	<i>má</i>	‘hemp’
3	<i>mǎ</i>	‘horse’
4	<i>mà</i>	‘scold’
	<i>ma</i>	‘INTERROGATIVE PARTICLE’

When tone-bearing morphemes are concatenated in a syllable tone language – for example, when two lexical roots are combined to form a compound, or when certain types of affix are added – the lexically-specified tones of individual morphemes are typically preserved. In some cases, we find a ‘sandhi’ tone; that is, a change from one tone to another. Or, we may find tonal ‘neutralization’, in which a particular tone is lost. In Table 2, again from Mandarin Chinese, we see that tones 1–2 and 4 are preserved when the lexical morphemes from Table 1 occur as compound initials, whereas in 3 the tone is converted from low-rising to high-rising (effectively, from tone 3 to tone 2). On the other hand, tone 1 is lost when occurring as a compound final. For a recent overview of sandhi effects in Sinitic and other eastern Sino-Tibetan languages, see Evans (to appear). The crucial thing to note for our purposes here, however, is that these are individual changes to individual tones at particular places in the word, and that such changes are exceptional; in general, the tones of particular syllables/morphemes tend to be preserved in larger contexts.

TABLE 2 – Mandarin Chinese tones in compounds

Tone	Composition	Resulting compound
1	<i>mā-mā</i> ‘mom-mom’	<i>māma</i> ‘mom’
2	<i>má-shéng</i> ‘hemp-rope’	<i>máshéng</i> ‘hemp rope’
3	<i>mǎ-zhǎng</i> ‘horse-palm (of hand)’	<i>mǎzhǎng</i> ‘careless; casual’
4	<i>mà-jīe</i> ‘scold-street’	<i>màjīe</i> ‘shout abuse in a public area’

In some E/SEA tone languages, pitch is associated with other prosodic features, such as voice quality (breathy, creaky), nasalization, or glottal ‘checking’, as in Burmese (Table 3). Such features remain associated with a particular syllable/morpheme/word, and can thus be integrated together with pitch into an overall ‘tone’ (or perhaps in this case ‘lexical-prosodic’) inventory.

TABLE 3 – The basic ‘tones’ of Burmese

Tone	Form	Gloss
Low	<i>k<sup>h</sup>à</i>	‘shake’
High	<i>k<sup>h</sup>á</i>	‘be bitter’
Creaky	<i>k<sup>h</sup>ǫ</i>	‘fee’
Checked	<i>k<sup>h</sup>aʔ</i>	‘draw off’

It is less common to find strong interactions between tone and rhythmic features such as syllable weight and stress placement in E/SEA tone languages. In Thai, light (CV) syllables are toneless, but this reflects an overall phonological markedness; an example of this is the common ‘fruit prefix’ *ma-*, which has lost its tone as part of a general process of phonological erosion in which the coda consonant is also lost, and the vowel is reduced in duration (Table 4).

TABLE 4 – Reduction of *màak* ‘betelnut > fruit prefix’ in Thai

Form	Gloss	Source	Gloss
<i>màak</i>	‘betelnut’	* <i>màak</i>	‘fruit’
<i>ma-phráaw</i>	‘coconut’	* <i>màak-phráaw</i>	‘fruit-coconut’
<i>ma-krùut</i>	‘kaffir lime’	* <i>màak-krùut</i>	‘fruit-kaffir lime’
<i>ma-kǎa</i>	‘eggplant’	* <i>màak-kǎa</i>	‘fruit-eggplant’

## 2.2 Tone in NEI Trans-Himalayan languages

Several Trans-Himalayan languages of the NEI region have properties which seem to contrast with the E/SEA syllable tone norm. For example, in Sumi, a language of Nagaland, the pitch contours of at least some types of polysyllabic word appear to be lexically specified for one of several tonal ‘melodies’ (Teo 2014: 78–79). For example, *àpù* ‘father’ (LL) contrasts with *apu* ‘dipper’ (MM) and *àpú* ‘son’ (LH). This is quite different from a prototypical syllable tone

language, in which the tone of each syllable is independently assigned in the lexicon (see again Table 2). So pervasive is the association between syllables and tones in a syllable tone language that tones are lexically assigned even to the meaningless ‘formatives’ of polysyllabic loanwords. For example, in Mandarin Chinese *màikèfēng*, from English ‘microphone’, the surface LLM ‘melo-‘melody’ has no distinct phonological status; it is simply the unmodified result of concatenating three syllable tones within a trisyllabic word.

In Singpho and Tangsa, two strongly iambic languages of the northern Indo-Myanmar border area, Morey (2014) finds that prefixing can ‘change’ the tones of following root syllables: for example, Ngaimong Tangsa *tɛɛŋ*<sup>2</sup> ‘be born’ becomes *a-tɛɛŋ*<sup>3</sup> ‘NZR-be.born’ when a nominalizing *a-* prefix is added. A number of hypotheses might be advanced to explain this process, including tone spreading/sandhi phenomena, ‘floating’ tones or diachronic change; the only point we need to note here, however, is that it happens. As we will see, a number of similar processes are relevant to the description of tones in Tani languages.

Another point made strongly by Morey (2014) – and echoed by a number of other scholars of NEI Trans-Himalayan tone languages – is that tones tend to be more variable in NEI Trans-Himalayan languages than they are in most E/SEA syllable tone languages. For example, the default pitches of lexical tones in NEI languages seem to be more often affected by phrase/sentence intonation – including, crucially, list intonation (as when eliciting a wordlist). Similarly, NEI Trans-Himalayan tone language consultants have often been reported as less confident or less consistent in their judgements than speakers of E/SEA syllable tone languages tend to be. In general, tones seem to have a **lower functional load** in NEI Trans-Himalayan languages than they do in E/SEA syllable tone languages – they are more often variable, and variation less often introduces comprehension difficulties. Morey’s bilingual Tai/Singpho consultants support this idea, saying that they ‘rely more on context than on the tones to disambiguate meaning in connected text’ when speaking Singpho, whereas in Tai ‘the tones are indispensable’ (Morey 2014: 640). Konnerth (2014: 76–82) presents an especially illuminating account of the low functional load of tone in Karbi, in which (among other pieces of evidence) she describes native speaker experts who are aware of tones in their language experiencing difficulties in identifying tone categories during the process of work on a tonally-specified community dictionary.<sup>2</sup>

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<sup>2</sup> One point which should perhaps be made here to avoid giving the impression that tones simply don’t matter in NEI Trans-Himalayan languages, is that despite their low functional load and despite the difficulty consultants often have in identifying them, tone categories are nonetheless learned by children, and in fact tend to be fairly stable over time, as we will see below. In other words, the different phonological status of tones in NEI Trans-Himalayan languages is not necessarily indicative of a difference in importance as far as the overall structure and character of the languages is concerned.

These two factors – the unusual systemic properties of tones in NEI Trans-Himalayan languages, and their lower functional load – have very often conspired to frustrate analyses. A number of scholars have reported that they were not actually certain that they were dealing with a tone language until quite late in their research. This is similar to the experience of Mazaudon (2014: 588), who wrote of her work on Tamangic languages in Nepal, ‘I expected to have some difficulties identifying and analysing tones if there were any, but I did not expect to ask myself the question: is this a tone language? But this is what happened.’<sup>3</sup> Others have noted that tones occur in their language of interest, but then go on to assign them a marginal status. For example, Simon (1972: 2–3) wrote that ‘Apatani is comparatively free from the tonal complexities one finds in languages of the Tai or Kachin group . . . the meaning of a few words may change according to the tone in which they are uttered . . . this feature is restricted to a small number of expressions.’ This assessment reflects a very different experience of Apatani tones than that of Post and Tager (2013), who later found tone to be an integral feature of not only ‘a few words’, but in fact every Apatani lexeme. Similarly, a number of authors have disagreed on such seemingly basic issues as the number of tones actually observed in a given NEI Trans-Himalayan tone language. For example, Burling and Joseph (2010) report in their recent study of Bodo tones that previous researchers had assigned either two lexical tones to Bodo (Burling 1959, Halvorsrud 1959), three (Burton-Page 1955) or four (Bhattacharya 1977). Although Burling and Joseph’s own study makes undeniable progress, the authors also admit that the question of how many tones must ultimately be recognized for Bodo has not yet been fully answered. Finally, another striking fact regarding those NEI Trans-Himalayan languages that are also spoken across the border in Tibet, is that the opposite tendency is often found in Chinese publications – to mark every syllable for tone as though every syllable were tonally contrastive as is basically the case in Chinese. The most striking example is perhaps that of Puroik, which was analysed in Tibet by H. Sun et al. (1991) as having two or three tones (or perhaps voice qualities – lexical-prosodic categories, in any case). Remsangpuia, who worked primarily in India and is a native speaker of Mizo – also a tone language – later wrote that he took great care to detect tone in his dissertation on Puroik

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<sup>3</sup> I can here offer a similar anecdote of my own: during my fieldwork on Galo from 2004–2008, I was aware that one Galo dialect – Pugo – had tone. However, I was not able to determine that the Lare dialect, on which I based the description in Post (2007), had tone until the last month of my first ten-month fieldtrip in 2004–2005. Both I and my consultants, evidently, had been working in complete ignorance of the existence of tones in Lare Galo for literally hundreds of hours over a period of nine months! The last three weeks of this trip were completely consumed by the sudden need to, first, come to understand the Lare Galo tone system, and second, retranscribe our entire lexical and text databases with this newfound attention to tones. Working virtually around the clock with two superlative (one might even say superhuman) consultants – Mili Nyodu and Igo Riba – we somehow, thankfully, managed it.

phonology, but that he ‘could not find any minimal pair for tones in the language’ (Remsangpuia 2008: 91).

Discussions such as this – regarding the basic inventory of tones in a language, or the question of whether or not tones actually occur in a language – are largely absent from the literature on E/SEA tone systems. It seems clear, then, that there is something different about NEI Trans-Himalayan tone systems. Accordingly, when we approach a NEI Trans-Himalayan tone language, we need to prepare ourselves for the likelihood that we may encounter both variability and seeming inconsistency, and also for the prospect that we are possibly encountering a system that is in some ways unusual, and perhaps even unique.

Most of the remainder of this chapter will be devoted to a ‘state-of-the-art’ description of the tone systems of a number of Tani languages. We will find that these same factors – unusual systemic properties and lower functional load – play crucial roles in the understanding of Tani tones. This will by no means be the last word on the analysis of tone in Tani languages: quite the contrary; much of the most important research remains to be carried out. However, I hope that what follows will provide future researchers with a reasonable starting point.

### 3 Tone in Tani languages

The Tani languages are spoken by around 1,000,000 people in central Arunachal Pradesh and upper Assam in India, and by much smaller numbers (perhaps a few hundred or thousand) over the de facto border with Tibet (Figure 1). They basically form a dialect chain; although a few Tani languages are basically unintelligible to speakers of all other Tani languages (especially Apatani, Milang and Tangam), the majority of Tani lects are mutually-intelligible to a large degree with at least one or two others. A ‘family tree’ of the Tani languages is given in Figure 2. Note that Figure 2 is presented in ‘tree’ format for convenience of visualization, however it is not intended to be read in the traditional way – as a series of proto-languages defined by shared innovations which branch out into mutually-unintelligible daughter languages – but rather as a rough indication of similarity among Tani lects; some of these similarities are due to common inheritance, whereas others probably owe more to language contact.

Most Tani languages have not yet been comprehensively described, and most of the existing sources either do not address tone or give an incomplete or unsystematic account. I will report on four languages in this chapter for which I have first-hand data: Apatani, Galo, Minyong and Tangam. We therefore know that at least this many Tani languages have tone. Milang also has tone, seemingly layered with register/voice quality features; unfortunately, this system has not yet been documented, so we can say nothing further about it here. A variety of Bangni spoken in Tibet is reported by T. Sun (1993: 32) to have what he describes as a ‘marginal’ tone system ‘which has not yet become fully functional in the entire lexicon’.





FIGURE 1 – Northeast India, with Tani language area in rough outline

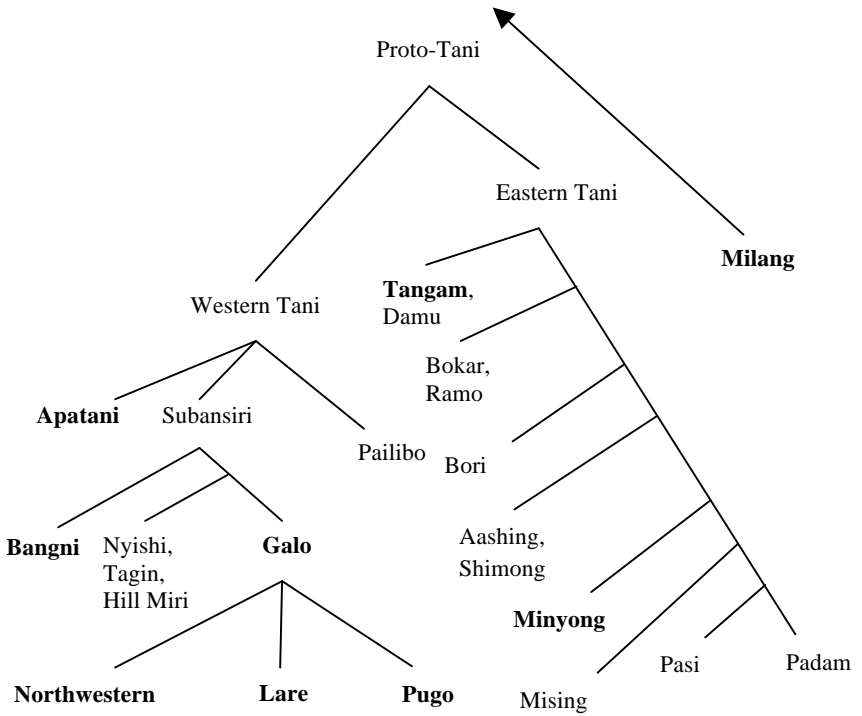


FIGURE 2 – Tani language relationships

Tone has been reported for Mising by Prasad, Sastry and Abraham (1991); however this report seems to be in error.<sup>4</sup> I have also conducted fieldwork on Mising, and conferred at length with native Mising-speaking linguists such as Surat Kumar (Ain) Doley and Jugendra Pegu; none of us can detect lexically contrastive tones in Mising. Be that as it may, the potential occurrence of tone in at least some Mising dialects cannot be completely ruled out. I have also been unable to detect tones in Lower Nyishi, Tagin or Lower Adi. In the speech of most Lower Adi speakers native to Pasighat township, it is clear that lexical tone is absent, and also that the speech of Adi who grow up in Pasighat generally lacks tone. However, since Pasighat is an ethnolinguistically diverse community which is host to large numbers of recent inward migrants and their relatives, it is likely that at least some of them speak varieties of Adi that retain tones. Little or nothing is known about the remaining known Tani lects, i.e. Bokar-Ramo, Pailibo, Hill Miri, Bori, Aashing, Shimong and Damu. My inclination is to suppose that the majority of these mostly northerly lects are most likely to have tone, as the tendency seems to be for tone to be lost in the southerly lower elevations near Assamese contact areas, and retained in the north (note that the neighbouring Idu language also certainly has tone). Nonetheless, the fact is that we do not know.<sup>5</sup> Whatever the case, an inspection of the distribution of **bolded** languages in Figure makes it clear that tone is a pervasive feature of Tani languages, found in every major branch; some form of tone can almost certainly therefore be reconstructed to Proto-Tani. I'll take up this comparative-historical point again in §7, following the description of Tani tones in §5 and §6. Table 5 summarizes our current state of knowledge regarding tone in Tani languages.

TABLE 5 – Tani languages and tone: what we do and don't know

Tone, confirmed	Apatani, Galo, Upper Minyong, Tangam, Milang
No tone, confirmed	Mising (Pagro), Pasi-Padam (Pasighat), Tagin (Daporijo)
Conflicting reports	Mising (more generally), Bangni (in Tibet), Nyishi
Unknown	Hill Miri, Pailibo, Bokar, Damu, Aashing, Karko, Bori, Shimong, Tagin (Upper)

<sup>4</sup> Most Mising lexemes which these authors report as bearing “tones” in fact typically have un-transcribed vowel length contrasts or rhythmic accents which appear to have been mistaken for tones. In other cases, transcriptions of “tones” seem to represent the effects of list intonation.

<sup>5</sup> Ou-Yang (1985) claimed that none of the Bengni, Bokar or Damu lects that he recorded in Tibet had tone. However, T. Sun (1993) later found that this was not the case of Bengni, at least, in which at least some clear minimal pairs on tone were found. Accordingly, and unless it can be independently confirmed by an in-depth study, Ou-Yang's further claim that Bokar and Damu lack tone should not be taken as definitive.

## 4 Tani syllable and word structures

To understand the tone systems of Tani languages it is necessary to first understand a certain amount about Tani syllable and word structures. A fuller account is given in Post (2006). Here, I will restrict discussion to the most basic issues.

Syllable weight is one of the most important factors in the analysis of Tani languages, and it is also one of the most frequently ignored. However, unless syllable weight is properly understood, no cogent analysis of tone in Tani languages seems to be possible.

All well-described Tani languages exhibit a fundamental contrast between light and heavy syllables; it is clear that this distinction must also be reconstructed to Proto-Tani. Light syllables contain only a short vowel nucleus, with an optional consonant onset. Heavy syllables additionally contain a coda segment ‘X’, which can be realized either by a nucleus-identical vowel, by nasalization of a short vowel nucleus (in languages which exhibit contrastive nasalization, such as Apatani), or by one of a usually restricted set of final consonants, varying from language to language (Figure 3). In other words, the possible syllable types are (C)V (light) and (C)VC, (C)V: or (C)Ṽ (heavy).

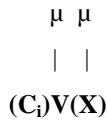


FIGURE 3 – Basic Tani syllable structure (X = nucleus-identical V, vowel nasalization, or CfC).

It is also important to understand some basic Tani word structures. The simplest type of Tani word structure is a single monosyllabic root. However, this is also the rarest type of word structure. Most words in Tani languages are either compounds of two roots, or else are suffixed or prefixed roots. At this point, it becomes useful to draw a distinction between the structures of nouns and adjectives, on the one hand, and predicates (verbs) on the other. Most nouns and adjectives have the structures [ROOT], [ROOT-ROOT] or [PFX-ROOT], whereas most predicates have a [ROOT-SFX] structure (Table 6). Some illustrative examples from Apatani are given in (1)–(4).

Table 6 – Basic Tani word structures

N, ADJ	PRED
[ROOT]	
[ROOT-ROOT]	[ROOT-SFX]
[PFX-ROOT]	

- |  |  |
|--|--|
| (1) <i>j̄i</i><br>black<br>[ROOT]<br>‘black’       | (2) <i>miʔ-láa</i><br>eye-juice<br>[ROOT-ROOT]<br>‘tear(s)’                        |
| (3) <i>à-miʔ</i><br>PFX-eye<br>[PFX-ROOT]<br>‘eye’ | (4) <i>pá-dó</i><br>cut.by.striking-IPFV<br>[ROOT-SFX]<br>‘(Someone) is chopping.’ |

## 5 Tani tones

This section will describe the tone systems of a number of Tani languages. Following a brief discussion on method in §4.1, we will discuss tones in morphologically simplex, monosyllabic words from a general perspective in §5.1. We then present a language-by-language description of tones in morphologically complex, polysyllabic words in §5.2–§5.3 – as we will see, the behaviour of tones in more complex words varies from language to language.

### 5.1 Method

When describing a syllable tone language, we typically work ‘bottom-up’. That is, we start by identifying the number of basic pitch contours (and any associated features, such as voice quality) in morphologically simplex and, ideally, monosyllabic words. For example, in Thai we might find a set of words such as the following (Table 7):

TABLE 7 – Assignment of a set of Thai words to tone categories

H		M		L	
Wd	Gloss	Wd	Gloss	Wd	Gloss
<i>lín</i>	‘tongue’	<i>mii</i>	‘have/exist’	<i>hèed</i>	‘reason’
<i>tóʔ</i>	‘table’	<i>phɛɛŋ</i>	‘expensive’	<i>tèʔ</i>	‘kick’
<i>rɔ́ɔn</i>	‘hot’	<i>maa</i>	‘come’	<i>nìŋ</i>	‘one’
<i>léɛw</i>	‘already’	<i>ŋən</i>	‘silver; money’	<i>màak</i>	‘betel’
<i>phrɔ́ʔ</i>	‘because’	<i>khuan</i>	‘should’		

F		R	
Wd	Gloss	Wd	Gloss
<i>mîit</i>	‘knife’	<i>s̄aj</i>	‘sound’
<i>chûaj</i>	‘help’	<i>khěŋ</i>	‘hard’
<i>dûaj</i>	‘also’	<i>mũu</i>	‘pig’
<i>bâan</i>	‘home’	<i>lõo</i>	‘dozen’
<i>mâj</i>	‘not’	<i>s̄ia</i>	‘tiger’

Having established a set of basic pitch contours, and with candidate sets of words in which each pitch contour is found, we then suppose that each pitch contour is the expression of a category, and say that each word which has each pitch contour is a member of the corresponding category. Next, we can move through the remainder of the lexicon, and assign each simplex word to one of our categories on the basis of the pitch contour it manifests.

Now that we know the number of categories in the language and the phonetic expression of each category, and have assigned a good number of simplex lexemes to each category, we can move on to complex, polysyllabic forms to look at how tone operates on these larger phonological units. As we saw in §2.1, it is common in syllable tone languages for the pitch contour of a larger phonological unit to simply reflect the pitch contours of its smaller, constituent units. Or, we may find some sandhi behaviour – for example, tone 1 may change to tone 2, or be neutralized, as was also discussed. Even in such cases, however, we can analyse the tone of a complex, polysyllabic word as the concatenation of simplex word tones, plus the addition of some sort of phonological rule that specifies the nature of their interaction. Put simply, in a syllable tone language, the tone of a complex, polysyllabic word is generally understood as a product of the tones of simplex, monosyllabic words, plus any applicable rules.

These facts are well-known, and appear to have been understood essentially since serious research on tone languages began. The point of this long excursus on a familiar method is to underscore the fact that, in general, Tani languages do not work this way, and this familiar and well-understood method cannot be applied in their analysis. Why is this so?

Tani languages have very few morphologically simplex, monosyllabic words; instead, the vast majority of Tani lexemes are morphologically complex, are composed of two or more bound morphemes, and have two or more syllables. Compare again examples (2) and (3) above from Apatani: these two words share a common root *mi?*- ‘eye’; however, as we can see from the examples, *mi?*- is marked as having a high pitch in (3), but a low pitch in (2). So does *mi?*- have a high tone or a low tone? According to the method outlined above, we would want to elicit *mi?*- in isolation, to try to determine its independent pitch contour and, therefore hopefully, its underlying tone. However, we cannot do that. This is a morphologically bound root, which cannot be pronounced in isolation. The same thing will be true of nearly every lexeme we encounter in the

analysis of Tani languages. It is clear, then, that the syllable tone method will not work for Tani languages; we need a different sort of approach. The following sections will outline this approach.

## 5.2 Morphologically simplex, monosyllabic words

As we saw in the Apatani example (1) above, there are at least a few morphologically simplex, monosyllabic words in all known Tani languages. In my Apatani database of 1,100 lexemes, there are 22 such words. In my Galo database of more than 5,000 lexemes, there are only 18 clear monosyllables.<sup>6</sup> My Minyong database of 2,500+ lexemes has around 10–15 monosyllables, allowing for some dialect variation, and my Tangam database of 1,900 lexemes contains no more than 10 monosyllables. It is clear that elicitation of these monosyllables will not yield a complete understanding of the tone systems of these languages. However, it does provide us with a relatively familiar starting point.

Tables 8 and 9 provide exhaustive lists of the simplex, monosyllabic lexemes in my Apatani and Galo data. As shown, only one minimal pair on tone occurs among these forms. However, in both Apatani and Galo we find that each word in the left-hand column exhibits a mostly level, mid-to-high-pitched contour, as in Apatani *nóo* [noo<sup>33</sup>] ‘you’; we can call this ‘H’. Each word in the right-hand column exhibits a falling-to-low pitch contour – slightly higher than our H words, at least initially, but quickly falling to a much lower point, as in Apatani *nòo* [noo<sup>41</sup>] ‘where’; we can call this ‘L’.

The important thing to note here is that in Galo and in Apatani, and in all other Tani languages for which tones have been studied, no more than two pitch contours are ever found on simplex monosyllables. This gives us an early indication that, phonologically, Tani languages might have no more than two underlying tone categories. As we will shortly see, the analysis of larger phonological units bears this out: the more complex pitch contours of larger phonological units can be analysed in terms of the interaction of these two underlying tone categories with the additional factor of syllable weight.

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<sup>6</sup> By “clear” here, I mean monosyllables with a monophthongal nucleus. For reasons we needn’t go into now, it is difficult to determine whether diphthongs are monosyllabic or disyllabic in Galo.

TABLE 8 – Some morphologically simplex H and L words in Apatani

H words		L Words	
Form	Gloss	Form	Gloss
<i>nóo</i>	‘you (second person singular)’	<i>nòo</i>	‘where’
<i>síʔ</i>	‘urine’	<i>sìi</i>	‘this (speaker-proximate)’
<i>rú</i>	‘drool (n.)’	<i>ǰi</i>	‘black’
<i>síi</i>	‘cow; cattle’	<i>yòo</i>	‘meat’
<i>híʔ</i>	‘dried, fermented bamboo chips’	<i>dàʔ</i>	‘existential copula (standing position)’
<i>ǰóo</i>	‘I (first person singular)’	<i>mòo</i>	‘he/she (third person singular)’
<i>híŋ</i>	‘three’	<i>hàŋ</i>	‘anything’
<i>dóo</i>	‘existential copula (inanimates)’	<i>dúu</i>	‘existential copula (animates)’
<i>xíi</i>	‘six’	<i>kəə</i>	‘okay’
<i>kóŋ</i>	‘one’	<i>hùu</i>	‘who’
<i>sáa</i>	‘tea’		
<i>níi</i>	‘what’		

TABLE 9 – Some morphologically simplex H and L words in Galo

H words		L Words	
Form	Gloss	Form	Gloss
<i>níi</i>	‘person’	<i>ǰèe</i>	‘green/blue’
<i>ǰóo</i>	‘I (first person singular)’	<i>bìi</i>	‘he/she (third person singular)’
<i>nóo</i>	‘you (second person singular)’	<i>bàə</i>	‘down there’
<i>ʔíi</i>	‘weed’	<i>tàə</i>	‘up there’
<i>máa</i>	‘no (negative particle)’	<i>ʔàa</i>	‘over there’
<i>mée</i>	‘many; multiplicity’	<i>hì</i>	‘this’
		<i>ʔèe</i>	‘excrement’
		<i>gòo</i>	‘mouth harp reed’
		<i>tàa</i>	‘var. of tree’
		<i>pàa</i>	‘dawn’
		<i>hàa</i>	‘tea’
		<i>hèe</i>	‘headstrap’

### 5.3 Morphologically complex, disyllabic words

#### 5.3.1 Affixed roots in Galo

The overwhelming majority of Galo words are disyllables of the form [PFX-ROOT] or [ROOT-ROOT] (if a noun or adjective) or [ROOT-SFX] (if a verb), as shown in Table 6 above. Very helpfully, however, Galo only exhibits two types of pitch contour on its disyllabic words. The first is a relatively high, level contour with a slight downstep on the second syllable in isolation: *túnám* [tu<sup>44</sup>nam<sup>33</sup>] ‘kick-NZR’. The second starts from a distinctively higher ‘pitch peak’, and falls to a much lower pitch in isolation: *túnàm* [tu<sup>55</sup>nam<sup>21</sup>] ‘garland-NZR’. These two pitch contours are essentially the same as the two pitch contours we saw on simplex, monosyllabic words, and can perhaps be informally referred to using the same labels H and L (Table 10).

TABLE 10 – A selection of minimal tone pairs in Galo complex, disyllabic words

H words		L Words	
Form	Gloss	Form	Gloss
<i>ʔáú</i>	‘grease; greasy’	<i>ʔàú</i>	‘spicy; chili flavour’
<i>ʔáká</i>	‘maternal uncle’	<i>ʔákà</i>	‘from, on the same level’
<i>ʔáci</i>	‘elder brother’	<i>ʔàcì</i>	‘pain; painful’
<i>tábá</i>	‘snake’	<i>tábà</i>	‘sugar cane’
<i>túnám</i>	‘to kick’	<i>túnàm</i>	‘to garland’
<i>tónám</i>	‘to wait’	<i>tónàm</i>	‘to release’
<i>núnám</i>	‘to knead’	<i>núnàm</i>	‘to be fully cooked, of food; ready. . .’

However, note that unlike in a syllable tone language, these larger word tone contours cannot simply be derived from the concatenation of their constituent roots and/or affixes. The minimal pair *túnám* ‘to kick’ and *túnàm* ‘to garland’ makes this fact clear: the second syllable is in both cases a nominalizer *-nam*, however it has a different pitch in each word. The semantic contrast, therefore, is obviously coming from the first morpheme, which must therefore also be responsible for the overall tone contrast of these two words – however, the actual pitch contour over the syllable [tu] in each word is relatively similar. So what is actually going on here?

Let’s examine this situation a little more closely: in the cases of each word in Table 10, there is one constituent root and one constituent affix: *a-* in the case of lines 1–3, *ta-* in the case of line 4 and *-nam* ‘NZR’ in the cases of lines 5–7. So far as I have been able to determine, these particular affixes are not TBUs – that is, they are not underlyingly specified for any tone. Since that is the case, any word in which they occur will have its tone determined by the root only. The resulting word will have either an H or an L contour, as described above. Importantly, however, the resulting contour is a property of the resulting *word* –



it does not appear to matter at all whether the tone-bearing root is in the initial or the final position of a word (Table 11).

TABLE 11 – Derivation of H and L word tones from [PFX-ROOT] and [ROOT-SFX] compositions in Galo

Word	Gloss	Composition	Gloss
<i>ʔáci</i>	‘elder brother’	<i>ʔa-cí</i>	‘PFX-elder brother’
<i>ʔacì</i>	‘pain’	<i>ʔa-cì</i>	‘PFX-pain’
<i>tábó</i>	‘snake’	<i>ta-bó</i>	‘PFX-snake’
<i>tábò</i>	‘sugar cane’	<i>ta-bò</i>	‘PFX-sugar cane’
<i>túnám</i>	‘to kick’	<i>tú-nam</i>	‘kick-NZR’
<i>túnàm</i>	‘to garland’	<i>tù-nam</i>	‘garland-NZR’
<i>tónám</i>	‘to wait’	<i>tó-nam</i>	‘wait-NZR’
<i>tònàm</i>	‘to release’	<i>tò-nam</i>	‘release-NZR’

Once we understand this principle, elicitation of a great many Galo root tones becomes possible due to the very common occurrence of these and several other non-tone-bearing affixes in Galo. For example, any verb root can occur with the nominalizer *-nam*, which makes citation forms in Galo; accordingly, it now becomes possible to elicit the underlying tones of the entire simplex verbal lexicon – despite that we cannot actually elicit (or hear) any simplex verb roots at all! We simply identify a verb root, attach *-nam*, listen to the resulting word tone, and deduce that our target verb root must be underlyingly specified as H or L accordingly. It is not as simple to attach *a-* or *ta-* to any given noun or adjective root – these prefixes are much less productive in modern Galo than is *-nam* – however, they do occur on a large number (certainly hundreds) of basic lexemes, so knowing this principle will turn out to be very helpful indeed. Other Galo prefixes that do not seem to be TBUs include *ja-* (for colours and feminine/negative items), *ho-* (for animals) and *pV-* (for birds).

### 5.3.2 Affixed roots in Apatani

Complex, disyllabic words in Apatani at first glance do not appear to operate the way that they do in Galo. Unlike in Galo, there are *three* pitch contours on Apatani disyllables: level, falling or rising (Table 12).

TABLE 12 – A selection of complex, disyllabic words in Apatani

Level		Falling		Rising	
Word	Gloss	Word	Gloss	Word	Gloss
<i>ʔápú</i>	‘arrow’	<i>ʔápù</i>	‘hive’	<i>ʔápúu</i>	‘flower’
<i>ʔámí</i>	‘elder sister’	<i>ʔámì</i>	‘tail’	<i>ʔámíʔ</i>	‘ripe’
<i>ʔánú</i>	‘younger brother’	<i>ʔáni</i>	‘mother’	<i>ʔániʔ</i>	‘swallow’
<i>tásé</i>	‘sago’	<i>tási</i>	‘wall’	<i>tási</i>	‘dragonfly larva’
<i>táxí</i>	‘squirrel’	<i>tálò</i>	‘platter’	<i>tàdòr</i>	‘parasitic worm’
<i>síbí</i>	‘monkey’	<i>sítì</i>	‘elephant’	<i>sicúu</i>	‘sambar deer’
<i>siré</i>	‘wild pig’	<i>sínì</i>	‘cow’	<i>sídí</i>	‘barking deer’

The additional factor of syllable weight complicates matters in Apatani. Note in Table 12 that words with ‘level’ and ‘falling’ contours have light final syllables (cf. Figure 3 above), while ‘rising’ words have a heavy final syllable; here, note again that nasalized vowels are treated as bimoraic and therefore heavy in Tani languages. To understand what’s happening here, we need to look to tone spreading. While an exhaustive analysis of tone spreading in Tani languages would expand this paper beyond its intended scope, we do need to be aware of at least a few facts:

Generally speaking, the tone of a phonological word in a Tani language will spread rightward, across a phonological word boundary, to influence the pitch contour of the following word. When the following word is a small, often toneless grammatical word such as an article or postposition, it is very often possible to determine the tone of a preceding lexeme by observing the effects of rightward tone spreading. In the case of Apatani nouns and many if not all adjectives, it is usually possible to add a following toneless indefinite article *ke*, and observe the resulting spreading effect quite clearly. In the case of our ‘level’ words in Table 12 above, we find that the pitch contour over a following *ke* is high-to-low falling. In the case of our ‘falling’ words in Table 12, we find that the pitch contour over *ke* is low. Now when we turn to the ‘rising’ words in Table 12, we find that some yield a falling pitch over a following article *ke*, while others yield a low pitch. In other words, within the ‘rising’ group, we have some words that behave like the ‘level’ group with respect to spreading, while others behave like the ‘falling’ group (Tables 13–14).

TABLE 13 – Tone spreading to indefinite article *ke* in Apatani: H words

	Underlying	Surface	Glosses
Light final syllables	<i>/apú ke/</i>	[ápú kê]	‘an arrow’
	<i>/amí ke/</i>	[ámí kê]	‘an elder sister’
	<i>/anú ke/</i>	[ánú kê]	‘a younger brother’
	<i>/tasé ke/</i>	[tásé kê]	‘some sago’
Heavy final syllables	<i>/apúu ke/</i>	[ápúu kê]	‘a flower’
	<i>/tasí ke/</i>	[tási kê]	‘a larval dragonfly’

TABLE 14 – Tone spreading to indefinite article *ke* in Apatani: L words

	Underlying	Surface	Glosses
Light final syllables	/apù ke/	[ápù kè]	‘a hive’
	/amì ke/	[ámì kè]	‘a tail’
	/anì ke/	[ánì kè]	‘a mother’
	/tasì ke/	[tásì kè]	‘a wall’
Heavy final syllables	/amí ke/	[ámí kè]	‘a ripe one’
	/aní? ke/	[ání? kè]	‘a swallowing’

The best explanation for these facts is that the single constituent roots in our ‘rising’ column underlyingly bear the same tone as the roots in either our ‘level’ or our ‘falling’ groups. Although the words in our ‘level’ and ‘falling’ groups directly project these pitch contours, the heavier syllable structure of the words in our ‘rising’ group causes these syllables to be accented, and for the pitch contour to be neutralized to rising. However, we can see that the underlying tone is still effectively present, since it spreads across a phonological word boundary to the article *ke*. This analysis allows us to reduce the number of tone categories in Apatani to two – just as with simplex, monosyllabic Apatani words – and to refer to them using the same labels H and L that we used for the Galo words.

Thus, we can assign H and L tones to Apatani prefixed roots in the following way:

The prefixed root of a level word is specified for H

The prefixed root of a falling word is specified for L

The prefixed root of a rising word with spreading to *ke* as *kê* is specified for H

The prefixed root of a rising word with spreading to *ke* as *kè* is specified for L

Now, what about verb roots?

In Apatani, verbal citation forms are in *-do*, a ‘factual imperfective’<sup>7</sup> suffix. Note that since *-do* is – very helpfully! – a light syllable, this makes it easy to determine the tones of Apatani verb roots. As we would anticipate, elicitation of Apatani verb roots in *-do* yields a total of two tone categories, H and L (Table 15).

<sup>7</sup> This suffix reports an event as a general fact; it is not generally found in clauses with first person subjects.

TABLE 15 – Determination of verb root tones in Apatani

Underlying	Gloss	Surface	Gloss
/kár-do/	‘emerge-IPFV’	[kárdó]	‘emerging (moon)’
/kâr-do/	‘roll up-IPFV’	[kárdò]	‘rolling sth. up’
/tú-do/	‘kick-IPFV’	[túdó]	‘kicking’
/tù-do/	‘flood-IPFV’	[túdò]	‘flooding’

**5.3.3 Compounds in Galo and Apatani**

Up to now, we have considered only Galo and Apatani words in which there is a single constituent TBU: a root. While the techniques we have reviewed will enable analysis of a large amount of data – perhaps at least 30% of the lexicon, depending on the language – the majority of Tani lexemes actually have two constituent roots; that is, they are either compounds of the form [ROOT-ROOT] (if nouns or adjectives), or are predicates of the form [ROOT-DERIVATION]. Although the analysis of predicate derivations in Tani languages is complex and lies beyond the scope of this paper (see Post (2010)), the only point we need to note here is that for the purpose of analysing Tani tones, predicate derivations can be treated as roots.

As we have seen, Tani roots can be divided into two tone categories H and L. Given this, we can assume that compounds will yield the set of combinations shown in Table 16.

TABLE 16 – Possible underlying tone structures of Tani compounds

Morpheme 1 → Morpheme 2 ↓	H	L
H	HH	HL
L	LH	LL

However, when we listen to compounds in Galo and Apatani, we do not actually find this set of four contours – at least, not phonetically. In Galo, we find only *two* pitch contours over disyllabic compounds: a high, level contour with a slight downstep HH – just like our simple and affixed H roots in §5.3.1 – and a high-to-falling contour HL – just like our simple and affixed L roots. To understand what’s going on, we need to analyse compounds of roots whose tones we already know, either because they occur as simplex monosyllables or because they occur in an affixed form. For example, we can combine *tə̀-* ‘big; elephant’ (from *hótə̀* ‘elephant’) with *bó-* ‘father; male’ and *nə̀-* ‘mother; female’ (from *ábó* ‘father’ and *ánə̀* ‘mother’), and so on. When we do this, we find the following pattern emerges: words with **all** H tones come out HH; words with **any** L tone come out HL (Table 17).

TABLE 17 – Determining tone derivations in Galo compounds

Underlying	Gloss	Surface	Gloss	Derivation
/ní-bó/	‘person-invite’	[níbó]	‘guest’	H+H > HH
/ní-bò/	‘person-priest’	[níbò]	‘priest’	H+L > HL
/tâ-bó/	‘elephant-male’	[tâbò]	‘elephant bull’	L+H > HL
/tâ-nâ/	‘elephant-female’	[tânâ]	‘elephant cow’	L+L > HL

It is therefore easy to handle HH words – we now know that both constituent TBUs must be H, so any time we hear an HH compound, we can assign H tones to each constituent. But how can we analyse the internal composition of HL words, which might have any of three underlying structures HL, LH or LL? Sometimes, knowing the tone of at least one root will help us. For example, we know that *ní-* ‘person’ is H, both because it occurs in simplex form as *níí* ‘person’,<sup>8</sup> and because it occurs in the HH compound *nííbó* ‘guest’. We can therefore deduce that *bò-* ‘priest’ in *nííbò* ‘priest’ must be L, since the resulting word is HL. Since most roots are used in more than one word, with a large enough database of roots whose tones have been discerned through one of the abovementioned methods, it is very often possible to find the right context to enable one to discern the tone of a newly-discovered root.

There is one other ‘trick’ that sometimes works. Again without getting too deeply into the details of rhythm and tone spreading in Galo (a basic description can be found in Post 2007: §4), we can note that in words with **two heavy syllables**, there is a pattern that enables us to distinguish H+L words from L+H/L+L words when they are followed by a toneless indefinite article *go*: underlying HL words exhibit a ‘pitch peak’ on the second syllable, while underlying LH or LL words exhibit a level pitch throughout, and manifest their L word tone via rightward spreading to *go* (Table 18).

TABLE 18 – Tone spreading in Galo L words with two heavy syllables

Underlying	Gloss	Surface	Gloss	Tone
/móo-mèn go/	‘area-play ART’	[móómên gò]	‘a clearing’	HL
/líi-póm go/	‘stone-heap ART’	[líípóm gò]	‘a stone heap’	LH
/líi-jàa go/	‘stone-rottenART’	[lííjáa gò]	‘a soft stone’	LL

A combination of the above techniques will enable determination of the tones of the overwhelming majority of Galo roots. However, there are still a few that get away despite one’s best efforts. To this day, there are approximately 50 HL words in my Galo database, each of which might be underlying HL, LH or LL – I just can’t find the right context to isolate one or more of their internal roots!

<sup>8</sup> The lengthened vowel in the simplex form is due to a bimoraic phonological word rule; see Post (2009) for description.

One example is *dzèin* ‘rag’. We can see that the initial root is *dzè-* ‘clothing’ from analysis of *édzì* ‘clothing’,<sup>9</sup> so we can rule out underlying HL. However, both LH and LL remain possible, meaning that the final root could be either H or L. Since the initial syllable is light, we cannot apply the test in Table 18. So, unless and until we are able to independently determine the tone of the final root *in-*, only the overall phonological word tone can be marked as known; the tone of the final root *in-* must be left unmarked (or marked as ‘unknown’).

Turning back to Apatani, we find that at this point, things start to go a little bit downhill. As of this writing, I have been unable to determine the rules for tone assignment in Apatani compounds. That is, words with the internal composition [ROOT-ROOT] have the three expected pitch contours discussed in §5.3.2, and for the same prosodic reasons. Unfortunately however, the pitch contour does not enable us to discern constituent root tones in the same way we could for Galo, and there is as yet no hypothesis as to why this is. One example of a misbehaving data set is in Table 19. Here, note that since *ja-* is a prefix, and is generally found to be toneless (both in Galo and in Apatani), we would expect the tone of *mù-* ‘fire’ to be L. This is consistent with *mùrù* ‘torch’ – we don’t yet know the tone of *ru-* ‘bundle’, but whether it is H or L, given an initial L in *mù-*, we would anticipate a resulting word tone HL, which is what we observe.

However, note that *múbú* ‘ash’ and *mùbú?* (*kê*) would both imply HH if we assumed that Apatani was observing the Galo-like pattern outlined in Table 17 – but we already know from *jámù* ‘fire’ that they can’t be. And neither syllable structure nor segmental composition (or other factors, such as nasalization) seem to be able to explain the situation, as *jámù* ‘fire’, *mùrù* ‘torch’ and *múbú* ‘ash’ have essentially identical phonological properties – except with respect to tone. Furthermore, it is not obvious that Apatani words which do and do not behave as we might anticipate form natural semantic classes. All we can say, then, is that the Galo rules for tone assignment in compounds cannot be applied in Apatani, at least not in all words in the same way. I can say nothing further about this, except that this would make a perfect topic for an MA or MPhil thesis . . .

TABLE 19 – Apatani compounds behaving differently from Galo compounds

Word	Gloss
<i>jámù</i>	‘fire’
<i>múbú</i>	‘ash’
<i>mùrù</i>	‘torch’
<i>mùbú?</i> ( <i>kê</i> )	‘gun’

<sup>9</sup> Short, word-final \**e* > *i* following palatals is a regular Galo sound change; some dialects further weaken *i* to *ə*.

#### 5.4 Eastern Tani: Upper Minyong and Tangam

Up to this point, we have only discussed tones in the Western Tani languages Apatani and Galo, and neglected the Eastern Tani languages we had earlier identified as having tone, namely Minyong and Tangam. There is a reason for this. Tones in Eastern Tani languages turn out to be much more difficult to analyse, and for functional rather than systemic reasons. That is, as far as I have been able to determine, tones in Eastern Tani languages sound and act very similar to tones in Western Tani languages – the numbers of categories seem comparable, pitch contours seem similar, and one would really expect a very similar sort of system to be describable. Unfortunately however, tones seemingly have a much lower ‘functional load’ in Eastern Tani languages than they do in Western Tani languages. At various times, in various places, and with different consultants, I have found what I thought to be reliable tone contrasts, and found consultants pointing out tone contrasts to me when segmental homophones emerged in our data. However, virtually every elicitation session on tones in an Eastern Tani language – whether with single or with multiple individuals – has started and ended in the same way: with an initial burst of confidence and a nearly instantaneous descent into uncertainty and low-confidence judgements.<sup>10</sup> Tables 20–21 present a selection of data from my Minyong and Tangam databases about which I am relatively confident. That is, each of these minimal pairs on tone has been verified by multiple consultants on multiple occasions with relatively high degrees of confidence, and with no contradictory attestations in my databases.

TABLE 20 – Some minimal pairs on tone in Upper Minyong

H words		L Words	
Form	Gloss	Form	Gloss
<i>ʔaák</i>	‘itchy’	<i>ʔaàk</i>	‘branch’
<i>ʔáki</i>	‘maternal uncle’	<i>ʔákì</i>	‘nest’
<i>ʔaṇìṇ</i>	‘shy’	<i>ʔaṇìṇ</i>	‘maternal aunt’s daughter’
<i>ʔátó</i>	‘thing’	<i>ʔátò</i>	‘grandfather; father-in-law; master/owner’
<i>ʔápóṇ</i>	‘trunk of a tree’	<i>ʔápòṇ</i>	‘rice beer’
<i>kónám</i>	‘to sell’	<i>kónàm</i>	‘to request; to beg’
<i>kóonám</i>	‘to dig’	<i>kóonàm</i>	‘to cross’
<i>dórnám</i>	‘to pay a fine’	<i>dórnàm</i>	‘to dig’

<sup>10</sup> I did try having my consultants read off of wordlists, both with and without a semantically-appropriate carrier phrase, and found that tones tended to level off completely (i.e. were not distinctive) in this type of unnatural exercise.

TABLE 21 – Some minimal pairs on tone in Tangam

H words		L Words	
Form	Gloss	Form	Gloss
<i>ʔádó</i>	‘vegetable; cooked dish’	<i>ʔádò</i>	‘(one’s own) child’
<i>ʔámé</i>	‘small’	<i>ʔámè</i>	‘fire’
<i>térí</i>	‘variety of bamboo’	<i>téřì</i>	‘tendrìl’
<i>dúúdú</i>	‘running’	<i>dúúdù</i>	‘sitting’

One very important thing to note here is that there does not seem to be more than a two-way contrast in Eastern Tani tone languages either. So, one is hopeful that an analysis which is comparable to our Western Tani analyses will eventually be made possible for an Eastern Tani language as well.<sup>11</sup> However, we are not yet at that stage, and when dealing with a two-category system in which one has certain alignment expectations based on previous experience with a related language – particularly in the case of Minyong, many of whose speakers are in regular contact with Galo speakers – considerable caution needs to be exercised to ensure that external factors do not bias transcriptions of and judgements regarding the data!

## 6 A fieldworker’s guide

The above section §5 has presented a sort of ‘state-of-the-art’ analysis of tone in Tani languages. Comparing this analysis with the traditional analyses of syllable tone languages discussed briefly in §2.1 and §5.1, we find that two factors stand out: one, Tani languages don’t operate the same way that syllable tone languages do. Rather than eliciting simplex monosyllables in isolation, and using this knowledge to analyse their concatenation in complex polysyllables, in Tani languages we need instead to understand the principles with which complex words are formed, and deduce the tones of most constituent roots on the basis of this understanding. Two, tones in many Tani languages have a lower functional load than they do in most syllable tone languages – and indeed, than they do in some other Tani languages. Both of these factors can conspire to frustrate fieldwork on Tani languages – and they have; for several decades now, in fact! Both of these factors also seem relevant to the analysis of at least some other NEI Trans-Himalayan tone languages, as discussed in Morey (2014).

With these facts in mind, it might be useful to present here a sort of ‘fieldworker’s guide’ – a sort of summary of facts and techniques that might serve as

<sup>11</sup> I should also point out that the situation in Tangam is more complicated than it looks here, and involves at least some interaction with syllable weight, like in Apatani. But I haven’t figured this out yet.



a ready reference to people starting out work on a Tani language.<sup>12</sup> I also hope that this information may be helpful to the analysis of at least some other NEI Trans-Himalayan tone languages.

- 1) There are at least some confirmed tone languages in the Tani group. So, when starting out work on a Tani language, look for tone contrasts. Especially when words with the same segments but with different semantic values are found, look for a difference in pitch.
- 2) There are at least some confirmed **non-tone** languages in the Tani group. So, when words with what appear to be the same segments but with different semantic values are found, don't **automatically** assume that they must differ in tone. Other factors, such as vowel length, nasalization and word-final glottal stop can influence the pitch contour (as we saw above in Apatani), and such influences may be present even in languages which lack phonemic tone (such as Mising). So, these factors must be attended to as well.
- 3) Tani tone languages, due in part to their morphological complexity, don't operate the same way that Mainland Southeast Asian syllable tone languages do – we need a different approach to their analysis. This chapter has outlined a handful of analytical techniques that seem to allow us to make some progress. However, they can't account for absolutely all of the data; for example, Apatani compounds are not yet understood. Moreover, other analytical techniques may do the job even better. So don't be hesitant to try out new approaches.
- 4) So far as I can judge, the prototypical Tani tone language has only two underlying tone categories, assigned at the level of a lexical root: H and L.<sup>13</sup>
- 5) For any given Tani tone language, we should expect any simplex, monosyllabic lexeme to be specified for either H or L.
- 6) Common Tani prefixes such as \*<sup>ʔ</sup>a-, \*ta-, \*ja-, \*sV- and \*pV- don't seem to contribute to the tonal specification of a word. So, prefixed roots should join simplex roots in a preliminary analysis.
- 7) If only two pitch contours are found on prefixed roots, assume that they indicate the tone category of the root.

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<sup>12</sup> For a more detailed fieldworker's guide to the elicitation of tone data in Apatani, see Post and Tager (2013).

<sup>13</sup> Hyman (2009) analyses Galo H as Ø, and describes the Galo system as a "privative L" (Ø, L) rather than my "(unmarked) H, (marked) L" (Post 2007). In Hyman's system, there would be no difference between H and toneless forms, and L would be the only tone in need of marking. It seems to me that Hyman's analysis might account for the Tani data just as well as the analysis presented above does, and there may be theoretical reasons for in fact preferring it. However, it seems to me that from a descriptive perspective, we can treat these two analyses as approximately equivalent. Future fieldworkers may wish to evaluate whether one or the other system works better for them.

- 8) If it's possible to find a common verb suffix which, when suffixed to different verb roots, exhibits a different pitch contour, then it can probably be used to determine verb root tones. Depending on the language, some useful suffixes might be *-nam* 'NZR', *-do* 'IPFV 1' and *-du* 'IPFV 2'. However, note that if contrasting pitch contours are **not** found among lexemes when a particular suffix is used, it may be that this suffix bears its own tone; for example, *-dùu* 'IPFV' in Galo has L tone, and so it cannot be used as it seems like it can be in Tangam to determine the tones of preceding roots. If something like this happens, look for another suffix!

And some additional words of caution:

- 9) Be very careful about syllable weight, as this has been known to influence pitch contours in several ways. If strange things are happening, syllable weights could be the reason. In general, it's a good idea to have the segmental phonology, including all aspects of syllable structure, fully worked out before worrying too much about the tone system (or about prosody in general).
- 10) Be careful with words that seem to have multiple TBUs (i.e. compounds, or morphologically complex predicates). Before approaching these, it's important to first work out the basics of single-TBU words (and get as many root tones assigned this way as possible). Having some advance knowledge of the probable underlying tones of at least one TBU in a complex word is likely to reduce the set of variables and improve the quality of hypotheses that can be made regarding their interaction.
- 11) In this chapter, we have mostly dealt only with monosyllabic and disyllabic words, and discussed tone spreading to a third syllable only to a limited extent. Once one moves to strings which are larger than two syllables – whether this is within or across phonological words – a large set of additional factors comes into play, including rhythm, word boundary phenomena, and phrasal intonation, all of which can interact with and modify the shape of a tone-driven pitch contour.<sup>14</sup> It is certainly worth looking at these larger environments – as we saw in Apatani and Galo, spreading phenomena observed in small phrases can yield information about tone categories which elicitation of simple lexemes cannot, and we cannot discover such things unless we start experimenting. At the same time however, due to these sorts of interactions, it is better to start with smaller units and work up, rather than to begin by approaching a string of six syllables which might be

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<sup>14</sup> Some of these factors are discussed in Post (2009); not all are yet fully understood.

phonologically one, two or three words, and have anywhere from two to six analytically relevant TBUs.

## 7 Some closing remarks

It seems appropriate to end a chapter written in honour of Robbins Burling on a historical-comparative note, so: here is one. When returning from my first fieldtrip to the Mising and Galo areas in 2005, and with a reasonably large database of tonally-specified Lare Galo data (but with no first-hand knowledge yet of Apatani), I conducted a reanalysis of Alfons Weidert's (1987) Pugo Galo and Apatani data, in which I compared only morphologically fully-corresponding forms – Weidert had also included partially-corresponding forms, for example compounds which had the same initial root but a different final root (Post 2005). On the basis of this reanalysis, I was able to reduce Weidert's perhaps unrealistically large set of Pugo-Apatani tone correspondences to a total of only two categories. These two categories corresponded quite well between Weidert's Pugo Galo and Apatani data, and were found to correspond almost perfectly with my Lare Galo data. Tables 15 and 17 of Post 2005 are reproduced below.

Table 15 of Post 2005 – High verbs

Gloss	Root			Tonal melody		
	Apt	Pugo	Lare	Apt	Pugo	Lare
'be born'	<i>bíi ~ bíú'</i>	<i>báə-</i>	<i>báə-</i>	22	2	2
'borrow'	<i>nár'</i>	<i>nár-</i>	<i>nár-</i>	22	2	2
'break (vi.)'	<i>dár'</i>	<i>dír-</i>	<i>dír-</i>	22	2	2
'buy'	<i>rí'</i>	<i>rə-</i>	<i>rə-</i>	22	2	2
'call'	<i>gjóʔ'</i>	<i>góg-</i>	<i>gók-</i>	22	2	2
'carry/wear'	<i>gí'</i>	<i>gə-</i>	<i>gə-</i>	22	2	2
'carry on back'	<i>báʔ'</i>	<i>bí-</i>	<i>bí-</i>	22	2	2

Table 17 of Post 2005 – Low verbs

Gloss	Root			Tonal melody		
	Apt	Pugo	Lare	Apt	Pugo	Lare
‘bark’	<i>pí</i> ̀	<i>pī-</i>	<i>pì-</i>	21	3	1
‘know’	<i>cín</i> ̀	<i>hēn-</i>	<i>cèn-</i>	21	3	1
‘measure’	<i>xée</i> ̀	<i>kī-</i>	<i>kí-</i>	21	3	2 <sup>15</sup>
‘make/do’	<i>mí</i> ̀	<i>mō-</i>	<i>mò-</i>	21	3	1
‘sit/live’	<i>dúu</i> ̀	<i>dūu-</i>	<i>dūu-</i>	21	3	1
‘stand’	<i>dá?</i> ̀	<i>dāg-</i> ~ <i>dāŋ-</i>	<i>dàk-</i>	21	3	1
‘take’	<i>lāa</i> ̀	<i>lāa-</i>	<i>làa-</i>	21	3	1

Since that time, my own Apatani data have been found to correspond – not perfectly, but in general, better – to both Weidert’s Pugo Galo and to my own Lare Galo data. This of course raises hopes that the tone categories found in Galo and Apatani can be reconstructed at least to the Proto-Western-Tani stage, and can possibly be reconstructed to Proto-Tani itself. This possibility was later enhanced by a recognition that at least some Eastern Tani languages also appear to be two-tone languages.

Unfortunately, however, the matter remains more or less as it stood in 2005. The Tani two-tone system has proved to be both a blessing, from a comparative perspective, and a curse. On the one hand, so many languages with two-tone systems, and with categories in general corresponding, no doubt imply an ancestor with a two-tone system, and few if any changes since that time. What could be simpler? At the same time, however, with such uncertainties due to low functional load on the Eastern Tani side, and with a 50% chance of tones corresponding among two languages even if we blindly guess, we need to exercise considerable caution – perhaps more than we otherwise would. For example, suppose we elicit a Minyong word *donam* ‘to eat’, which we *know* should be H, because it is H in both Galo and Apatani, and our Minyong consultant returns what sounds like an H. Fine; that’s what we expected, so we mark it and move on. We next elicit *gognam* ‘to call’, which we *also* know should be H, but we hear what sounds like L. So we pause, and ask our consultant, ‘could you say that again?’ This time, we hear something that sounds more like H, and after several repetitions, we feel that the H is confirmed. Phew! A problem was averted. Or was it? How do we know that the later repetitions were better? And wasn’t it only our knowledge of another language that allowed us to be more confident with *donamH* ‘to eat’, but less confident with *gognamL* ‘to call’? If we had asked for further repetitions of *donamH*, might we not have

<sup>15</sup> It was later found that two Galo roots correspond to this isogloss: *kí-* ‘measure’ and *kì-* ‘count’. In principle, then, this form might also correspond.

found a *donamL* or two? This is why the comparative analysis of Tani tones has proceeded so slowly. Without a better method for dealing with languages in which tones have such a low functional load, and without due caution, our reconstruction of tone categories to the Proto-Tani stage could end up being a self-fulfilling prophecy. It should be possible, someday. But we aren't quite there yet. I hope that some readers of this chapter might like to help!

Thus ends this somewhat heterogeneous and necessarily incomplete chapter on tones in NEI Trans-Himalayan languages, with a focus on Tani. Its aims have been to reflect the facts accurately, as they are currently understood, and to hopefully provide a foundation on which additional work can be conducted. I hope it has passed the two Burling Tests I established for it at the outset. If it has, I hope that Rob will accept it as a minor contribution to the field, to be sure, but one which nevertheless has been inspired by his example, and which most likely would not have been written without it.

## Abbreviations

ART article, ET Eastern Tani, H high tone, IPFV imperfective, L low tone, NZR nominalizer, PDER predicate derivation, PFX prefix, PINFL predicate inflection, PRED predicate, SG singular, SFX suffix, TBU tone-bearing unit, WT Western Tani

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## 12

## The evolution of vowel length in TGTM (Tamangish) languages<sup>1</sup>

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Vowel length in open syllables is a rare feature in Tibeto-Burman languages. It is not reconstructed at the Proto-Tibeto-Burman (PTB) level, and it is not widely reported in modern languages. The languages of the Tamang group (= TGTM, Shafer's (1955) Gurung branch of Bodish) have developed it and are in the process of losing it again, as a part of a general process of reduction of the syllable canon.

We will touch briefly upon the development of vowel length on open syllables in Proto-Tamang (= Proto-TGTM), and concentrate on the different evolution patterns followed by diverse dialects in eliminating vowel length contrast.

### 1 Reconstructing a length contrast

At the level of Proto-Tibeto-Burman (PTB) Matisoff rules out the reconstruction of vowel length in open syllables (Matisoff 2003: 233), although he and Benedict do reconstruct some length contrasts in closed syllables. At the level of the different sub-groups of Tibeto-Burman, vowel length seems to be also rarely reconstructed and mostly on closed syllables. Burling does not reconstruct any for Proto-Lolo-Burmese (Burling 1967), neither do later authors. Proto-Karen lacks vowel length altogether, in all of its re-workings from Haudricourt (1946), Jones (1961) and Burling (1969), all the way to the most recent improvements on rime reconstructions by Solnit (2013). Proto-Bodo-Garo evinces some length contrast, but only on closed syllables (Burling and Joseph 2006), and so does Proto-Kuki-Chin (VanBik 2009). In Kiranti, length on open syllables has been shown to be secondary in several languages

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and is not reconstructed, but length in closed syllables may need to be reconstructed on the basis of Limbu and Yamphu (Michailovsky 2004). Proto-Tani is the only group, as far as we know, in which vowel length is (albeit marginally) reconstructed on open syllables (Sun 1993: 78).

All in all, length contrasts are at best transient and especially on open syllables.

Contrary to the majority pattern, in the languages of the Tamang group, as in Tani, vowel length is absent from closed syllables, but it is well established and reconstructable at the level of Proto-Tamang on open syllables, with regular correspondences in the daughter languages which are reminiscent of the developments in Romance languages, thousands of miles away.

The vowel length, in some Proto-Tamang words, but not all, can be seen clearly to originate in lost final consonants. This can be observed by comparison with Written Tibetan, representing the ancestor of the sister branch which includes all Tibetan languages (e.g. Proto-TGTM<sup>2</sup> \**ʰna*: ‘pus’ cf. WT *rnag*, but not systematically e.g. Proto-TGTM \**ʰku*: ‘nine’ cf. WT *dgu*) or by comparison with more remotely related languages (e.g. Risiangku Tamang *ʰu:-pa* ‘be buried as by a landslide’, Limbu *lup-* ‘be covered’).

Morphological variation inside one dialect also reveals former final consonants. For instance the infinitive of open verb roots with short vowels in Risiangku Tamang is made by adding the suffix *-o/-u*, but the infinitive of long vowel (open) verb roots is formed by adding *-ko*, a /k/ which can be attributed to an older form of the root although later analogical regularization has obscured things somewhat, e.g. *ʰni-pa/ʰni-u* ‘go’ vs. *ʰthi:-pa/ʰthi:-ko* ‘lift’.

Whatever the origin, it is sufficient for us that the contrast is well established in all of the conservative dialects, and has regular correspondences in the others, as we will see.

Since we will not consider closed syllables in detail here, let us mention that these closed syllables, devoid of a length contrast, are on the other hand fully provided with tone contrasts. The same four tones are found on short open syllables as on long open syllables or syllables closed by final stops or final resonants. This also is not typical of TB languages, where tone contrasts are generally fewer in closed than in open syllables.<sup>3</sup> In Maru, Burling could invoke intrusive consonants to explain the identity of tonal patterning between some stopped syllables and the general patterning of open syllables (Burling 1966, 1967: 59). Since all vowel timbres occur with all final consonants in Proto-

<sup>2</sup> Tones are irrelevant to the evolution of vowel length in TGTM. All languages of the group have a four tone system, with varying phonetic realization, transcribed here with their etymological value by numbers 1 to 4. The modern tones can be shown to derive from an earlier two-tone system, transcribed by raised capital A and B (Mazaudon 1978).

<sup>3</sup> Here again Proto-Tani joins the minority pattern, and so does, among modern languages the Turung variety of Singpho (Morey 2011) Thanks to the editors for drawing my attention to these similarities.



Tamang, we cannot explain away final consonants in this manner. Even if some finals may derive from suffixes, many others seem to go back to PTB.

## 2 The loss of the Proto-Tamang length constrast

### 2.1 The ‘prosodic change’ of the Proto-Tamang syllable canon

The Proto-Tamang syllable canon for root syllables (excluding suffixes) can be reconstructed with a structure only slightly depleted as compared to the PTB syllable canon. The Proto-TGTM syllable consists of a tone (T), an optional initial onset, and a rime. The onset is either empty ( $\emptyset$ ), or consists of a simple initial (I), a cluster of an initial + a liquid (IL), or an initial + a glide (IG), or an initial + a liquid + a glide (ILG). The rime consists of a short vowel (V), a long vowel (V:), or a short vowel and final consonant (VF)

$$T \{ \emptyset, I (L) (G) \} V \{ \emptyset, :, F \}$$

FIGURE 1 – A formula for the Proto-TGTM syllable canon

The full syllable canon is exemplified in the most conservative dialects of the group, the Eastern Tamang dialects, and it gets progressively, but not regularly, reduced as one goes West, with a dialect like Ghachok Gurung having no syllable final consonants, and no vowel length, and Tukche Thakali having no initial consonant clusters except those formed with the palatal semi vowel /j/ or groups of labial + /l, r/. So for instance Proto-TGTM \**khraŋ* ‘to roast’ > Ghachok Gurung *khrõ*, Tukche Thakali *thaŋ*. The disappearance of vowel length is certainly part of this general syllable reduction process.

Such reduction processes can be viewed in the light of the opposition drawn by Vennemann (1995: 185–186) between ‘sound change’ and ‘prosodic change’, as interpreted by Page (2007: 340).

A sound change is a phonological change that targets the feature composition of a segment or group of segments. Example: Grimm’s Law, which changes the laryngeal and continuancy features for inherited PIE plosives in Proto-Germanic.

A prosodic change is a phonological change that affects the rhythmic pattern of a language. Its focus is a prosodic constituent, not the feature composition of a segment or group of segments. Example: Fixing of initial stress in Proto-Germanic.

Vowel length changes in Germanic seem to have happened independently of any timber changes, and can thus easily be considered to belong to a different

level ('tier' in some theories) than the segmental features, a higher level where 'supra-segmental' elements, like stress, by definition belong. I believe that changes in the syllable canon, including vowel length changes, can usefully be considered as 'prosodic' changes, which does not mean that they have no relation to 'sound changes'

In most cases a prosodic change is accompanied by a 'sound change' in the sense that, for instance, a lost final consonant is reflected by a change in the vowel timbre.

In TGTm languages, some extreme results of the palatalization of vowels preceding final coronals (consonantal /t/ or vocalic /i/) can be observed in two otherwise conservative dialects spoken up North in the Rasuwa area of Nepal, in the villages of Dhunce and Haku (Table 1 – Table 2).

TABLE 1 – Dhunce Tamang: the contextual palatalization of vowels

*it	*ut	*at	*et	*ot	*i:	*e:	*ai	*oi	*ui
it	ɛt	et			i:	e:			ui

TABLE 2 – Haku Tamang: the contextual palatalization of vowels

*it	*ut	*at	*et	*ot	*i:	*e:	*ai	*oi	*ui
it	ut	et		ot	i:	e:	i:		ui

## 2.2 The context-free evolution of vowels in TGTm open syllables

What we want to examine here is the context-free evolution of the vowels of open syllables, where changes in the timbre of the vowels are conditioned only by the restructuring of the system, and not by any immediate context.

Context-independent evolutions of the vowel systems, similar to the Great English Vowel Shift or to the early Romance vowel shortening, are not often described in Tibeto-Burman languages. The Romance example, the origin of the Common Romance vowel system, is an example of the trans-phonologization of a length contrast into a timbre contrast, quantity into quality, which is not rare in languages of the world. It has also occurred in TGTm.

A major difference is that, whereas in Romance languages the context-free evolution of the vowel system happened even in the presence of a potential conditioning context (in closed syllables), the tightly bound structure of the TB syllable did not allow such paradigmatic context-free restructuring to happen in the presence of a syllable final consonant.

Another major difference is that whereas the loss of vowel length in Romance can be reconstructed between Late Latin (5 vowels plus length) and Common Romance (Hewson 1998: 3–4), resulting in a common system of 7 vowels without length from which all of the Romance vowel systems derived

(except for Corsican and Sardinian and partly Rumanian), it seems that the Tamangish languages each went their own way in the process of losing length or replacing it by timbre differences. This reminds us of the different paths that TGTM languages took in the general process of replacing voicing contrasts on initial consonants by tonal contrasts (Mazaudon 2012).

### 2.3 The different evolutions

The Proto-Tamang vowel system can be reconstructed with five vowels: *i e a o* and *u*, which, in open syllables, can be long or short.

TABLE 3 – The Proto-Tamang vowel system

i:	i	e:	e	a	a:	o	o:	u	u:
----	---	----	---	---	----	---	----	---	----

The Tamang dialects of Dhunce and Haku, to the North of the Trisuli river, preserve these vowels unchanged in open syllables. Risiangku Tamang seems on the way to losing the length contrast without change in the vowel timbres. That would be a ‘Sardinian’ type of change and the only example in the TGTM languages of a ‘pure’ prosodic change (without any compensation). Since this is a change in progress it would be imprudent to make predictions on its outcome.

The other languages of the group have all brought modification to this original pattern. In the Nar-Phu dialect, spoken to the North of the Manang valley, the surviving length difference is accompanied by a timbre difference for all vowels. The short vowels have become more open or more centralized, except for the short *\*a* which has become more front, with some diphthongization of the mid front vowel, while the long vowels keep the original, peripheral in the sense of Labov (1994: 173) timbre. This is reminiscent of the Common Romance phase of evolution from the old five vowels of Latin, and one could have expected that this would represent the phase through which other languages of the TGTM group would have gone to reduce their length contrast. But in fact the opening of the short vowels, if it ever existed in an intermediate phase, is nowhere exemplified in the other modern languages.

TABLE 4 – The evolution of open syllable vowels in Nar-Phu

*i:	*i	*e:	*e	*a	*a:	*o	*o:	*u	*u:
i:	ɪ	je:	jɛ	ɛ/æ	a:	ɔ	o:	ʊ	u:

The Thakali of Tukche followed an evolution identical to that of the national Indo-Aryan language Nepali. The length difference was lost without compensation for all vowels except the central *a/a:* where an additional timbre was created, the short *\*a* becoming more central and back.

TABLE 5 – The evolution of open syllable vowels in Tukche Thakali

*i:	*ī	*e:	*ē	*a	*a:	*o	*o:	*u	*u:
i		e		ʌ	a	o		u	

The variety of Manangge spoken in Praka village followed a similar evolution, except that the timbre of the short \*a became much more closed and back, and that a distinction was maintained between old long and short \*e, by the diphthongization of the short \*e.

TABLE 6 – The evolution of open syllable vowels in Praka Manangge

*i:	*ī	*e:	*ē	*a	*a:	*o	*o:	*u	*u:
i		e	ie	ɤ	a	o		u	

In all the preceding cases, the old long vowels have maintained their timbre, while the short vowels changed. The Gurung dialect of Ghachok shows the effect of another general evolutionary principle, which is that the long vowels become more closed. In this case the short vowels all maintained their original timbre, and symmetrical mergers in the back and the front led to a new system without an increase in the number of vocalic timbres.

TABLE 7 – The evolution of open syllable vowels in Ghachok Gurung

*i:	*ī	*e:	*ē	*a	*a:	*o	*o:	*u	*u:
i		e		a		o		u	

### 3 Toward a conclusion

With the TGTM languages we are neither in the situation of the Great English Vowel Shift, where the length contrast was retained and only long vowels moved, according to the principle that in chain shifts long vowels rise, nor in that of the Romance languages after the Common Romance period where length had already disappeared. In the TGTM changes it seems that vowel length and timbre evolved at the same time with the pressure of the impending loss of length contrast causing the vowel timbres to change in many cases. When it occurs, the shift of these vowels does follow the principle that long vowels rise and short vowels fall, but in the case of TGTM this happens either to the long vowels or to the short vowels, while length is disappearing.

There is no intermediate stage from which all the evolutions could be derived; each evolution has to be drawn from Proto-TGTM itself.

## 4 Appendices

The following Appendices give example words for each vowel (Appendix 1), and representations of the vowel evolution and contextual palatalization in each of the linguistic varieties (Appendix 2). The sources of the data are listed in Table 8.

TABLE 8 – Sources of the data

Broader ethnic group or language	Dialects (Villages)	Source
Tamang	Risiangku, Dhunce, Haku	personnal notes (Mazaudon 1973, 2009)
Thakali	Tukche	Hari (Hari 1969)
Gurung	Ghachok	Glover (Glover 1969)
Nar-Phu language		personnal notes (Mazaudon 1996)
Manang language	Praka	Hoshi (Hoshi 1984)

### APPENDIX 1 An example word for each vowel

*i	* <sup>A</sup> mi > * <sup>3</sup> mi	‘man’
*i:	* <sup>B</sup> m <sup>hi</sup> : > * <sup>2</sup> mi:	‘eye’
*e	* <sup>B</sup> me > * <sup>4</sup> me	‘cow’
*e:	* <sup>A</sup> m <sup>he</sup> : > * <sup>1</sup> me:	‘tail’
*a	* <sup>A</sup> sa > * <sup>1</sup> sa	‘earth’
*a:	* <sup>A</sup> da: > * <sup>4</sup> ta:	‘post’
*o	* <sup>B</sup> pho > * <sup>2</sup> pho	‘belly’
*o:	* <sup>B</sup> bro: > * <sup>4</sup> p(h)ro:	‘smallpox’ (Gur.missing)
*u	* <sup>B</sup> blu > * <sup>4</sup> p(h)lu	‘seed’
*u:	* <sup>B</sup> ku: > * <sup>4</sup> ku:	‘nine’

### APPENDIX 2 A more dynamic representation of the evolutions

#### Appendix 2.1 The context-free evolution of vowel length in four dialects

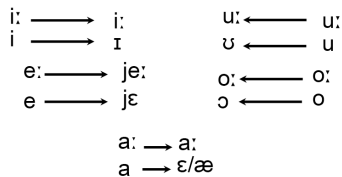


FIGURE 2 – Vowel evolution in Nar-Phu

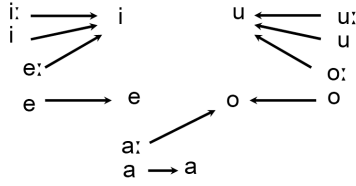


FIGURE 3 – Vowel evolution in Gurung of Ghachok

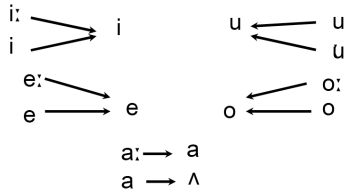


FIGURE 4 – Vowel evolution in Thakali of Tukche

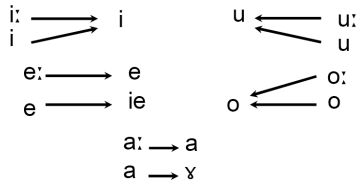


FIGURE 5 – Vowel evolution in Manange of Praka

Appendix 2.2 The contextual palatalization of Dhunce and Haku Tamang vowels

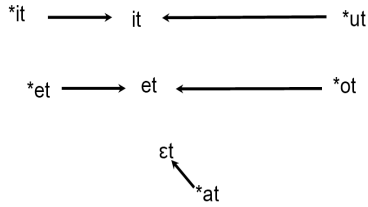


FIGURE 6 – Contextual palatalization in Dhunce Tamang: \*Vt

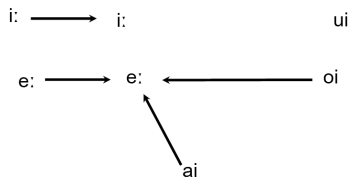


FIGURE 7 – Contextual palatalization in Dhunce Tamang: \*Vi

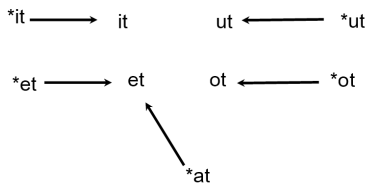


FIGURE 8 – Contextual palatalization in Haku Tamang: \*Vt

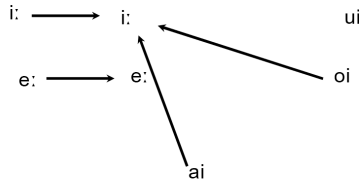


FIGURE 9 – Contextual palatalization in Haku Tamang: \*Vi

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# Irregular dorsal developments in Montana Salish<sup>1</sup>

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## 1 Introduction

Montana Salish (also known as Salish-Pend d'Oreille, formerly known as Flathead) is the easternmost of the twenty-three Salishan languages. It is part of a dialect continuum that also includes Spokane and Kalispel, both spoken in eastern Washington State. In Montana Salish, as in most other Salishan languages, the Proto-Salish nonlabialized velar obstruents *\*k*, *\*k'*, and *\*x* regularly changed into alveopalatals, respectively *č*, *č'*, and *š*. Many correspondence sets can be adduced to illustrate this change; a few examples are given in Table 1, where Colville-Okanagan – which, like Montana Salish (MSa), belongs to the Southern Interior branch of the family – represents nonpalatalizing languages. The Proto-Salish (PS) forms in Table 1 are from Kuipers 2002; parentheses indicate partial cognacy and/or semantic non-identity.<sup>2</sup>

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<sup>1</sup> In his writings, in conversations, and in biweekly HistLing meetings at the University of Michigan, Rob Burling shows a lively interest in the kinds of small but intricate historical puzzles that I tackle in this paper. Although the puzzles he investigates are found in languages on the other side of the world, I dedicate this paper to him in the hope that he'll find a Salish puzzle intriguing.

As always, I am most grateful to the Salish and Pend d'Oreille Culture Committee of the Confederated Salish and Kootenai Tribes, St. Ignatius, MT, for their collaboration and their generous support of my work on Montana Salish since 1981. My gratitude to the elders who have worked with me over the years is immense. I am also deeply indebted to the late Dale Kinkade, who provided many very helpful examples from his Columbian field notes and from Coeur d'Alene.

In morpheme-by-morpheme glosses, lexical suffixes are indicated by a preceding =; other affixes are marked with -. Example words are only partially analyzed in this paper, however; morpheme boundaries that are not relevant to the discussion are generally not indicated, and not all morphemes are glossed even when boundaries are put in to isolate a morpheme under discussion.

<sup>2</sup> The comparative focus in this paper will be on those languages which are most closely related to Montana Salish, namely the other two dialects of the same language (Spokane and Kalispel) and the other three members of the Southern Interior branch of the family:

TABLE 1 – Regular alveopalatal reflexes of Proto-Salish velars in Montana Salish

a.	MSa	<i>čélš</i>	Cv	<i>kílx</i>	‘hand’	PS * <i>kalax</i>
b.	MSa	<i>isčéw</i>	Cv	<i>nskíw</i>	‘sister-in-law’ <sup>3</sup>	(PS * <i>kiw</i> )
c.	MSa	<i>ck<sup>w</sup>ín’č</i>	Cv	<i>ck<sup>w</sup>ín’k</i>	‘bow (and arrow)’	(PS * <i>cək<sup>w</sup></i> , *= <i>ín’ak</i> )
d.	MSa	<i>č’éye?</i>	Cv	<i>k’íya?</i>	‘dead tree’	(PS * <i>k’ay’</i> )
e.	MSa	<i>snč’l’é</i>	Cv	<i>snk’l’íp</i>	‘coyote’	PS * <i>s-n-k’əl=ap</i>
f.	MSa	<i>níčč’</i>	Cv	<i>nik’k’</i>	‘it gets cut’	PS * <i>nik’</i> - <sup>4</sup>
g.	MSa	<i>ši?mí</i>	Cv	<i>xi?míx</i>	‘any (kind of)’	—
h.	MSa	<i>šlšált</i>	Cv	<i>xrxárt</i>	‘steep’	—
i.	MSa	<i>suméš</i>	Cv	<i>sumíx</i>	‘guardian spirit’	(? PS *= <i>míx<sup>w</sup></i> , *= <i>míx</i> )

In several morphemes, however, Proto-Salish or Proto-Interior Salish (PIS) nonlabialized velars turn up in Montana Salish as labialized velars or uvulars instead of the expected alveopalatals. In at least one morpheme, moreover, Montana Salish may have an alveopalatal reflex of an original labialized velar. Below I will examine examples of irregular changes in Montana Salish involving velars and other dorsal consonants and offer suggestions, where possible, about how the deviant developments might have come about.

This paper is exploratory in nature. It is not meant as an exhaustive study of irregular changes involving velars even in Montana Salish, because I have compared Montana Salish forms systematically to forms in just one nonpalatalizing Salishan language, Colville-Okanagan (primarily as documented in Mattina 1987). A broader comparison between Montana Salish and other languages would certainly turn up more velar mismatches; see Kuipers (2002: 6–7). I have checked the forms in which there are mismatches between Montana Salish and Colville-Okanagan in certain other nonpalatalizing languages as

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Colville-Okanagan in particular (because it is a nonpalatalizing language, and because of the impressive size and quality of Mattina’s 1987 dictionary), but also Coeur d’Alene and Columbian. Some attention will be given to the three Northern Interior Salishan languages (all of which are nonpalatalizing), especially Thompson and Shuswap; I have not checked this feature systematically in non-Interior Salishan languages, though a few examples are taken from various sources.

<sup>3</sup> The MSa form in this set looks at first glance as if it should be glossed ‘my sister-in-law’ rather than simply ‘sister-in-law’, because the initial *i-* is the expected allomorph of the 1sg possessive prefix /i(n)-/ ‘my’ before a stem-initial *s*. But the word has no 1sg prefix; ‘my sister-in-law’ is *in-isčéw* in MSa. Similarly, the initial *n* of the Cv cognate cannot be a possessive prefix. Mattina (1987) treats this word as monomorphemic in Cv, and it may be best treated that way in MSa as well, in spite of its apparent origin as a derivative of the root *čéw* ‘extend, far’. The reason the initial *n* of the original stem appears as *i* in MSa is that MSa has a morphologized rule *n* → *i* before a stem-initial *s*.

<sup>4</sup> These MSa and CV forms are fully cognate; both have reduplication of the second root consonant. The first affricate in the MSa form is deglottalized by a regular rule that deglottalizes all but the last glottalized oral stop or affricate in a sequence of ejectives.

well, especially Thompson River Salish (or Thompson, for short; Thompson and Thompson 1996), a Northern Interior language; I have also checked these forms in the other two major members of the dialect continuum to which Montana Salish belongs, Spokane and Kalispel (as represented in Carlson and Flett 1989 and Vogt 1940, respectively). Besides Montana Salish data gathered from works produced by the Salish and Pend d'Oreille Culture Committee and from my fieldwork with elders, I have made extensive use of Mengarini et al. 1877–1879.<sup>5</sup> Note too that this is not the first effort to sort out irregular developments in Salishan velars: Kinkade 1973 is an analysis of surprising velar developments in Cowlitz Salish, in which palatalization of Proto-Salish plain velars occurred before *\*i* and before a uvular in the same morpheme but was blocked when an *s* appeared in the same morpheme. There is no parallelism, however, between the Cowlitz pattern and the irregular Montana Salish changes.

After discussing some possible ways in which irregular reflexes of original velars might have arisen (§2), I will examine Montana Salish morphemes that do, or may, contain such reflexes (§3). In the concluding section (§4) I discuss briefly the broader implications of these results, both for the history of the Salishan family and for the theoretical elucidation of phonological change.

## 2 Some alternations involving velars

Before we look at the unexpected velar developments themselves, it will be useful to exemplify several synchronic alternations that may help to explain some of the irregular changes. First, in a number of Salishan languages labialized and nonlabialized dorsals are neutralized in certain positions, usually before a rounded vocoid (/u o w w' ʕʷ ʕʷ'/). In Montana Salish a labialized segment appears in the position of neutralization; this is not a regular morphophonemic rule but is sporadic, confined to particular morphemes. This phenomenon can only be illustrated with uvulars in MSa because, thanks to the regular change from nonlabialized velars to alveopalatals, there are no plain velars to which the rule could apply. Thus plain uvulars are (sometimes) labialized at a morpheme boundary before a rounded vocoid. Compare, for instance, *tl'q-nt-én* 'I kicked him' and *n-tl'qʷ=óps-i-s* 'she kicked him in the rear end', both from the root *tl'q* 'kick'; the second form contains the lexical suffix *=úps* 'tail, bottom', with a lowered vowel due to the preceding uvular stop. This type of alternation occurs elsewhere in Salishan as well, and in nonpalatalizing languages it involves velars as well as uvulars. So, for instance, Thompson has *k'éx-m* 'dry something' vs. *k'exʷ=úse?* 'dried berries' (the lexical suffix means 'berry'; see Thompson and Thompson 1996: 102 and the discussion in §3.8 below). In Cowlitz, a member of the Tsamosan branch of the family, the alter-

<sup>5</sup> Mengarini et al. 1877–1879 is the Jesuit dictionary traditionally cited as Giorda 1877–1879; see Thomason et al. 1994 for arguments in support of crediting Gregory Mengarini with first authorship.

nation is regular (Kinkade 1973: 229), with only labialized velars occurring before *u*.

Second, Montana Salish labialized velars occasionally alternate with labialized uvulars in the neighborhood of a uvular consonant. The following two words, for instance, both contain the root *nk<sup>w</sup>'ú?* 'one': *nk<sup>w</sup>'u?-lúk<sup>w</sup>'* 'yardstick' (a compound with *lúk<sup>w</sup>'* 'wood') vs. *nq<sup>w</sup>'o? = qín* 'one hundred' (with the lexical suffix =*qín* 'head' added to 'one'). Another example is the word for a bitter drink, *n-táx = q<sup>w</sup>'*, in which the lexical suffix =*étk<sup>w</sup>'* 'liquid' surfaces, in an abbreviated variant, with uvular *q<sup>w</sup>'* rather than velar *k<sup>w</sup>'* because of the preceding uvular fricative in the root *táx* 'bitter'.<sup>6</sup>

Like the labialization of plain dorsals before rounded segments, the velar-to-uvular assimilation process is sporadic rather than regular, but it may ultimately be connected indirectly with a striking feature of Montana Salish root structure. My dictionary files contain only one rather dubious root with both a uvular and an alveopalatal consonant (*čcax* 'hurt, sick'; see §3.6 below) and only six roots with both a uvular and a velar consonant, all of them beginning with a uvular and ending in *x<sup>w</sup>'*: *qéyx<sup>w</sup>'* 'chase, whip'; *q'l'x<sup>w</sup>'* 'hook'; *q'ex<sup>w</sup>'* 'proud' (PIS \**q'əx<sup>w</sup>'* – Kuipers 2002: 181); *q'x<sup>w</sup>'* 'bloated, constipated'; *q'ep'x<sup>w</sup>' = e?* 'nut' (PS \**q'ap'x<sup>w</sup>/x<sup>w</sup>'* 'hazelnut', where only Southern Interior Salish languages have the velar alternant – Kuipers 2002: 89); and *xléx<sup>w</sup>'* 'tooth'. In other words, in Montana Salish – both in its current form and before the palatalization of velars – the juxtaposition of velars and uvulars is clearly dispreferred. The same is true of Columbian, another Southern Interior Salishan language (Dale Kinkade, personal communication, 1996).<sup>7</sup> This pattern may be widespread in Salishan more generally: Kuipers' Salish etymological dictionary (2002) has only eight roots with both a velar and a uvular. Two of these, PS \**k<sup>w</sup>'aq'-t* 'scream, bellow, weep' and PIS \**s-q'ax<sup>w</sup>'* 'a small owl', look onomatopoeic. Two others are animal names, which tend to be widely borrowed in the Northwest: PIS \**q<sup>w</sup>'a?k* 'a river fish (sucker, chub, squawfish)' and Proto-Coast Salish \**k<sup>w</sup>'utx* 'halibut'. The other four all end in *x<sup>w</sup>'*: PIS \**q'əx<sup>w</sup>'* (as above); PS \**q'ax<sup>w</sup>'* 'stiffen, harden'; PS \**qənu/a(x<sup>w</sup>)* 'throat', where the final velar fricative looks like an extension of some sort; and PS \**q'ap'x<sup>w</sup>/x<sup>w</sup>'* 'hazelnut', as above.

<sup>6</sup> The absence of the *t* of the suffix in 'bitter drink' is not phonologically conditioned; it is a peculiarity of this suffix that it sometimes surfaces without the *t*. If the presence vs. absence of the *t* in this suffix follows a pattern, I haven't discovered it yet.

<sup>7</sup> Mattina 1987 has a number of roots with both velars and uvulars, but most of them either have another consonant between the two dorsals or are otherwise unusual (e.g. longish place names or personal names). Some of these are therefore probably not primary roots; they are more likely to be fossilized derived forms. It seems likely that CVC roots containing both a velar and a uvular consonant are dispreferred in Colville-Okanagan too.

Third, in some Salishan languages velars alternate with uvulars as a result of sound symbolism, perhaps ancient.<sup>8</sup> Kuipers (1981b: 165) says that Proto-Salish had ‘a velar (and plain) – uvular (and darkened/retracted) alternation, which had a symbolic value . . .’, and Kuipers (1981a: 325f.) cites several Proto-Salish forms that, he argues, show this sound-symbolic alternation pattern. Kuipers 2002 has four Proto-Salish roots and two Proto-Interior Salish roots with alternate velar and uvular onsets. Kuipers observes that ‘the uvular form [has] the connotation *large, strong, loud, etc.*’ (2002: 6). Thompson and Thompson (1992: 109) note that, in Thompson,  $k^w$  :  $q^w$  correspondences (among others) ‘hint at some earlier sound symbolism system.’ Moreover, a velar/uvular sound symbolic alternation – or, at least, a front dorsal/back dorsal alternation, because the back dorsals need not be as far back as the uvula – appears to be areal: Jacobs, discussing diminutive formations in Sahaptin (1931: 136), observes that, in addition to reduplication ‘velar or back palatal consonants change to mid-palatal consonants’ in diminutives; Aoki finds the same device in another Sahaptian language, Nez Perce, where velars change to uvulars in diminutives (1994: 16–17). (Sahaptin is, or was, spoken in Oregon and neighboring parts of south-central Washington and Idaho; Nez Perce is, or was, spoken in Idaho.)

Finally, one piece of evidence suggests that Montana Salish speakers have sometimes replaced plain velars with labialized velars in loanwords. The modern form of the name *Jesus Christ* is *Yesuk<sup>w</sup>lí* (MSa has no /r/); compare *Susukrí* in Columbian, a nonpalatalizing Southern Interior language, and *Jisohkri* in Coeur d’Alene, a palatalizing Southern Interior language. This MSa form may be relatively recent, since the name always has a nonlabialized dorsal in Mengarini et al. 1877–1879: the Jesuits’ spelling is *iesu kli* or *jésu kli*. (A labialized dorsal would be spelled in the Jesuits’ dictionary as *ku* for  $k^w$  or *ko* for  $q^w$ , even before a consonant.) The relevance of this point is that, given the (formerly?) widespread multilingualism in the region, borrowings from nonpalatalizing Salishan languages could turn up with labialized velars in modern Montana Salish either by way of a ‘closest sound’ adaptation strategy or by the less automatic application of a correspondence rule (‘their *k* equals our  $k^w$ ’). Either strategy could produce a labialized velar in a loanword that had a plain velar in the lending language. Unfortunately, however, proving the existence of such a borrowing process for any of the cases discussed below ranges from difficult to impossible, because the words have no phonological peculiarities that might provide clues. I will therefore not argue for a loanword source for any of these examples, but borrowing should nevertheless be kept in mind as a possible source.

Nativization of foreign sounds in loanwords – that is, replacing them with native sounds that are perceived to be closest to the foreign sounds – is a well-

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<sup>8</sup> I am grateful to the late Dale Kinkade for drawing my attention to this type of alternation, and for pointing out the areal dimension.

known aspect of lexical borrowing, although predicting which native sound (or phoneme) will replace a given foreign sound is notoriously difficult. The general phenomenon of applying correspondence rules in borrowing is also well known in the language-contact literature (see, in particular, the discussion of ‘borrowing routines’ in Heath 1984: 372–378), and it can be illustrated from languages of the Northwest, where multilingualism has long been common. One regional example is the Chinook Jargon word *latáb* ‘table’, originally from French *la table*. This word has been borrowed into many Northwest languages, usually as *latáp* (e.g. in Colville-Okanagan) but occasionally as *latám* (e.g. in Upper Chehalis – Kinkade 1991: 59). Why the nasal in *latám*? The reason seems to be that Upper Chehalis speakers (among others) did not borrow the word directly from Chinook Jargon, but instead adopted it from another language that had previously borrowed it – namely, from one of the several coastal languages in which nasals had changed into voiced oral stops. Speakers of the nasalless languages borrowed *latáb* with its final voiced stop intact; and speakers of neighboring languages, which had nasals but no voiced oral stops natively, would then have applied a correspondence rule (‘their *b* equals our *m*’) in adapting the word to their own phonological structure. Another example is the word for ‘cranberry’ (or, in Squamish and Thompson, ‘high cranberry’), which Kinkade (1995: 35) analyzes as a borrowing into Thompson from Chilliwack. The Coast Salishan languages Squamish and Chilliwack both have *l*’s in this word – Squa *k<sup>w</sup>ú?k<sup>w</sup>uwəl*’s, Chi *k<sup>w</sup>úk<sup>w</sup>əls/k<sup>w</sup>úk<sup>w</sup>əwəls* – but Thompson has *n*: *k<sup>w</sup>úk<sup>w</sup>ns*. Kinkade explains the change as follows: ‘Recognizing that Chilliwack *l* was often derived from *n*, the Thompson form changed this consonant “back” to *n*, although the Squamish cognate shows that it actually derived from *l*.’

Montana Salish speakers certainly participate(d) in the multilingualism so common in the region. The elders say that when they were young many of the old-timers spoke French, and some spoke Kutenai. They also list other languages that are ‘very similar’ to their own, so close that they can understand them – including Spokane, Coeur d’Alene, and Nez Perce. But although they would understand most of the very similar Spokane and probably much of the closely-related Coeur d’Alene without prior exposure to those languages, only bilingualism (and cultural ties) can explain their view that the unrelated language Nez Perce is very similar to Montana Salish. Evidence for the diffusion of words among the various tribes can also be found; for example, Teit and Boas (1927–1928: 352) make the following comment about words for ‘horse’: ‘The Kalispel and Colville-Okanagan always called horses by the common term for dogs when they were first introduced. Later they adopted the name common to nearly all the Salish tribes for “horse”, which is related to a common word for “dog”.’ The Montana Salish and Nez Perce tribes have long had close cultural contacts, including intermarriage, and lexical borrowing has gone in both directions, though primarily from Salish to Nez Perce; some of the loanwords are old and are shared by other Southern Interior Salishan languages and other languages of the Molalla-Sahaptian family (Pharris and Thomason 2005).

However the irregular variants arose in each particular case, the subsequent history of all but the borrowing scenario must have involved analogic spread beyond the original conditioning environment and thus competition with the original plain-velar variant. This competition had one of three outcomes: the innovative irregular variant – a labialized velar or a uvular – spread analogically until it replaced the original plain-velar variant entirely; or the irregular and the plain-velar variants both remained in the language, sometimes with and sometimes without semantic differentiation (compare, for instance, the English past-tense forms *hung* and *hanged*, with semantic differentiation, and the past-tense forms *dove* and *dived*, which are semantically identical); or the irregular variant disappeared, in which case there is no evidence that it ever existed.<sup>9</sup> The first two outcomes are exemplified in the examples in the next section.

### 3 Montana Salish morphemes with irregular velar developments

Two of the nine examples discussed in this section are prefixes; the rest are roots. In a few cases it isn't certain, from the data at hand, that the original root had a nonlabialized velar (as opposed to a labialized velar or a uvular), and in most cases there are no visible candidates for conditioning environments for the innovations. This latter circumstance does not, of course, mean that there were no conditioning factors to motivate the changes; it does mean that, after the fact, none can be determined.

#### 3.1 The prefix *q(t)*- 'Irrealis (future)'

Both allomorphs of this prefix are extremely common. The short variant *q-* occurs before *s*, *es-*, and (by analogic extension) a few prefixes preceding an *s* or *es-*; the long variant *qt-* occurs elsewhere.<sup>10</sup> Typical Montana Salish examples are given in (1).

- (1) a. *a-qt-nóx<sup>w</sup>n<sub>x</sub><sup>w</sup>*  
 2sg.POSS.IRREALIS-wife  
 'your wife-to-be'

<sup>9</sup> There could of course be such evidence in older sources, especially Mengarini et al. 1877–1879. But so far I have found no examples of unsuccessful innovations in the dictionary.

<sup>10</sup> The distribution of these allomorphs may actually be more complicated. I have one example with [qʰ] before *s*: *qtsisiyus* 'may be(come) smart', where the first *s* is not a prefix but is rather part of the reduplicated root. If this example is genuine – as it probably is, since it comes from a spontaneous narrative text – then the status of a following *s* must be taken into account in predicting which allomorph of the irrealis morpheme will appear. Given that its distribution is already morphologically determined in part, this wouldn't be a particularly surprising complication. See Baier 2010 for a detailed analysis of the Montana Salish irrealis marker(s).



- b. *qe qt-q'ex<sup>w</sup>mscútn*  
 we IRREALIS-show.off  
 'we'll show off'
- c. *ta qe q-s-cú?ca axlá*  
 not we IRREALIS-NOM-swim every.day  
 'We won't swim every day'
- d. *tam esnté q-et-es-x<sup>w</sup>stú*  
 not he.wanted IRREALIS-back-STATV-walk  
 'He didn't want to walk back'

This same irrealis prefix, with the same allomorphs, also appears in Kalispel and Spokane. But the cognate Colville-Okanagan prefix *kt-* 'unrealized aspect' has a velar stop, not a uvular stop, and the same is true of the Columbian cognate *kat-* 'unrealized' (Dale Kinkade, personal communication, 1996). Moreover, the Coeur d'Alene cognate prefix *čet-* shows the expected palatalized reflex of a velar.<sup>11</sup> Lillooet, which belongs to the Northern Interior branch of the family, has (-) *kət* 'remote future, possibility' (Kinkade 1996), and the Thompson particle *kə* 'unrealized (to be established in the future . . .)' also appears to be partially cognate.<sup>12</sup>

There are two obvious historical possibilities: either Montana Salish and its sister dialects replaced an original *\*k* with *\*q* in this morpheme, or the other five languages replaced *\*q* with *\*k*. A third possibility, that the velar and uvular forms are etymologically unconnected, is unlikely, given the close semantic and morphological match. Vogt mentions a Kalispel alternation that seems at first glance to point to an original uvular (1940: 19): he says that the *q* of this prefix 'is differentiated to [k] by the labials of the personal prefixes *ku-* [= MSa *k<sup>w</sup>u* "me"] and *k<sup>w</sup>-* ["you (2sg.INTR.SUBJ)"] and of the particle *tu*.' I have not observed such an alternation in Montana Salish. The conditioning environment claimed by Vogt is a bit surprising, since lip rounding seems unlikely, in itself, to cause fronting of a uvular to a velar. But if such an alternation existed in Proto-Interior Salish, producing two allomorphs for this morpheme, then the velar reflex in Colville-Okanagan, Columbian, Coeur d'Alene, Lillooet, and Thompson could be accounted for by positing a process of allomorphic leveling in favor of the velar. The uvular allomorph (presumably the 'elsewhere' allomorph in the proto-language, on this hypothesis) survived in Montana Salish, Kalispel, and Spokane; but Kalispel would then have developed its current variation after

<sup>11</sup> Dale Kinkade (personal communication, 1996) pointed out that the vocalism of the Coeur d'Alene form is odd, because its vowel *e* 'should derive from *\*ə*, so it is not clear how this matches the Cm form'.

<sup>12</sup> The Thompson form suggests that the *t* of the Southern Interior languages may be a connective rather than part of the irrealis morpheme per se; in Montana Salish, at least, *-t-* often serves this function. However, Upper Chehalis has a particle *t* 'unrealized future', which makes it seem more likely that the fricative does belong to the Montana Salish irrealis morpheme.

the palatalization change, because otherwise its current alternation would be  $q/\check{c}$ , not  $q/k$ .

There are two main problems with this analysis. First, it requires two separate changes innovating a velar variant of the prefix, one in Proto-Interior Salish and one in modern Kalispel. This is not especially implausible (except for the oddity of the conditioning factor itself), because drift often results in similar or identical changes in related languages at different times; but it adds an extra unattested step to the historical derivation. Second, there is no obvious phonetic or distributional reason for the direction of leveling in five of the languages (why should the velar win out?). This is significant because the change would have to have occurred twice independently, once in Southern Interior (for the Colville-Okanagan, Coeur d'Alene, and Columbian prefix) and once in Northern Interior (for Lillooet and Thompson). Aside from the lack of a good phonetic motivation that might enhance the possibility of identical changes via drift, this again adds an extra unattested step to the historical scenario.

On the basis of the Interior Salishan data, therefore, it seems more likely that the morpheme originally had a velar stop, not a uvular stop. On this hypothesis, only a single change is required, in the immediate ancestor of Montana Salish, Kalispel, and Spokane (in addition to the Kalispel-specific change that is required in any case). No clear source for the development and spread of a uvular variant in Montana Salish can be established, however. The frequent juxtaposition of this prefix with a preceding particle containing a uvular might have provided the environment for the velar-to-uvular change;  $qt-$  is always word-initial unless it is preceded by the nasalless allomorph of a possessive pronominal (1sg /i(n)-/ or 2sg /a(n)-/). Two common proclitics containing uvulars are /qe(?)/ '1pl' (in all grammatical contexts) and a possibly dialectal variant of the 1sg object particle 'me',  $q^vo$  (the other variant is  $kwu$ ). Once the uvular variant of the irrealis prefix arose, it eventually replaced the original velar variant completely – probably, though not necessarily, before the palatalization change occurred.

There is another complication, however. At least three Salishan languages outside the Interior branch of the family have a uvular stop in what looks very much like a cognate morpheme – the Coast Salishan languages Squamish ( $q$  'irreal') and Clallam ( $q(-)t$  'conditional'), and the Tsamosan language Upper Chehalis ( $q'at$  'subjunctive'). If these forms are factored into the equation, the balance might be tipped toward a Proto-Salish uvular stop. But if this is the case, then either the velars in Thompson, Lillooet, Colville-Okanagan, Columbian, and (pre-)Coeur d'Alene reflect independent, and unexplained, changes – not an attractive option – or the original uvular changed to a velar in Proto-Interior Salish, with a single later change to a uvular in the immediate ancestor of Montana Salish, Kalispel, and Spokane. So even if Proto-Salish had a uvular in this morpheme, it seems most likely that it became a velar in Proto-Interior Salish.

### 3.2 The locative prefix *kʷt-* ‘under’

This prefix is matched by *kʷət-*, which occurs in Kalispel and in the Northern Interior language Shuswap; but Spokane has *čʷt-* instead. The Spokane form, together with Colville-Okanagan *kʷt-* and the apparently related Columbian prefixes *kt-* ‘on the (lower) side’ and *kʷt-* ‘away from, at a distance’, points to an original nonlabialized velar, at least in Southern Interior Salish. If the proto-language had a labialized velar, at least two independent changes would have to be posited to get the velar (and later alveopalatal) reflexes. However, the labialized velar in Shuswap means that at least two independent changes must be posited in any case, so the evidence is not strong either way. Examples are given in (2).

- (2) a. MSa: *kʷt-išút* ‘it’s under(neath)’  
           *c-kʷt-čʷí* ‘arrive here’ (with *c-* ‘hither’)
- b. Kal: *kʷət-čʷíc* ‘arrive’
- c. Sp: *čʷt-išút* ‘it’s under’
- d. Cv: *kʷt-ixʷút* ‘what’s underground’
- e. Cm: *c-kʷt-kícəm* ‘arrive here’
- f. Sh: *kʷət-kʷémt* ‘(space) under’

As with *qt-*, no firm source for an irregular development of MSa *kʷt-* can be established. The prefix is very common, appearing in many words in which its specifically locative function is not evident (e.g. ‘arrive’ in (2a)), and it often occurs before a labialized segment, as in *čn kʷt-xʷst l escʷlcʷil* ‘I walked under the trees’ (lit. ‘1sg under-walk LOC trees’) and *kʷt-xʷélstš* ‘she ruined it’. Of course it also occurs very frequently before nonlabialized segments, as in (2a). Still, it may be that the labialization of the prefix’s stop was conditioned in the first instance by a following labialized segment (in spite of the intervening lateral fricative, which would presumably be labialized allophonically between two rounded segments), with subsequent analogic leveling of the two allomorphs to eliminate the plain-velar variant. It is worth noting that a similar labialized/nonlabialized pattern can be found in at least one other grammatical morpheme in Southern Interior Salish, the particle *xʷlʷ*:

- (3) a. MSa: *xʷlʷ* ‘for, because’; *xʷlʷ stém* ‘why?’ (lit. ‘for what?’)
- b. Sp: *xʷlʷ* ‘for’; *xʷlʷ stém* ‘why?’
- c. Cv: *xl* ‘for’; *xəl stím* ‘why?’

The parallelism between the grammatical morphemes for ‘under’ and ‘for’ may or may not be significant, though it seems relatively unlikely to be completely accidental – in which case the explanation for the labialization in ‘under’ in Montana Salish, whatever it is, may also apply to the labialization in ‘for’.

### 3.3 The root doublet *p'ilč'/p'úlk<sup>w</sup>* 'turn'

These two root forms differ in their root vowels, in their final consonants, and in their stress patterns (the first variant has weak stress, the second has strong stress). As in other palatalizing languages, the *č'* variant should come from PS *\*k'*, while the *k<sup>w</sup>* variant should reflect a PS *\*k<sup>w</sup>*. Analogous variants in several other Interior Salishan languages have very similar meanings, so there is no semantic barrier to analyzing them as allomorphs of a single root. Carlson and Flett group them into a single morpheme in Spokane, and that seems to be a reasonable analysis in Montana Salish too, especially in view of the intersecting cognate constructions in Coeur d'Alene, Colville-Okanagan, and Thompson. Coeur d'Alene apparently has three different root forms, two that share final *č'* but have different root vowels and one with *ú* and final *k<sup>w</sup>*, as in Montana Salish; the meanings seem to match those of the Montana Salish doublets. Colville-Okanagan has just one root *p'lak'* 'turn', always with a nonlabialized velar. Thompson has two different roots, both with nonlabialized final dorsal stops – *p'ik'* 'roll' and *p'iq'* 'turn'; it is the uvular-final root that has clear cognates with Colville-Okanagan and Montana Salish constructions (though not precisely in the root form itself). The presence of a uvular in the Thompson root is perhaps explained by the Proto-Salish variation in *\*p'əlk'/q'* (Kuipers 2002: 79): both variants occur in both Coast and Interior Salishan, occasionally in the same language and usually with semantic differentiation. Moreover, occasional variants with labialization also occur in Coast as well as in Interior Salishan. For Southern Interior Salishan, at least, almost all the variation concerns plain vs. labialized velars, not uvulars.<sup>13</sup> The Columbian forms reflect the same distinction we see in Montana Salish, Spokane, and Coeur d'Alene, an (original) nonlabialized velar in one and a labialized velar in the other, and with the same semantic distinction. The remaining languages, like Colville-Okanagan and Thompson, have only a nonlabialized root.

- (4) a. MSa: *p'lč'úsm* 'turn around' (lit. 'turn one's face around', with the lexical suffix =*ús* 'face, fire'); *p'lč'mncú* 'turn around' (lit. 'turn oneself around', with the reflexive suffix *-cú(t)*); *p'lč'mstén* 'I turned it over'; *č-p'lk<sup>w</sup>=íc'e?* 'wrap' (lit. 'to-turn=cover'); *p'úlk<sup>w</sup>ntx<sup>w</sup>* 'you fold it (over the stick)'
- b. Sp: *č-p'lk<sup>w</sup>=íc'?e-n* 'I wrapped it'; *p'lč'mstén* 'I turned it over'; *p'úlk<sup>w</sup>ntm* 'somebody rolled it up'
- c. Cv: *p'lk'úsəm* 'turn around'; *p'lk'məncút* 'turn to something'; *k-*

<sup>13</sup> The one exception to this pattern that I've found is a single form in Montana Salish: *M p'el'q<sup>w</sup>ósmstx<sup>w</sup>* 'You'll be turning it [the meat] over and over [over the fire]'. The speaker was a highly fluent elder, and the utterance was spontaneous, not elicited. The likelihood that I mistook a velar for a uvular is small, because the vowel of the lexical suffix =*ús* 'face, fire' is lowered, as expected after a uvular consonant (but not after a velar). See below for further discussion of this example.

- p'lk'* = *íc'aʔ* 'roll, wrap'; *p'əlk'mstím* 'turn, roll something over'
- d. Cm: *p'əlk'* - 'turn over, turn around'; *p'úlkʷ-ən* 'I fold it'
- e. CdA: *p'ilč'* 'turn round objects'; *p'elč'* 'turn flat thing over', *pulkʷ* 'fold sheetlike object'
- f. Th: *p'iq'úsm* 'turn around to go back'
- g. Sh: *p'lk'em* 'roll something over'; *p'úlkʷ* 'fold'
- h. Se: *p'əłč'* - 'be turned over'; *sp'əlıqʷ* 'twisted'; *sp'əlikʷ* 'ball-shaped'
- i. UChe: *p'ə\*łč'* - 'turn over'
- j. Squa: *p'láč'-m* (*snəxwít*) 'canoe with heart of cedar at bottom' (lit. 'turnover canoe')

As the examples suggest, there is some semantic differentiation. For instance, within Montana Salish (and also Spokane) the forms with *č'* are used especially for something that turns itself around, while the forms with *kʷ* are used for turning something else around, especially folding or rolling some object up. This differentiation is not complete, however, as the *č'* forms meaning 'turn it over' show. Moreover, within Montana Salish there is a doublet in which both forms have essentially the same meaning, though the words have different morphological structures (the uvular in 5b is puzzling, but see fn. 13):

- (5) a. MSa: *p'l'-p'l'č'-mí-m*  
REDUP-turn-DER.TRANS.-TRANS.CONT.3sg  
'she's turning it [the meat] over and over [over the fire]'
- b. MSa: *m p'l'qʷ' = ós-m-st-xʷ*  
FUT turn=fire-DER.TRANS-TRANS-2sg.TRANS.SUBJ  
'you'll turn it [the meat] over and over [over the fire]'  
(the lexical suffix is =*ús* 'face, fire')

The simplest way of accounting for the *p'łč'/púlkʷ* doublet is to posit an original *\*k'* in the root, both because two of the four nonpalatalizing languages (Colville-Okanagan and Thompson) lack labialized variants and because conditioned delabialization of an original *\*kʷ* would be improbable in Montana Salish before a rounded vowel, as in *p'łč'úsm* 'turn around'. Two possible conditioning factors for labialization of an original plain velar are suggested by the examples. First, the Montana Salish variant *p'úlkʷ* has a stressed rounded vowel, which (if original) could have contributed to labialization of the following stop; and second, labialization could have occurred before a rounded suffix vowel – though only sporadically, as the contrast between *p'łč'úsm* and *p'l'qʷ'ósmstxʷ* shows. The former environment might not have existed in PIS, because the vocalism of Colville-Okanagan *p'lak'* 'turn' and Coeur d'Alene

*p'elč'* 'turn flat thing over' doesn't match that of Montana Salish *p'úlk<sup>w</sup>'*; however, Columbian has the same vowel as Montana Salish. If the original PIS root did have a stressed rounded vowel, then the currently available modern data, in which the alveopalatal variant occurs primarily unstressed, would make it tempting to suggest that most of the *č'* variants left unlabialized were those in unstressed contexts, i.e. with no preceding rounded segment: unstressed vowels in MSA (and frequently in other Salishan languages as well) are usually deleted. The later analogic extension of a labialized variant to some unstressed contexts would be unsurprising, especially once the semantic differentiation set in. Since the Colville-Okanagan form *p'əlk'mstím* in (4c) suggests that the root originally had weak stress, however, this explanation will work only if Montana Salish and its sister dialects, and also Columbian, had developed a strong-stress variant (with *ú*) before the sporadic labialization change and before the regular palatalization change.

Note that identical formations, with different glosses, occur both in the modern language and in Mengarini et al. 1877–1879: modern *esp'ílč'* 'it's turned over, it's upside down' (cf. Mengarini et al.'s *es-pilch* 'it is turned over') vs. modern *esp'úlk<sup>w</sup>'* 'it's rolled up, all twisted up (in a circle)' (cf. Mengarini et al.'s *es-pólko* 'it is wrapped around (referring to the wrapper, not to the object wrapped)', and cf. (5b)). These identical patterns, together with the matching Spokane forms, show that the variation is old within the Montana Salish-Kalispel-Spokane dialect complex.

### 3.4 The root doublet *č'út/q<sup>w</sup>ót* 'half'/'across'

Like *p'lč'/p'úlk<sup>w</sup>'*, this pair of forms differs in more than one phonological feature. Here the vocalism is the same in both, allowing for the automatic lowering of *u* to *o* after a uvular, but the initial consonants don't fit etymologically: *č'* should derive from an original velar stop, not a uvular stop. The meanings, though not identical, are close, so grouping them together is reasonable on semantic grounds. Kalispel has the same two forms and meanings as Montana Salish, and Thompson has only a uvular-initial root with the same meanings as the two Montana Salish/Kalispel variants. But since Spokane has a labialized velar instead of a labialized uvular in the second variant,<sup>14</sup> and since Colville-Okanagan has only a labialized velar form with both meanings while Columbian has a labialized velar in the meaning 'half', it seems reasonable to analyze the two forms in Montana Salish as belonging to a single root morpheme. This fits the PS analysis in Kuipers 2002, where *\*q<sup>w</sup>u?* (with added *-t* in Interior Salishan) is glossed as '(other) side, half, companion' (94). Kuipers also says that Proto-Southern Interior Salish (PSIS) had *\*k<sup>w</sup>ut* – which, however, doesn't account either for the initial *č'* in some forms or for the *q<sup>w</sup>* in others.

<sup>14</sup> Carlson and Flett treat the two forms as separate roots, however.

- (6) a. MSA: *s-č'út* 'half'; *s-č't=élc'e?* 'side' (with =*élc'e?* 'body'); *s-č't-m=sqélix<sup>w</sup>* 'half-breed' (with =*sqélix<sup>w</sup>* 'person'); *nis-q<sup>w</sup>ót* 'across the river'
- b. Kal: *č'út* 'half'; *s-č'ət-əm=sqélix<sup>w</sup>* 'half-breed'; *nis-q<sup>w</sup>ú* 'the opposite side of a river'
- c. Sp: *s-č'út-m* 'half'; *s-č't-m=sqélix<sup>w</sup>* 'half-breed'; *č-s-k<sup>w</sup>t=éčst* 'one hand' (with =*éčst* 'hand')
- d. Cv: *sk<sup>w</sup>út* 'one side, across, half'; *n-sk<sup>w</sup>t=ink* 'half the ribs'; *n-sk<sup>w</sup>út* 'across the river'<sup>15</sup>
- e. Cm: *sə-k<sup>w</sup>t/s-k<sup>w</sup>út* 'half'
- f. Th: *s-q<sup>w</sup>út* 'one, other side (of something), half'
- g. Sh: *s-q<sup>w</sup>út* 'half'

It is simplest to posit a velar as the initial proto-language consonant in this root, at least for PSIS, because fewer changes are required to derive the modern forms from a velar than from \**q*' or \**q<sup>w</sup>*. And since the root vowel is rounded it is probably better to reconstruct a nonlabialized initial velar, with assimilatory labialization in some of the languages, than to posit an original labialized velar with partial rounding dissimilation in Montana Salish and its sisters: the Montana Salish tendency (at least nowadays) is to labialize dorsals before rounded vowels, and I have found no clear examples of delabializing changes in this environment. This analysis accounts for the presence of labialized stops in some Montana Salish and Kalispel forms, but of course not for the fact that they are uvular rather than velar. They may be relics of the PS form, or they may be later developments within Montana Salish/Kalispel. Mengarini et al. have a form spelled *niskót*, which probably indicates a labialized uvular, although it could represent a glottalized labialized velar; a nonglottalized labialized velar form would be spelled *niskút*.

Finally, note that the two variants have apparently become at least partially independent in Montana Salish, with clear semantic differentiation: so far I have found *q<sup>w</sup>ót* only in the construction *nisq<sup>w</sup>ót* 'across the river', though it may also be used in constructions like 'one hand', as in Spokane.

### 3.5 The root *xíq* 'rub'

Here there is only one possible doublet to complicate the picture in Montana Salish and its sister dialects, and Columbian also has two uvulars (though the second one is glottalized, unlike all the other cognates except the possible

<sup>15</sup> Mattina (1987: 174) treats *sk<sup>w</sup>út* as the root, rather than as a root *k<sup>w</sup>út* preceded by the nominalizing prefix *s-*. Similarly, Mengarini et al. list the entire word *schut* (*sč'út*) as a root. This analysis clears up some oddities in derivatives from the root, but it may create others, at least for Montana Salish. My current analysis, like Carlson and Flett's for Spokane, segments off the *s-*.

Clallam form). But the comparative picture is nevertheless puzzling, because both Colville-Okanagan and Thompson have initial and final velars in what is surely a cognate root, and Clallam has two labialized uvulars in a root that may be cognate.

- (7) a. MSa: *xíq-n* ‘I rubbed it’; ? *es-ščí-č=šn-i* ‘he’s shuffling’,<sup>16</sup>  
 b. Kal: *xíq-n* ‘I smear it’  
 c. Sp: *xíq* ‘to rub; rasping or rubbing sound’: *xíqn* ‘I rubbed it’  
 d. Cm: *xíq’-* ‘rub’  
 e. Cv: *xki-st* ‘rub against something’; *c-xk-xk-ílx* ‘make noise rubbing’; *n-xik-xk=cn* ‘purple aster, Aster conspicuus’ (lit. ‘shuffling noise’)  
 f. Th: *xik* ‘rub something (e.g. with grease), smear, anoint’; *xík-mn* ‘substance used for rubbing’  
 (g. Cl: *x<sup>w</sup>íq<sup>w</sup>* - ‘rub’)

If Proto-Interior Salish had either two velars in this root or two uvulars, then – leaving aside the question of the dubious Clallam cognate – the odds are even on the available evidence. In each case two independent changes would be required: either two proto-language velars changed to uvulars independently in two Southern Interior languages – Columbian and the immediate ancestor of Montana Salish (mostly), Kalispel, and Spokane – or two proto-language uvulars changed to velars independently in Northern Interior (for the Thompson root) and in Southern Interior (for Colville-Okanagan). But there is no reason to conclude, from this set of data, that the proto-language had root consonants in the same series. If the original root was heterogeneous, as the possible Clallam cognate would suggest, then the Montana Salish development could be explained as a consonant harmony process, bringing the root’s structure into conformity with the vast majority of the language’s roots, in which velars and uvulars do not co-occur. The possible variation in MSa (that is, assuming that the ‘shuffling’ word is connected with *xíq*) would be a case of leveling in both directions, with semantic differentiation of the competing uvular and velar forms.

This proposal has the disadvantage of requiring changes in all the daughter languages – leveling in favor of the uvular in Montana Salish (mostly) and its sister dialects plus Columbian, and leveling in favor of the velar in Colville-Okanagan and Thompson. It also rests on the premise that roots with mixed

<sup>16</sup> I’m not certain that *es-ščí-č=šn-i* belongs with this root. Semantically it fits well enough, and phonologically the root form *ščí* matches the Colville-Okanagan and Thompson forms, with regular palatalization of the two velars. The metathesis from a CVC root to a CCV stem is common in MSa. The Colville-Okanagan word referring to a shuffling noise provides at least weak support for this connection.



dorsal series are dispreferred in the other languages as well as in Montana Salish (see §2 above for discussion), but that situation does seem to obtain in other Salishan languages besides MSa. The advantage of the heterogeneous-protoform hypothesis is that it provides a phonetic motivation for all the changes; if the original root was homogeneous, there is no obvious phonetic motivation for change in either direction. This is not, of course, a strong argument against a homogeneous root; there is no really clear phonetic motivation for any of the apparent velar/uvular alternations discussed in this paper, and this is to be expected if the alternations are sound-symbolic in origin.

### 3.6 The root *čcax* ‘hurt; sick’

I have few examples with this root, and I have found clear cognate roots only in Colville-Okanagan and Columbian. I call *čcax* a root in spite of its unusual two-obstruent initial cluster – unusual because the canonical root form in MSa is CVC, with variants C(R)VC and CV(R)C, where R may be any resonant consonant. It is quite possible that the initial *č* is actually a prefix, historically if not synchronically; there is a common locative prefix *č-* that has abstract as well as concrete functions.

- (8) a. MSa: *es-čcax=éls-i*  
 STATV-hurt=feelings-INTR.CONT  
 ‘hurting inside, sick (in one’s mind)’  
*čc’ax<sup>w</sup>élsi*  
 ‘sick in one’s stomach (e.g. from heartburn)’
- b. Cv: *t-kcx=íls* ‘be hurting, suffer’ (*t-* is a resultive prefix)
- c. Cm: *kicx-* ‘suffer’

The oddity here is not the first root consonant, which shows the expected correspondence – velar in Colville-Okanagan and Columbian, alveopalatal in Montana Salish. Rather, the problem is with the final fricative: it is velar in Colville-Okanagan and Columbian but varies between a plain uvular and a labialized uvular in Montana Salish, in the very same word. Another oddity is that the root *čcax* seems to alternate with *čtax*, as in *es-čtax=éls-i* ‘he’s hurting, suffering’; and compare *čta?xéls* ‘it aches, it hurts’ in Spokane, which has no form that corresponds directly to Montana Salish *čcaxéls*. The Spokane form fits with Proto-Salish *\*tax* ‘wrong, bitter’ (Kuipers 2002: 107), which means ‘sour, sharp to taste’ in Spokane and Coeur d’Alene – a good semantic fit for ‘heartburn’.

The Montana Salish word is phonologically peculiar in two other ways as well: one variant has a glottalized affricate *c’* instead of the expected *c* (as in the other variant and in Colville-Okanagan and Columbian), and both variants have

an unexpected unstressed vowel.<sup>17</sup> The word needs to be rechecked, because at least once I thought I heard a pharyngeal fricative next to the root vowel. If there is one, it would account both for the unstressed [a] (impressionistically, pharyngeals are often realized phonetically in Montana Salish as unstressed non-high back vowels, with rounding depending on whether the pharyngeal is labialized or not) and for the glottalization of *c'* (in Montana Salish, etymological pharyngeals have sometimes been replaced by a glottal stop, which in turn may merge with a preceding affricate). A pharyngeal might also account for the uvular articulation of the root-final fricative, because pharyngeals, like uvulars, have the potential for backing and lowering a neighboring dorsal. The Colville-Okanagan cognate has no pharyngeal, however, and with so little data it isn't possible to determine whether Colville-Okanagan lost a pharyngeal or Montana Salish added one. One might think it would be easier to explain the loss of a root-internal pharyngeal than the unmotivated addition of one, but Colville-Okanagan has what Mattina (1987) calls 'intrusive pharyngeals', and Montana Salish may have a similar phenomenon; so that's a possible source for an added pharyngeal consonant. In any case, this suggestion requires the presence of a pharyngeal, which isn't certain. If there is no pharyngeal in the Montana Salish root, I have no explanation for the velar/uvular mismatch between Montana Salish and Colville-Okanagan. And even with the pharyngeal I have no explanation for the labialized variant in Montana Salish, because if there were a labialized pharyngeal in the root the unstressed vowel would be *o*, not *a*.

### 3.7 The root *l'áq* 'thin'

This root seems to come from an original velar in Proto-Southern Interior Salish, because the uvular stop appears only in the Montana Salish-Kalispel-Spokane dialect complex, and Spokane has a variant that reflects an earlier velar stop that underwent the regular palatalization change. The initial *l'* in this root is probably secondary; glottalization of resonant consonants is a regular part of the diminutive morpheme. The glottalization in Kalispel *q'* also looks secondary.

- (9) a. MSa: *i t-l'l'áq* 'it's thin' (*t-* is a diminutive prefix); *sc-n-ll'q'l'áq=lex<sup>w</sup>* 'hot-cakes' (the lexical suffix means 'earth, ground')

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<sup>17</sup> In Montana Salish, unstressed vowels generally disappear. The major exceptions are *e*, which often remains even in unstressed positions; *i* and *u* when they are syllabified from underlying /y/ and /w/; *a* and *o* when they are syllabified from an underlying (or, in some cases, etymological) pharyngeal, non-labialized or labialized, respectively; and *i* when it results from the rule that changes /n/ or /m/ to [i] before *s* and sometimes before other fricatives as well (this rule is morphologized, occurring even when certain *s*-less morphemes intervene between the nasal and the triggering *s*). Other unstressed vowels sometimes surface as [ə] or, especially after nonlabialized or labialized uvulars, as [a] or [o].

- b. Kal: *i ʔ'áq* 'thin (of clothes, sheet, etc.)'
- c. Sp: *l'l'éč (l'l'áq)* 'it's thin'; *n-l'l'éč=leʔx<sup>w</sup>* 'thin bread'
- d. CdA: *l'il'íč* 'half'
- e. Cm: *l'l'ák* 'thin' (pl *l'əkl'ák*)

The Spokane alveopalatal variant is the only surviving relic of the original velar consonant in the dialect complex. Innovation of a root-final uvular can be posited for the parent of all three dialects, with analogic leveling in favor of the uvular variant completed everywhere except in Spokane. There is no visible context that might promote retraction of an original velar stop. Sound symbolism is a reasonable explanation for this irregular change, given that the secondary glottalization of a resonant is often sound-symbolic in these languages.

### 3.8 The root *č'éx<sup>w</sup>* 'dry'

The initial consonant of this root is not problematic, but the final consonant may be. Cognates exist in most (possibly all) of the Interior Salishan languages and also in some of the coastal languages. (Kuipers connects this root with Proto-Salish *\*k'ay*, *\*k'ay'-x<sup>w</sup>* 'dry out, wither' (2002: 43–44), and he may well be right, but I won't discuss the possible connection here.)

- (10) a. MSa: *č'éx<sup>w-n</sup>* 'I dried it'
- b. Sp: *č'éx<sup>w-n</sup>* 'I dried it'
- c. Cm: *k'x<sup>w-íkn</sup>* 'thirsty, very dry'
- d. Th: *k'ex-m* 'dry something'; *k'ex<sup>w</sup>=úseʔ* 'dried berries' (the lexical suffix means 'berry')
- e. Sh: *k'ex-m* 'to dry meat'
- f. Li: *k'ax* 'be dry'; *k'ax-ləx* 'dry oneself'
- g. Squa: *č'iwʔx<sup>w</sup>, č'ix<sup>w</sup>* 'dry'
- h. Tw: *č'iwʔəx* 'dry'
- i. Chi: *c'éyx<sup>w</sup>* 'dry'

Thompson and Thompson (1996: 102) say that the labialized variant of the Thompson root may be a back-formation from the pronunciation of the derivative with the *u*-initial lexical suffix for 'berry'. If the variant *k'éx* is indeed the basic form of the Thompson root morpheme, then it is possible (though not certain) that the proto-language also had a final nonlabialized velar fricative; and if it did, then Montana Salish and Spokane have also labialized the final fricative – but everywhere, not just in a labializing context. Given the mix of labialized and nonlabialized root-final fricatives in the various languages, this issue can't be

resolved, though of course the final consonant in Montana Salish could easily have occurred in labializing contexts from which an innovative labialized variant could have spread analogically to replace an original nonlabialized fricative.

### 3.9 The root *yšú* ‘low; below’

This root has a labialized velar fricative in most Interior Salishan languages – at least in the Southern Interior languages Colville-Okanagan, Coeur d’Alene, and Columbian and the Northern Interior languages Shuswap and Lillooet – and in several Coast Salishan languages as well; Kuipers reconstructs the Proto-Salish root as *\*yəx<sup>w</sup>* (with a variant *\*ləx<sup>w</sup>*) ‘to descend, drop’ (2002: 133). By contrast, the Montana Salish-Spokane-Kalispel forms and that of the Northern Interior language Thompson instead seem to reflect an original nonlabialized velar fricative:

- (10) a. MSa: *k<sup>w</sup>ʔ-išú-t*  
 under-low-STATV  
 ‘under, beneath’  
*n-išú-t* ‘deep’ (*n-* ‘in’)  
*iš-ílš-m*  
 low-MOTION-ANTIPASSIVE  
 ‘he lowered (something)’  
*n-iš-t=úlex<sup>w</sup>* ‘underground’ (= *úlex<sup>w</sup>* ‘ground’)
- b. Kal: *tijšú tu cítx<sup>w</sup>*  
 it’s.low PARTICLE house  
 ‘the house is low’  
*č-ən-iš-t=úleʔx<sup>w</sup>*  
 ‘inside of the earth, the underworld’ (*č-* ‘to’)
- c. Sp: *čʔ-išú-t* ‘it’s under’; *n-išú-t* ‘it’s deep’; *n-iš-t=úleʔx<sup>w</sup>*  
 ‘basement’
- d. Cv: *yáx<sup>w</sup>-t* ‘dropped’; *nix<sup>w</sup>út* ‘inside’; *kʔ-ix<sup>w</sup>-út* ‘what’s underground’; *n-ix<sup>w</sup>-t=úlaʔx<sup>w</sup>* ‘below the ground, pit’
- e. CdA: *dex<sup>w</sup>* ‘lower, descend, dismount’
- f. Th: *zəx* ‘go lower’; *zix* ‘go lower gradually’; *zix-m* ‘to lower (something) gradually’
- g. Sh: *yux<sup>w</sup>-* ‘descend’

In the case of Colville-Okanagan, at least, the presence in several forms of a rounded vowel *u* after the fricative would make labialization of an original plain velar fricative a reasonable hypothesis (in which case the irregularity would be in the Colville-Okanagan development rather than in the nonlabialized velar reflexes). But the presence of *x<sup>w</sup>* in most of the other languages, where (at least

in the forms I have) there is no following rounded vowel, weakens any such hypothesis. The possibility that Montana Salish and its sister dialects delabialized an original labialized fricative seems phonetically unmotivated – dissimilation before a rounded vowel is not reliably attested in any of these dialects, as far as I know – but I can think of no other explanation for a delabializ-delabializing change. In any case, Thompson would presumably have to have undergone delabialization of this root independently, and this makes delabialization even less appealing: two independent changes with no visible motivation are even less likely than a single unmotivated change.

## 4 Conclusion

No general conclusions about the developments discussed in this paper suggest themselves: all the changes are irregular, sometimes with and sometimes without plausible conditioning factors present. Two points are worth mentioning, however. First, there are two morphemes in which Montana Salish and Kalispel are like each other and unlike Spokane ( $k^w\acute{t}$  vs.  $\acute{c}^t$  in §3.2 and  $l^{\acute{a}q}$  vs.  $l^{\acute{e}\acute{c}}/l^{\acute{a}q}$  in §3.7), and none in which Spokane groups with one of the other two dialects in opposition to the third. This is one of several pieces of evidence indicating a closer linkage between Montana Salish and Kalispel, with Spokane slightly more distant from both of them.

Second, as noted above, irregular labialization of plain velars and velar/uvular mismatches are not unique to Montana Salish. Kuipers (2002), for instance, discusses examples of both types (pp. 7 and 6, respectively); as we saw in §2, velar/uvular alternations have, or had, sound-symbolic value in a number of Salishan languages.

One possible case of labialized/nonlabialized velar variation arising already in Proto-Salish is the lexical suffix doublet  $=m\acute{i}\acute{s}/=m\acute{i}x^w$  ‘person’. As Kinkade observes (1993: 164), both forms must be reconstructed for Proto-Salish, because a number of the modern languages have reflexes of both; typical examples are Montana Salish  $s-t^{\prime}i\acute{c}^{\prime}=m\acute{i}\acute{s}$  : Colville-Okanagan  $s-t^{\prime}a?k^{\prime}=m\acute{i}x$  ‘virgin’ and Montana Salish  $il=m\acute{i}x^w-m$  : Colville-Okanagan  $ylm\acute{i}x^w-m$  ‘chief’ (Mattina analyzes  $m\acute{i}x^w$  as part of the root, but Kinkade 1993 convincingly analyzes this word as having the suffix  $=m\acute{i}x^w$ , at least etymologically). As with some of the examples discussed above, there is no visible reason why an original  $*=m\acute{i}x$  should develop an allomorph  $*=m\acute{i}x^w$ , with subsequent analogic spread of the new variant and then a morphological split into separate morphemes, or vice versa. However, a word-final consonant will sometimes be followed by a rounded segment – for instance, in Montana Salish, the clause connector  $u$  ‘and, but’ – so that conditioning environments for labialization would certainly have been present in some utterances. I do not suggest that any such explanation for the existence of two separate suffixes with similar forms and identical meanings can be established, now or in the future. My point, ra-

ther, is that the possibility should be considered in this and other cases of morphemes that differ only in labialization; and, more generally, it is worth comparing cognates within Salishan to see just how widespread the phenomena of sporadic labialization and uvular/velar mismatches might be.

From a broader historical perspective, paradoxically, the analysis of these irregular velar developments in Montana Salish and some of its sister languages may shed light on the nature of regular sound change. A crucial observation is that none of these irregularities involve uncompleted sound changes: there is no residue in Montana Salish of Proto-Salish nonlabialized velar obstruents. All the irregular developments resulted in sounds that already existed in both Proto-Salish and Montana Salish. The irregularities are therefore invisible until relevant MSA words are compared with cognates in closely-related languages. In some cases a plausible explanation for an irregular development can be suggested, but in no case can an explanation be established with any confidence.

## Abbreviations

Languages (subclassification in parentheses): CdA = Coeur d'Alene (S. Interior), Chi = Chilliwack (Coast/Central), Cl = Clallam (Coast/Central), Cm = Columbian (S. Interior), Cv = Colville-Okanagan (S. Interior), Kal = Kalispel (S. Interior; dialect of the same language as MSA), MSA = Montana Salish (S. Interior), PIS = Proto-Interior Salish, PS = Proto-Salish, PSIS = Proto-Southern Interior Salish, Se = Sechelt (Coast/Central), Sh = Shuswap (N. Interior), Sp = Spokane (S. Interior; dialect of the same language as MSA), Squa = Squamish (Central/Coast), Th = Thompson River Salish (N. Interior), Tw = Twana (Coast/Central), UChe = Upper Chehalis (Tsamosan)

Grammatical morphemes: CONT continuative, DER.TRANS derived transitive, FUT future, INTR intransitive, NOM nominalizer, pl plural, POSS = possessive, REDUP reduplicative, sg singular, STATV stative, SUBJ subject, TRANS transitive

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## 14

## Towards an understanding of language distribution in the Tani area: Social organization, expansion and migration

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### 1 Introduction

Several scholars have argued for a causal relationship between large-scale adult second language acquisition and a ‘simplified’ or ‘creoloid’ language structure, which lacks many grammatical ‘extras’ like gender, agreement, and so on (McWhorter 2007, Trudgill 2009, among others). This idea has entered the Tibeto-Burman literature beginning with Burling (2007), who discussed cases in which creoloid languages are used as *lingua francas* in the Tibeto-Burman area, and become reshaped as a result of this use. DeLancey later focused Burling’s argument on the process of state formation, arguing that the spread of *lingua francas* in the context of state formation in the Tibeto-Burman area led to the simplification of languages like Tibetan, Proto-Boro-Garo, and Old Chinese as these languages were acquired by adults in large subject populations. Meanwhile, a more archaic morphological type is retained by many hill languages such as Kiranti, rGyalrongic, Kuki-Chin and Tangsa, whose speakers remained basically independent of states until well into the modern era (DeLancey 2010, DeLancey 2011, DeLancey 2012, DeLancey 2013). These are compelling hypotheses, since they have the potential to explain structural differences among Tibeto-Burman languages as resulting in part from the social histories of human populations.

But there are also some problems. For example, the Tani languages, which are primarily spoken in a remote and mountainous section of the central Eastern Himalaya, mostly exhibit the same creoloid language profile that Boro-Garo and Tibetic languages have. According to Post (2015), the proto-language Proto-Tani looks like it has an even more strongly creoloid profile, which closely resembles languages of the Jingpho group, discussed by Burling and DeLancey. However, there is no history of state formation in the Tani area, and in fact,

there is very little evidence of even low-intensity state penetration into the Tani area until very recent times (Post 2011).<sup>1</sup>

If that is the case, then what *can* explain the creoloid structure of Tani languages? This chapter will take some initial steps toward an explanation. In it, I will argue that an explanation can be found in the social organization of Tani groups. Specifically, I will argue that the segmentary lineage system, marriage practices, and agricultural system of Tani speakers conspired to create conditions that enabled and encouraged Tani languages to spread, simplify, diversify, and converge. In §2, I will first discuss the expansion of Tani groups and languages in their area. §3 is the chapter's main section, and discusses the adaptive social strategies of Tani groups in terms of social units (§1.1), extensions of social units (§2.1), the process of expansion (§3.1), agricultural practices (§4.1) and trading networks (§5.1). §4 discusses some linguistic consequences, and §5 concludes the presentation.

## 2 Tani expansion

Geographically, the Tani speakers are spread across three main river valleys: the Kameng, the Subansiri and the Siang in the highlands of Arunachal Pradesh. In Assam, Tani speakers have followed the Siang and its tributaries and settled across a large swathe of the Brahmaputra floodplain. This spread forms a neat chain of dialects, forming a near-continuum in terms of mutual intelligibility. Very few Tani languages are mutually unintelligible with any other Tani language. Apatani and Tangam are relatively difficult to understand for most speakers of other languages, although at least some levels of mutual intelligibility are generally achieved. Only Milang, which is not mutually intelligible with any other Tani language, seems to form an exception, which Post and Modi (2011) explained as possibly being due to a substrate of unknown origin.

These similarities among the Tani languages, and their status as a dialect chain, have led Sun (1993) and Post (2012) to suppose that the time-depth of Proto-Tani is relatively shallow, and that the expansion of Tani languages in the Tani area has probably been relatively recent. In other words, the Tani languages constitute a small 'spread zone' in the sense of Nichols (1992).

The settlement pattern of Tani villages varies somewhat, from the large and compact villages of large river valleys or plateau areas to smaller and more

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<sup>1</sup> There are of course modern-day political claims that refer to historical claims of Tibet-an suzerainty over the Tani area. Huber (2012) discusses historical interactions between Western Tani groups and Tibetans along the modern-day border, and makes it clear both that the interactions were not of a state-subject nature, and that the interactions were limited to the immediate border area. Speaking as a native of this area myself, and having travelled widely in the Tani area and spoken to many elders, I can further assert with confidence that no cultural memories of significant state penetration of the Tani area exist until the arrival of the British in the 19<sup>th</sup> century.

dispersed settlements in the innumerable hills and cul-de-sacs interspersed among them. Some notable examples of large, compact villages in the Tani area include the Apatani valley of Ziro, where at least 800 houses were found in one village (Blackburn 2010: 24). Minyong settlements in the Siang and Siyom areas often contain between 250 and 450 houses, while around 300 and above houses are found in the Milang villages of Dalbung and Milang (Holon), and in the Padam village of Damro (author's field notes). It is of course possible to find much smaller villages of no more than ten or twenty households interspersed throughout the Tani area in modern times, especially in the Nyishi-dominated areas of the Kameng-Subansiri region. In general, however, the tendency is for Tani groups to maximize the population potential of a given area, to the extent that this population can be supported by the area's environment.

This is not necessarily the case of all groups found in the broader Eastern Himalayan region in which the Tani are found. For example, in the Dibang river valley, to the immediate east of the Tani area, an Idu village with 'a dozen houses is considered to be a large village' (Bhattacharjee 1983: 34). Unlike the Tani, the Idu are widely dispersed and tend to live in small, scattered settlements of only a few houses. Similar things can be said about the Puroik, to the immediate west of the Tani area, who traditionally live in small and dispersed settlements (Stonor 1952: 948). Further west, we find the Hruso and Miji who, while traditionally considered to be powerful groups (Mackenzie 1884), nevertheless are found in areas which are comparatively much more limited than the Tani area is. These differences in settlement patterns are not exclusively dictated by the environment. Although some river valleys or plateaus are certainly much larger than others are, and can potentially support a larger population, the areas immediately surrounding the Tani area are much more similar to the Tani area than they are in any way different. Furthermore, it should be noted that all of the groups discussed above – the Aka, Miji, Puroik, Tani-Milang, and Idu – have an approximately equivalent material culture, and no group traditionally had relatively more privileged access to guns or other weapons, armies, or significant alliances with large neighbouring states. Finally, as I will also discuss below, we should note that the productive strategies of these groups – shifting rice cultivation mixed with vegiculture, limited animal husbandry and hunting and foraging – are approximately equivalent. Certainly no group stands out as having had exclusive access to a particular productive technology in earlier times.

If all of this is the case, then what is it about the Tani that is so unique in this area that their language was able to spread with such comparative speed and to such a comparatively great extent within their present area? Although this is a large question which implies a potentially complex answer, I will argue that at least one promising source of explanation can be found in the adaptive nature of Tani social organization.

### 3 Adaptive social strategies

#### 3.1 Social units

All Tani groups exhibit segmentary lineage systems.<sup>2</sup> The main organizing principle is that of a patrilineal line of descent. All Tani groups recognize a patrilineal line of descent, and all Tani groups practice exogamy in relation to the patrilineal line of descent. Depending on the group, the precise details of organization will differ – often considerably – in terms of levels of organization and their social functions. However, the basic principle of exogamy in relation to a patrilineal line of descent is always maintained.

Many (perhaps most) Tani groups recognize at least two ‘levels’ of social organization in terms of descent groups, which we will here call ‘clan’ and ‘sept’. The clan is understood as a common patrilineal descent group, which shares a common ancestor. Marriage within groups which are recognized as clans is strictly forbidden perhaps throughout the Tani area. Clans in turn divide into septs, which in essence function as extended families. In modern Tani society, individuals’ surnames are often derived from the name of their sept; however, this is far from universal.<sup>3</sup> For example, most individuals in the Galo tribe have surnames which correspond to their sept name, such as *Ribaa*, *Rinaa*, *Baasar*, and so on. A sept such as *Ribaa* functions as an extended family, and while this particular sept is quite large – certainly numbering in the hundreds of individuals – *Ribaa* will unhesitatingly refer to one another as brothers, sisters, etc., support one another in disputes, and reciprocally perform a wide range of social and ritual functions. Although *Rinaa* are somewhat removed from the *Ribaa* in terms of strict family relations, by virtue of their assumed common descent within the same clan (in this case, sons of the legendary common ancestor *Ato Karko*), marriage between these septs is strictly prohibited (cf. Figure 1 in §3.2).

Although the ethnographic sources on Tani groups are relatively meagre and sometimes of questionable accuracy, we can at least see that similar types of arrangements are found in most groups. For example, among the Apatani, ‘the society as a whole is divided into clan (*halu*), sub-clans (*tulu*), constituting

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<sup>2</sup> There is a considerable literature treating the nature and subclassification of segmentary lineage systems, which I am not in a position to review in its entirety here (a good general account may be found in Barth 1973). A fully contextualized study of Tani lineage systems has yet to be conducted, and in fact awaits adequate ethnographic studies of the individual Tani groups.

<sup>3</sup> The practice of using fixed, permanent surnames, or ‘titles’, appears to be a recent innovation in the Tani area, and surnames can have many sources depending on the group, sub-group or area in question. Some surnames derive directly from a sept name, while others may derive from the name of an ancestor, a locality, or a clan grouping, and still others appear to have been deliberately constructed. A full study of Tani surnames, their motivations, structures and sources would be worth conducting, however it falls beyond the scope of this chapter.

ritual units and lineages (*uru*) whose members reckon their presumed or real kinship and common ancestry through the paternal line' (Bouchery 2015ms: 2). Similarly, among the Bori, one of the Eastern Tani groups, *halung* refers to both clan and lineage (Kumar 1979: 114).

It is common to find clan-based societies throughout the hill groups surrounding the Tani area, including among non-Tani groups such as the Hruso, Idu, Bangru, Puroik, etc. However, the practice of tracing clan lineages becomes particularly pronounced among the Tani, who claim to have oral genealogical records which illustrate the emergence of every one of their septs as the offspring of a given ancestor. The genealogical records of the Tani function as a means of clan organization and serve to maintain social cohesion, especially given the relatively large size of most Tani groups.

At the same time, it is clear that this system is subject to change and even deliberate manipulation. From time to time, it is noticed that the clan records or sept nomenclatures of one group do not correspond to the records recounted by another group, meaning that conflicts can naturally arise. Discussions, disputes, and even entire conferences are regularly held in the Tani area to attempt to resolve such conflicts, and large books and compendia of the results are regularly published (Geiyi Ed. undated, All Modi Welfare Society 2006). Nevertheless, as a general framework, the genealogies of Tani groups serve as a collective source of social cohesion and are regularly referred-to when making group decisions in daily life (for example, when maintaining common clan hunting and fishing grounds, and when establishing ownership over animals such as the semi-domesticated mithun [*Bos frontalis*]).

However, Tani groups also recognize social units above the clan. This is the topic of the next section.

### 3.2 Extensions of social units

One very notable feature of Tani social organization is the tendency to form alliances, or groupings above the level of the clan. For example, among the Minyong, two macro-groupings are generally recognized, resembling a moiety system: the *kumiñ* and the *kuuri* (Roy 1960: 210). Apatani society is reportedly also bifurcated into the *Dübo asso* and the *Tin asso* (von Fürer-Haimendorf 1980: 78). To understand how these social units come about, it will be useful to understand the organization of Tani settlements.

In traditional Tani societies, clan members lived together with other clan members in a cluster of houses, sharing the resources and labour responsibilities of their locality. Among most groups, such 'clan neighbourhoods' would also have at least one community structure of some kind, such as the Milang *ñaptək*, Apatani *lapanj*, Padam Adi *muusup* or Minyong Adi and Galo *dəərə*, which were (depending on the group and the type of structure) often the traditional foci of ritual events and group meetings, and often also served as youth dormitories. These clan neighborhoods were typically located in close proximity to

one another within a given area, such as a mountain hillside or plateau adjacent to water sources and croplands. Accordingly, such clusters of clan neighbourhoods give off the appearance of a single settlement, i.e. a ‘village’. And indeed, in the initially British and later Indian administrative contexts, they have been assigned labels as villages, and are treated as unitary settlements for the purpose of administration. However, it is often remarked that Tani speakers will lack a word to correspond to ‘village’ or other types of large scale social organisation. As Blackburn (2010: 27) writes, ‘in everyday conversation, people often refer to a clan neighbourhood rather than the composite village of which it is a part.’ However, there are terms to refer to clan neighbourhoods, such as Apatani *lem-ba* or Milang *yimbu*, which is often and incorrectly translated as ‘village’ (for example in Post and Modi 2011).

In terms of decision-making, each clan neighborhood is effectively independent. Thus there is no larger, hierarchical structure such as a ‘tribe’ or a corresponding ‘chief’ in traditional Tani societies, a fact which early British writers were struck by. Arthur Bentinck, in the introduction of his early 20<sup>th</sup>-century travelogue ‘The Abor expedition’, reports his bewilderment about how each settlement seemed to function independently. He writes,

though I have used the term Abors, it is name of which Abors themselves are ignorant and for which they have no equivalent. it covers a number of tribes, each of which is loosely coherent, generally by its connection with some parent village, but not otherwise recognizing any community of interests or policy. The real unit, as the nature of the country requires, is the village, and each village acts independently. (Bentinck 1913: 100)

Bentinck’s observation was only partially accurate, however. Decision-making at the level of the ‘village’ in Tani societies traditionally required negotiation among clan groups and alliances, and did not reflect the perceived authority of any village hierarchy or ‘headman’, such as those the British ultimately themselves installed for their own administrative purposes (i.e. the non-native ‘Gam bura’ system). An example of such clan solidarity during inter-group disputes is mentioned by von Führer-Haimendorf:

J. H. F. Williams mentions that in Riga, the largest Minyong village, political factions coincided with these two divisions [i.e., *Kuumiñ* and *Kuuri*] and that in their backing of the rival parties of the neighboring Karko tribe, the Minyongs were split according to their moieties (to which Williams refers as ‘families’). (von Führer-Haimendorf 1954: 589)

Critical to an understanding of Tani social organization is the concept of the ‘clan alliance’. Clan alliances can be formed for several reasons and serve several types of purpose, many of which are natural extensions of the functions of clans themselves. For example, clan groups can form an alliance to share responsibility over a community house, to share reciprocal labour obligations, and to share territories and resources such as hunting grounds and bamboo groves.

Most importantly however, clan alliances are formed for mutual defense against attacks and raids by hostile groups. As such, they are an absolutely critical aspect of group survival in the Tani area, and are valued correspondingly.

For example, the *Moodə* of the Holon area of modern-day Milang village, although commonly referred to as a clan, is in fact an alliance of several clans, such as *Kəəba*, *Kəətin*, *Maayom*, etc. These clans are individually comprised of multiple exogamous septs, but share marriage relations among one another. However, *Moodə* functions in many ways like a clan does, for example in cohabitating within a particular locality in Milang village, in sharing the responsibility of defending one another in disputes, and in sharing several types of resource. In this way, we can see that the clan alliance functions for many practical purposes just like a clan does; however, it is not a clan in the strict sense of sharing common ancestry within a patrilineal lineage (Figure 1).

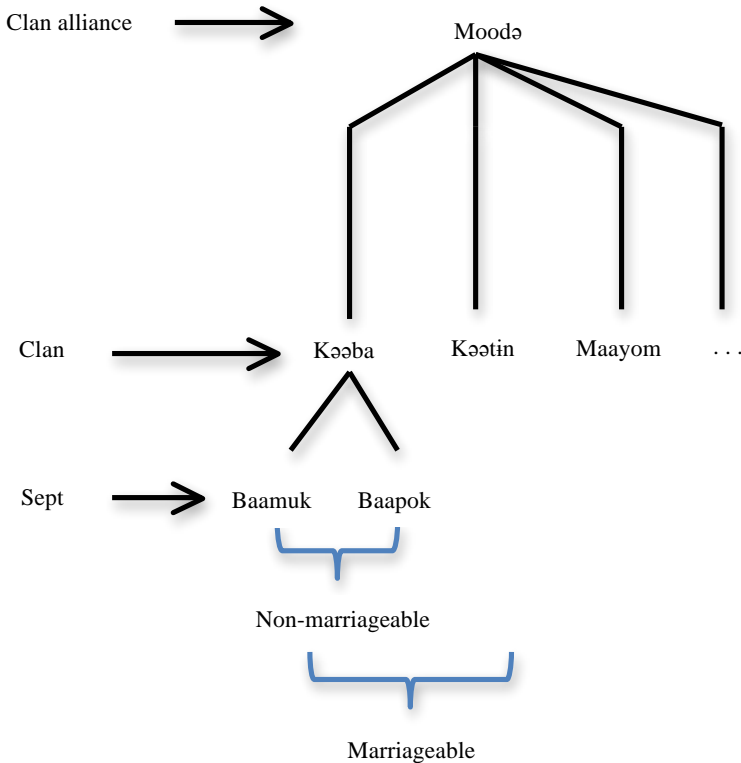


FIGURE 1 – Tani social organization (example from Milang)

Furthermore, clan alliances can themselves form larger clan alliances further afield. For example, the *Moodə* clan alliance of the Milang people has alliances with the *Boraŋ* and *Yiiraŋ* clans of the neighbouring Padam group, as well as with the *Saaro* and *Meeloŋ* clans among the Minyong group, the *Paadun*, *Paanaŋ* and *Tagi* clans among the Panggi group, the *Badu* and *Taaram* clans of the Komkar group, the *Təksəŋ* clan among the Shimong group, and the *Mooyon* and *Aapum* clans among the Paasi group. Individuals of each of these clans or clan groupings will refer to one another as *ani-abiŋ* (in Adi), i.e. ‘siblings’, and will gain safe passage and protection when visiting one another’s areas, as well as mutual defense in times of conflict. Furthermore, such clan alliances will advocate for one another in cases of dispute, which was traditionally important to enable an individual to escape slavery or bondage. For example, a case of accidental murder in the Eastern Tani area would traditionally have been settled via a payment or compensation which was typically too high for most individuals (or even a single clan) to manage themselves. In such cases, the accused was required to enter a bondage relationship with the aggrieved party. However, a larger clan alliance could muster the resources to effect the payment, enabling individuals to escape the bonds of slavery. Such organization tended to push Tani groups to form larger and larger units, contributing to the overall elasticity of the Tani social system. Furthermore, it created opportunities for individuals to become mobile: to expand their territories of influence and relationships and to move and even migrate within them. Clan alliances take on the character of a social network – since every clan has the capacity to enter into an alliance with another clan, alliances which Clan A forms with Clan B, and which Clan B forms with Clan C, effectively link Clans A and C. This is not to say that Clans A and C themselves fall into alliance through this process; however, by virtue of the network that now connects them, events which affect Clan A may now have implications for Clan C and vice versa.

### 3.3 Segmentation, assimilation and expansion

As discussed in the preceding section, the formation of clan alliances has been an important feature of Tani social organization, both because it effectively enlarges the population of a clan and increases the resources available to that clan, and because it creates possibilities for movement and interaction which would not otherwise be available. In this section, we will begin to outline some of the consequences of Tani social organization for the diachronic expansion of Tani groups.

Let us first assume the existence of three clan neighbourhoods A, B and C, in different localities. We do not know the precise origin of the individuals living in these clan neighbourhoods, but we assume that they have inhabited their corresponding areas for at least several generations, and constitute relatively close-knit communities speaking a relatively homogeneous variety of a single language. Through natural population increase and via exploitation of the sur-



rounding resources, and assuming no major disturbances such as wars or natural catastrophes, the populations of clan neighbourhoods A, B and C will tend to grow to the extent that the area can support no further natural increase without conflict. Assuming a general desire to avoid conflict, another available solution is for some subset of a clan neighbourhood to leave the area. Here, there are basically two options: to forge into an uninhabited area as a settler population, or to join another existing population in some other locality, where there is a possibility of obtaining more resources.

In the Eastern Himalayan region, it was traditionally extremely difficult for individuals, or even small groups, to forge into uninhabited territories unsupported. The environment is harsh and rugged, the jungle is extremely thick, there are large numbers of deadly animals and plants, and activities such as building shelters, establishing agricultural fields, laying fencing, and so on are generally considered to be tasks that exceed the capacities of individuals and small groups. Accordingly, they are almost invariably performed by large clan-based groups working together. This being the case, there was a strong motivation for a settler population to settle in a territory which was already inhabited by at least a few families, and where some of the basic necessities of life had been provided for. Here, the importance of the clan alliance becomes clear: through formation of clan alliances, individuals and small groups from overpopulated and resource-stripped clan neighbourhood A (for example) could migrate to a relatively less populated and resource-rich clan neighbourhood established by outward migrants from clan neighbourhoods B and C. People in clan neighbourhood A benefit from this arrangement by lessening the pressure on the resources and other individuals in their clan neighbourhoods. At the same time, people in the offshoot of clan neighbourhood B also benefit by gaining additional labourers for community activities such as shelter and fence constructions, field-clearing, and in particular, defense. Also importantly, settlers from clan neighbourhood A are potentially marriageable partners to individuals in clan neighbourhood B. Exchanging marriage partners through this process will, in turn, have the effect of further consolidating clan relationships. This process is schematized in Figure 2.

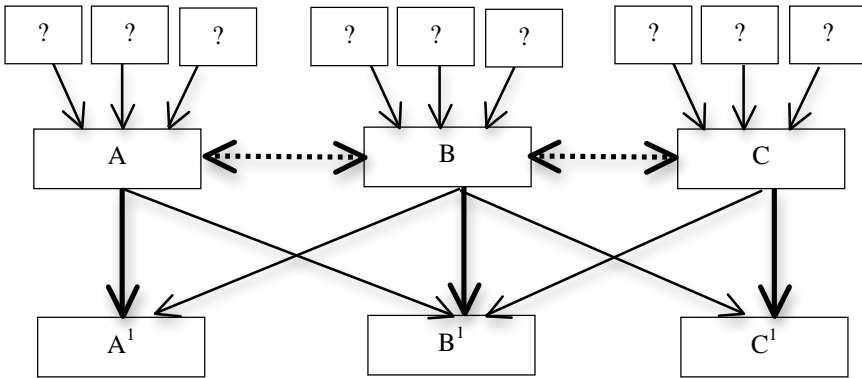


FIGURE 2 – Simplified Tani expansion schematic (differences in line strengths reflect differences in sizes of population transfers; solid lines indicate population movements, dotted lines indicate clan alliances)

Here, note that clans A and B are in alliance, and B and C are in alliance. A, B and C have formed settlements A<sup>1</sup>, B<sup>1</sup> and C<sup>1</sup>, which function as proper extensions of clan neighbourhoods A, B and C. By virtue of their clan alliances, outmigrants from clan neighbourhood A can settle in B<sup>1</sup> and vice versa, and B can settle in C<sup>1</sup> and vice versa. In this way, even outmigrants from clan neighbourhoods A and C can end up cohabitating in clan neighbourhood B<sup>1</sup>, despite that A and C never formally entered into an alliance. This fact illustrates the potential diversity of any given settlement in the Tani area, whose ancestors may in fact have arrived from any number of distant clan – and linguistic – territories. This largely unknown historical diversity of origins is schematized in Figure 2 by question marks in the upper boxes.

Several illustrative examples of this process can be adduced from recent times. For example, members of septs falling within the *Moodā* clan alliance can be found not only in Milang-speaking villages, but also in Shimong villages. Similarly, members of the Minyong *Tamut* clan can be found in both Tangam and Shimong villages. Out of the 32 villages surveyed by Pertin (2009) in which clans traditionally recognized as falling within the Padam Adi subtribe now predominate, only the villages of Damro, Padu and Sili were listed as being exclusively comprised of traditionally Padam clans. The remaining 29 predominantly Padam villages, including Mebo, Bomjir, Dambuk and so on are settled by individuals with a wide range of clan origins. This is particularly true of villages found alongside the border of Arunachal Pradesh and Assam, which has been a prime target for settlers from upland Tani areas for several decades now at least. In a great many cases, individuals who are still alive today can recount with certainty the precise origin of their ancestors' origins, movements, and circumstances of arrival, as their ancestors may have arrived only one or two

generations ago. And of course, many individuals alive today are themselves such migrants.

Once this process is understood, it becomes clear that the traditional idea of ‘mass migrations’ is something of a distortion, at least where groups with segmentary systems such as the Tani are concerned. This idea – of a coherent ‘tribe’ speaking a particular ‘language’, which ‘originates’ in a particular locale in prehistorical times and ‘migrates’ to another locale – can be found in both the vernacular and scholarly literatures on Tibeto-Burman-speaking groups; for example, in Nyori (1993) and in LaPolla (2001). However, the mass migration view is strongly criticized by Burling (2012), who argues that the movement of languages across space is not in fact typically associated with large-scale movements of populations across space. Certainly, such movements have occurred, but more often what we find is that only a few people move, and often at very different times. Such ‘micro-migrations’ have also been discussed by Huber (2012).

### 3.4 Agriculture

In the preceding section, I argued that the segmentary lineage system of the Tani groups, together with the capacity to form clan alliances, naturally produced opportunities for group expansion and group admixture through micro-migration to allied clan areas. Similar types of process have been described in relation to other groups with segmentary lineage systems, for example the Nuer in Africa (Sahlins 1961). In the next two sections, I discuss the additional factors of agriculture and trade.

Tani cultures are generally identified with the practice of shifting (swidden, *jhum*, ‘slash-and-burn’) cultivation. Primary crops include a range of rice grains, as well as millets, maize and Job’s tear (*Coix lachryma*), and secondary crops include a range of legumes such as beans, pumpkins, taros, yams, egg-plants, and a very wide range of leaves. However, Blench (2013) has argued that grain cultivation has come relatively recently to the Tani area, and that early Tani groups must have balanced a more rudimentary vegiculture with the hunting and foraging strategies that they mostly retain to this day. Indeed, a great amount of evidence of such a rudimentary agricultural past can be found among Tani groups today. For example, although most hillside fields are devoted to grain cultivation (see below), at least a few (called *riktak* in Adi) are devoted to semi-wild crops such as palms, ferns, amaranths, taros, yams and plantains – all crops which require relatively little attention by comparison with grains. Such techniques are even more prominent among groups peripheral to the Tani area such as the Idu, and the Puroik, who predominantly exploit the sago palm. If a predominantly vegicultural strategy can indeed be therefore attributed to early groups in the Tani area, then we must imagine these groups to have been much more thinly distributed on the ground than they are in modern times, as they would have had to exploit and travel across much larger areas.

This would mean that permanent settlement on a large scale would have been all but impossible.

We do not yet know when or how grain agriculture would have spread through the Eastern Himalayan region, however we can note that agricultural techniques vary somewhat according to the group, and perhaps reflect an earlier or more complete adoption of settled agricultural techniques among these groups in early times. For example, while most Tani groups in the Siang River valley area cultivate permanent fields with anywhere from five to fifteen varieties of wet and dry rices (in addition to Job's tear, maize, millet and legumes), groups in the Subansiri and especially Kameng river areas seem in general to exploit fewer rice varieties, and seem to depend relatively less on rices than the Siang River groups do; for example, many Bangni groups to this day seem to favour sago palm over any type of grain, much like the neighbouring Puroik.

Whatever the circumstances of the arrival of grain agriculture in the Tani area, we must assume that its arrival had at least two outcomes: one, settlements became more permanent; relatively few areas in the mountainous Eastern Himalayan region are even suitable for hillside cultivation, as a great many and perhaps most areas either too steep, or too high in elevation. Once a reasonably large area of land suitable for cultivation was found, settlers would have remained there permanently. Accordingly, two, their populations and, in particular, the concentration of population in a given area, would have increased.

Tani oral histories are replete with accounts of overpopulation within a given area, and of the constant need for groups to locate and open up new lands for cultivation.<sup>4</sup> To understand the dynamics of such movements, it will be useful to understand the Tani grain cultivation system:

The main traditional grain cultivation system in the Tani area is known as *patat* in Padam and Minyong Adi, *patet* in Kugij (Tangam), or *pitat* in Milang. This term basically refers to the practice of rotating a series of hillside patches over a period of several years. A similar term *patanj* is found in Apatani, although with the meaning 'community labour'.<sup>5</sup>

Patat cultivation involves first clearing a patch of a mountain hillside, followed by burning away of the debris which has been left to dry. The ensuing rains thus enable fertilization of the field and replenishment of the soil's nutrients. These patches of land are then used for only two crop cycles.<sup>6</sup> After that a new patch of hillslope is selected. In the Eastern Tani area at least, this pattern

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<sup>4</sup> Unfortunately, very few such histories have been made publicly available.

<sup>5</sup> It is likely that the Apatani term has specialized to refer to the process of organizing community labour – as is necessary to effectively clear and plant a hillside field, and perform associated and similarly large-scale tasks such as laying fencing to protect fields from animals.

<sup>6</sup> Some variation may occur according to the locality and group, however the point here is that the field will be used for a brief period, and then be left fallow for a much longer period.

seems to have developed into a permanent cycle in which the plot of the hillslope under cultivation began to literally form a circle. Using this technique, some of the Eastern Tani villages such as Riga, Damro, and Milang (Figure 3) came to sustain comparatively very large populations with up to 500 houses – in the thinly-populated Eastern Himalayan region, settlements of this size effectively take on the appearance and character of large, cosmopolitan cities, and to this day, they have a somewhat commanding status.

However, the expansion of a settlement such as Riga cannot possibly be infinite. There are limits to the distance that individuals can travel back and forth in a day to manage labour-intensive hillside fields, and there are limits to the suitability of land in a given area for cultivation. As population increases beyond the capacity of the land under cultivation, swidden cultivators have to constantly look for new areas for cultivation. Therefore, an extended family will eventually have to split. Examples of how this happens can be easily found by interviewing individuals who have undergone this process and are alive today. In a typical scenario, Brother A will remain in a village, and Brother B will leave for a new area. Depending on the group in question, Brother B may be the eldest, or the youngest, or it may be negotiated. Brother B will move into a new and more productive area, and once established he will try to grow and expand his own population base, both in the interests of increasing his group's productivity and to increase his security. As we saw in the preceding section, the way he does this is by forming or exploiting alliances with various clans, some of which may be located in geographically distant regions with different linguistic profiles and tribal or sub-tribal characteristics. An interesting outcome of this is that while the environment of Brother A was relatively homogeneous in terms of clan and language profiles, Brother B now attracts a relatively diverse immigrant population to his area. Several concrete examples of this process can be identified, especially (though not exclusively) in the lowlands/Assam border areas. For example, among the three main traditional Milang villages of Milang, Dalbuing and Peki Modi, Milang is identifiable in terms of both clan and language origins as the primary source of early migrants to both Dalbuing and Peki Modi villages. This would have happened many generations ago, however the clan origins of individuals in these areas are easily traceable. More recently, settlements such as New Milang, located near Mariyang town, have sprung up. Aside from the obvious novelty of the English loanword in its name, the recency of New Milang can be seen in the heterogeneous nature of its inhabitants. For example, many traditionally Padam clans are found in this village, and linguistically, this village is completely bilingual between Milang and Padam (in addition to showing multiple Milang dialects). Similarly, Goobuk and Koolung, which have sprung up in close proximity to Dalbuing village, has more people from Dalbuing than from Milang and Peki Modi, and they have in turn mixed with in-migrating clans from the Shimong area.



FIGURE 3 – Locations of Riga, Damro and Milang in relation to other villages in the Tani area

To the west of the Tani area in the Apatani valley, Blackburn (2010) reports that only nine Apatani villages are recognised by Apatani as ‘original’. Several new settlements have formed during the past thirty years, however each of them ‘is treated as an extension of the original nine’ (Blackburn 2010: 24). Although I do not have data regarding the ethnolinguistic composition of these new Apatani villages, it is widely known that Nyishi and Apatani mixed villages exist in at least some localities.

Thus we can see that the Tani agricultural system, which fostered rapid population increase in areas with limited ability to support large populations, has operated as a ‘push factor’ to encourage outward migration from Tani villages. This fed directly into the Tani system of settlement by means of clan alliance, and has led to the repeated formation of settlements with mixed ethnolinguistic origins.

### 3.5 Trade networks

The Eastern Himalayan region is very large in area for its population size, and some types of resources which are essential to survival are either scarce or non-occurring. Chief among them are salt and iron, neither of which occur naturally in the Eastern Himalaya. Accordingly, trade with larger populations to the north and/or south of the Eastern Himalaya is and has always been a necessity. Since the Eastern Himalayan region was never incorporated into a kingdom or state

until the progressive British annexation of the region beginning in the late 19<sup>th</sup> century (Mackenzie 1884: 6), groups inhabiting the Tani area had no access to regular supply networks, and rivalries among tribes were not traditionally managed or adjudicated by external forces. This fact, taken together with the difficult terrain of the Eastern Himalayan region, meant that travel to the northern and southern trade frontiers was extremely dangerous, and could not easily be undertaken by individuals or small groups acting alone. Instead, groups with relatively privileged access to these plateau and plains areas acted as the primary trade intermediaries, while groups interspersed along the river valleys acted as middlemen. Although these traditional trade networks have mostly dissolved in modern times due to the easy access of factory-made goods from India and the closure of the de facto international border with Chinese-occupied Tibet, large numbers of individuals are still alive today who participated in these trade networks in various capacities, and I have interviewed several of them in the course of my fieldwork.

Among the Eastern Tani groups, Bori and Bokar were geographically in a more advantageous position to access Tibetan goods (especially Himalayan salt), and also extended trade alliances with Bodic-speaking groups such as the Memba and Kamba. Towards the south, Minyong villages such as Kebang, which was formed as an extension of the more centrally-located Riga village, had almost a full monopoly over the southern trade route on the western bank of the Siang. Eventually, this trade monopoly went against Riga's interests. Oral histories recounted by Kebang villagers describe the onset of tension between Kebang and its erstwhile ally Riga, and explain how they invited settlers from Panggi and Shimong areas in order to create a stronger population to control and defend their area.

On the other side of the river Siang, large numbers of Padam villages have been established towards the plains. Padam settlers from Damro village succeeded in establishing a network of clans and clan alliances throughout the southern trade route, which placed the smaller groups to their north such as Milang, Panggi, and Komkar at a disadvantage. Accordingly, groups such as the Milang were obliged to form alliances with Padam clans and support them in wars against their enemies, and as a part of this process, large numbers of Milang left to settle in Padam areas. In modern times, several villages in the southeasterly eastern Siang and western Dibang valley areas such as Borguli and Dambuk are Padam-speaking, but have very large numbers of Milang clanspeople, in a few cases approaching the majority. Similar instances of alliance-formation for security purposes have been noted among the Apatani and Nyishi groups in the Subansiri river valleys. And in the Mechuka area, the Tani-speaking Ramo and the Bodic-speaking Memba now live in common settlements due to their traditional alliances against their common Tani-speaking enemies to the west. Although the trade networks that in part motivated formation of these alliances have nowadays collapsed, the alliances continue to influence daily events; for example, cases of murder and similar offenses

against a particular clan member are regularly responded to both by fellow clanspeople and by individuals who hold a traditional clan alliance with them.

To summarize, in order to gain safe passage and access to goods in the Tani area, it was traditionally necessary to form clan alliances. In order to form an effective clan alliance, it was necessary to exchange populations. Furthermore, by moving a subset of clan's population to a given strategic area, that clan was thereby able to extend its influence within that area, which in turn increased the likelihood of safe passage and access to goods via trade. As we can see from several concrete examples, both of these factors contributed to the ethnolinguistic heterogeneity of villages in the Tani area. In a great many cases, such villages have been formed relatively recently, and the heterogeneous ethnolinguistic origins of their diverse residents can be easily traced.

## 4 Linguistic consequences

The preceding section §3 has outlined a set of factors which led to the formation of ethnolinguistically heterogeneous settlements in the Tani area. We will now consider some of the linguistic consequences.

Referring back to Figure 2 (§3.3), let us assume that inhabitants of clan neighbourhoods A, B, and C speak noticeably different lects (whether 'different languages' or 'different dialects' of the same language – in the Tani area, this is a very difficult distinction to make). Now, settlements A<sup>1</sup>, B<sup>1</sup>, and C<sup>1</sup> have settlers with multiple ethnolinguistic origins; in particular, B<sup>1</sup> has settlers from all three communities A, B and C. Almost everywhere in the world, where ethnolinguistic heterogeneity exists in a given (internally peaceful, stable) locality, the tendency will be to homogenize over time. There are several ways that this could happen, at least linguistically. In the case of B<sup>1</sup>, settlers from A and C could abandon their lects and wholly adopt the lect originating from B. Or, community B<sup>1</sup> could shift to the lect of a particularly populous and influential settler community from A or C. A third possibility – and probably a much more frequent scenario – is that at least some elements of A, B and/or C could be maintained in the common lect of B<sup>1</sup>. In other words, a sort of 'compromise speech' may emerge. Dozens of concrete examples of the emergence of such compromise features in modern Tani languages might be adduced, although we have very few published in-depth studies (two examples are Post 2013 and Post and Modi 2011).

However, as McWhorter (2007) and DeLancey (2013) have argued, an additional consequence of the admixture of lects in an adult acquisition scenario is that complex features of the compromise lect (i.e., the lingua franca) will tend to be simplified. Complex and difficult-to-learn phonological features such as tone will tend to be dropped, abstract grammatical structures such as person alternations will tend to be simplified or dropped, and large systems of abstract functors such as evidential particles will tend to be simplified or dropped. We



find two ways in which the Tani languages may have been shaped by such processes:

First, as mentioned in §1, the Tani languages in general (and to the extent that it can currently be reconstructed, the Proto-Tani ancestral language) have a relatively simple morphological profile by comparison with many other Tibeto-Burman subgroups – for example, in lacking agreement or complex case alternations such as are found in, for example, Kiranti or Tangsa, and in having a relatively simpler tone system than, for example, Lolo-Burmese. It is possible that simplification of the Proto-Tani lect or lects themselves was a result of the types of population admixture processes described in this chapter, coupled with the adoption of grain agriculture and the relatively sudden resulting population increase among settled Tani communities.

However, this is somewhat speculative. What seems much clearer from our present perspective is that the Tani languages, in general, are simplest in areas with the highest amounts of traceable population admixture (perhaps implying recent settlement), and most complex in areas with the most ethnolinguistically homogeneous composition (perhaps implying older settlement). The clearest contrast that can be given is perhaps that of the Padam and Milang communities. The Padam are primarily concentrated nearby to an enormous confluence basin, i.e. where the Siang, Sisar, Dibang and Lohit rivers join a number of smaller tributaries to form the Brahmaputra River in Upper Assam. This area has long been an ethnolinguistic contact zone and a major trading point, as has been recounted by dozens of early European visitors (for example Needham 1888). Accordingly, this was the site of the first semi-permanent manifestation of state control in the area, when the British established an administrative outpost and school in Sadiya. And it is in this area that we find what may be the simplest form of Tani language – tones have been lost completely, there are few evidential particles, complex person-sensitive TAME systems (i.e. ‘conjunct-disjunct’ marking) are gone, and there are extremely few morphophonological alternations by comparison with the northern languages. On the other hand Milang, whose speakers have long inhabited a mountainous cul-de-sac on the northeastern extreme of the Tani area, has a complex tone + voice system, complex person-sensitive alternations, and an extremely large system of particles with an especially wide range of information-status functions even by Tani standards. These differences in linguistic complexity correlate inversely with differences in the heterogeneity of the ethnolinguistic origins of these areas’ inhabitants.

## 5 Conclusion

The Tani languages are grammatically simpler than the languages of many other Tibeto-Burman subgroups, in terms of the types of ‘complexity’ parameters discussed by McWhorter (2007), DeLancey (2012) and others. However,

McWhorter's and DeLancey's explanations for the simplification of languages in terms of state formation and the spread of dominant lingua francas cannot be applied in the Tani area, which until very recently has never before experienced state control or the influence of any particular dominant population. In this chapter, I have argued that a range of factors may have conspired to give rise to the types of ethnolinguistic heterogeneity that fosters linguistic simplification as a result of adult language acquisition along the lines of McWhorter's and DeLancey's arguments. Specifically, the Tani segmentary lineage and clan alliance systems have conspired together with the opportunities and challenges posed by a new type of grain agricultural system, on the one hand, and the necessities of forming trade networks, on the other, to repeatedly produce ethnolinguistically heterogeneous communities in the Tani area who were then motivated to homogenize their speech via compromise and simplification. If this thesis is accepted, it might simultaneously explain the linguistically simpler structure of the Tani languages, their status as a near-perfect dialect chain, and their comparatively sudden and rapid spread throughout their area.

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## 15

## Minor observations on some major issues of 'tribal' India

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Perhaps no section of the Indian population has been a subject of as intense academic and administrative attention as the eight or so percent of India's population that are termed 'tribal'. Clearly this population does not fit into any neat natural category, nor does it fit into any general anthropological definition, nor do most of the criteria adopted by the Government of India from time to time for the purpose of enlisting various communities as Scheduled Tribes fit them. Attempts have been made to do away with the term 'tribe', considered as it is in some parts of the world to be pejorative, but no other word seems equally inclusive or even acceptable. Indic words such as *janajati*, *adibasi*, *adimjati*, *vanajati* and *anuschitjati* have proved to be poor substitutes for the word 'tribe'. The draft National Tribal Policy of India (Government of India 2006) is the most comprehensive policy on tribal affairs in India drafted to date, but it leaves much to be desired. It does not address the underlying causes of sluggish development in many tribal areas, and in the generally low ranking of tribals in the human development index in India. Inequities among the tribes, for example in payment or non-payment of income tax, also indicate that the National Tribal Policy has not addressed some major issues at the grassroots level.

Despite that 'tribal' India is indeed mired with all kinds of issues and contradictions, discussion and debate often take place without the knowledge – leave alone participation – of tribal people. I wonder how many tribal intellectuals have access to the National Tribal Policy, and how many were consulted as it was drafted. The purpose of this chapter is to raise some of the major issues currently engaging tribal India, which government policy must address if it is to succeed.

## 1 What is a ‘tribe?’

‘Tribe’ is one of the most widely used words in India, and yet the question of what a tribe is or is not has always eluded answers. One of the most common concomitants of this label is ‘social and economic backwardness.’<sup>1</sup> Virginius Xaxa, a leading tribal scholar himself, argues that tribes have begun to see themselves as ‘dispossessed and deprived people of a region’ who do not claim aboriginality but do claim first-right to natural resources vis-à-vis outsiders or the dominant socio-economic groups of their area (Xaxa 2009). In certain places in the Northeast this claim for first-right might also be infused by larger ideas of self-determination and (earlier) non-identification with Indian nationalism in various forms.

In many parts of India, attempts to define a tribe without reference to caste seem incomplete, although the differences between tribe and caste were seldom clear even to colonial administrators. A number of Indian sociologists and anthropologists, including G. S. Ghurye (1980 [1963]), André Béteille (1998), B. K. RoyBurman (1992) and P. K. Misra (1977), who argue that the members of these two categories have interacted with each other for so long in the country’s history that the distinction between the two is often of no significance. Some of them have also debated whether or not ‘tribes’ and ‘indigenous peoples’ can be treated synonymously. Skaria (1997) shows how the colonial agenda was responsible for the way tribes have been constructed as different from castes. Kapila (2008) shows the disjuncture between anthropological, official and popular understandings of ‘tribe’ in the context of the Gaddis, a pastoral tribe of northern India. I might also like to mention here my own attempt to define tribe as a reciprocal people (Subba 2009).

There are many unanswered questions about what a tribe is or is not and these questions will continue to pose challenges in the future. This is because tribal identity has not followed any consistent criteria, and is therefore an inclusive and heterogeneous category. The tribes in India actually represent a spectrum. There are tribes who number as few as 100 ranging to those who run into several million; tribes who are Hindus, Christians, Buddhists, Muslims and Animists; tribes whose members are mostly illiterate ranging to those with nearly 100 percent literacy; hunters and gatherers to the most advanced settled cultivators; nomads to city-dwellers; and so on. Indeed the internal variation within the category is mind-boggling, not only in respect of their various characteristics but also in terms of the legal/constitutional protection/privileges extended to them. One may actually find the differences among groups classed as ‘tribes’ and ‘castes’ to be less overwhelming than the differences among groups classed as ‘tribes’. How does one define such a heterogeneous category?

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<sup>1</sup>The Indigenous and Tribal Populations Convention (ILO 107) of 1957 quite clearly indicates this (RoyBurman 1992: 31), although the National Tribal Policy seeks to replace derogatory words like “primitive” and “backwardness” associated with tribes.

One might, for example, propose to keep 'tribes' and 'castes' at either end of a spectrum of ritual and hierarchical labour, but this is not easy either because there are numerous tribe-like castes and caste-like tribes in India. It may also be recalled that over two hundred 'castes' are waiting to be scheduled as 'tribes' in India. This is of course related to the fact that one's 'tribal' status in India is not purely a matter of identity, community membership, land rights or traditional culture and values; it is also intimately bound up with the nature of one's educational, employment, and other socio-economic opportunities.

## 2 'Creamy layers'

Much of the debate over tribal status and identity revolves around the issue of the 'creamy layers'. Coined in 1971 by the Sattanathan Commission, the term 'creamy layer' was introduced for the purpose of restricting wealthier members of Other Backward Classes from availing various government reservations that were in principle available to them. Although the Supreme Court of India has made it very clear that this designation is relevant only in the context of the Other Backward Classes and does not apply to scheduled castes and scheduled tribes, the National Tribal Policy has this to say:

Exclusion of the creamy layer among the Scheduled Tribes from the benefits of reservation has never been seriously considered. As we move towards, and try to ensure, greater social justice, it would be necessary to give this matter more attention and work out an acceptable system. (Government of India 2006: 20.6)

There seems to be a fair degree of consensus outside the world of 'tribal' India that the scheduled tribes in fact **have** such a 'layer' of relatively well-off families and individuals, and that those belonging to such a layer should not continue to get the benefits of affirmative action. Over the past six decades or so of India's affirmative action policies, socio-economic differentiation has clearly taken place in a large number of tribes, in not in all tribes, giving rise to what is perhaps a creamy layer in everything but the name (the Supreme Court's exemption notwithstanding). Needless to say, internal differentiation among the tribes themselves has emerged as a major challenge due to unequal resources, numbers, politico-legal and economic privileges enjoyed by various tribes or clans within them, etc. Cultural, linguistic and political marginalisation of smaller and weaker tribal groups by numerically and politically dominant tribal groups is another story that has not often been told in the context of tribal India, and it is virtually ignored by the National Tribal Policy. However, the issue of whether relatively well-off tribals should be subjected to 'creamy layer' exemptions is not in fact a simple one:

The individuals and families belonging to the creamy layer are actually a highly burdened group. They are expected to take care of the education and

employment of their close and distant relatives, help them financially when they are sick, and meet the expenses of their marriage and death rituals. If they do not fulfill these social obligations, they are ridiculed. However, if they do fulfill such expectations it is difficult to make any progress themselves. Some members of various creamy layers have made huge personal sacrifices bringing up their siblings, cousins, nephews and nieces who live far away from their villages of origin. They can save very little, and cannot devote as much time and resources as they need to grow in prosperity and ensure that their children continue to reside in the creamy layer. In fact, there are numerous examples of such families having slid down the socio-economic ladder during the past few decades.

Any national policy on scheduled tribes should perhaps avoid actions that may result in the dismantling of creamy layers, because if that happens, the efforts of the government over the past five decades or so to bring tribals and Other Backward Classes up to par with more developed communities would be judged as failures. Furthermore, the administrative costs towards identification of such individuals or families are likely to be more than the amount actually saved by delisting them, since the creamy layer criteria are economic rather than social and educational. Identification of individuals with more than 450,000 rupees in annual income for inclusion in the creamy layer, as stipulated by the Supreme Court in the case of Other Backward Classes, is not difficult in the case of government servants and other public employees. However, it will not be easy in the case of many individuals in the private sector, such as lawyers, chartered accountants, private doctors, consultants, film artists and so on, as the real income of such individuals is seldom known. Individuals would have a tremendous incentive to be excluded from the creamy layer, so that their sons and daughters might continue to enjoy various constitutional privileges. This is also likely to encourage understatement of income by them in order to avoid being detected as one belonging to the creamy layer. With fierce competition for every medical or engineering seat, job and other opportunities, the politics of backwardness is only likely to be played out more intensely in future.

### 3 Alienation from land and forest

On the important issue of land rights and ownership (see Mishra, Ed. 1998), the National Tribal Policy has this to say:

Ownership of land signifies livelihood, culture and identity in a tribal economy. The STs [Scheduled Tribes] usually possess lands which are infertile uplands. But even such as they are, these lands have also been going out of tribal possession on account of appropriation by exogenous forces. Poor land record systems in tribal areas couples with the illiteracy, poverty and ignorance of tribals and the greed of others have resulted in the continuous



transfer of resources from tribals to non-tribals for several decades. (Government of India 2006: 1.11)

In a later section, the Policy declares:

Due to the faulty processes of declaration of forests in the past, the rights of the tribals over their traditional land holdings in the forests have gradually been extinguished. Insecurity of tenure and fear of eviction from these lands have led the tribal communities to feel emotionally as well as physically alienated from forests and forest lands. The condition of the tribals living in and around forests is becoming increasingly precarious and vulnerable day by day due to displacement threats arising out of various causes, such as increasing emphasis on conservation of forests without human beings, etc. (Government of India 2006: 7.2)

To address this situation, the Policy aims for 'preventing alienation of land owned by STs [Scheduled Tribes] and restoring possession of wrongfully alienated lands' (Government of India 2006: 4.1), and protection of STs' rights with respect to forests, including minor forest products, minerals and water bodies, through appropriate legislations.

Since both forests and land fall within the jurisdictions of the states, it may be difficult to achieve the above objectives by simply exercising various legislative options open to the central government, which is itself responsible for appropriating enormous parcels of tribal land for defense and other purposes like railways and airports. There is also a need for engaging state governments politically, and for changing the mindset of the bureaucrats towards tribes; failing this, implementation of laws to stop further alienation of tribes from their lands and forests will remain incomplete or ineffectual. However, the draft Policy stops short of making any such proposals.

Of late, there seems also to be a clear need to stop the tribal elite from alienating the lands and forests of their fellow-villagers and community members, as Karlsson's *Unruly Hills* shows (Karlsson 2011). If there is significant discussion on the alienation of tribal lands by exogenous forces, this might, as a side-effect, work to conceal – in line with Rata's (2002) argument about alienation and rising forms of inequality within.

## 4 Shifting cultivation

Shifting cultivation is traditionally associated with tribes, be they in Africa, Latin America, or South and Southeast Asia. This ancient form of domestication of crops, which has received tremendous technological input in some Southeast Asian countries in the recent past, is under attack in numerous nation-states that became independent in the 1940s and 1950s. The arguments against this mode of cultivation, which sustained human life for thousands of years and even gave rise to the Mayan civilization, are mainly three: low productivity, high soil ero-

sion, and low sustainability. There are, of course, a number of counter-arguments, which have been forcefully advanced in recent volumes edited by Malcolm Cairns (2007, 2015). My own arguments in favour of shifting cultivation are briefly as follows:

First, concerning low productivity, it must first be pointed that there is a great variety of crops under shifting cultivation, and harvesting of such crops goes on daily or periodically for almost eight months in a year. It is therefore virtually impossible to keep an accurate account of the amount of each crop actually harvested over the course of a year. This is of course very different from mono-cropping, in which single-crop yields following the one or two yearly harvests are generally very clear.

Second, regarding allegedly high soil erosion, the fault does not lie with the system of cultivation or its technology per se, but rather with its progressively shortening cycle. This, in turn, is due to various endogenous and exogenous factors. However, there is in fact **no** erosion of soil during the long fallow period, when shrubs and trees grow abundantly and prevent the wind and rain from eroding the soil. By contrast, the terraced and permanent cultivation areas that the government wants to see replacing shifting cultivation in most areas do not have even a few years' respite from erosion, for such areas are permanently exposed to the two most important factors contributing to soil erosion: wind and rain.

Third, as concerns the low sustainability of population in areas under shifting cultivation, I would argue that hill agriculture cannot be as sustainable as plains agriculture under **any** circumstances due to the relatively low fertility of upland soil, relatively longer crop gestation periods, and the challenges posed by physical terrain. These factors will continue to constrain productivity and population sustainability no matter what is the technology of cultivation.

History can also be brought to witness here. Had shifting cultivation in fact been detrimental to the environment in upland areas, as is so often argued, the region called Northeast India would presumably not figure in the world's list of biodiversity hotspots – but, unlike the majority of lowland areas in India, it does (Mittermeier *et al* Eds. 2004). Instead of doing away with this form of cultivation, which takes care of the pH value when the land is set on fire, and accomplishes nitrogen fixation when legumes are grown, the state should perhaps focus instead on population control, ban chemical insecticides and fertilizers, and stop bringing more and more areas under wildlife sanctuaries and biosphere parks, which further shorten the cycle of shifting cultivation and contribute to its unsustainability.

The forest department officials put the blame on shifting cultivation for almost anything bad that happens such as the floods and elephant attacks on human beings. This cannot be dismissed as the willful ignorance of a few officials, for they do influence government policies, which are already biased against this form of cultivation. For instance, the Draft Tribal Policy says: 'Efforts will be made to increase production through conversion to settled

agriculture, where possible, with linkage to easy credit and markets and assured irrigation' (Government of India 2006: 9.15). The Nagaland Government, for example, has long sent out ambassadors of settled cultivation (mostly Angamis and Chakhesangs for whom settled cultivation is a tradition) to those tribes which practise slash-and-burn agriculture. Furthermore, in many places the tribes themselves are converting their lands into settled cultivation for growing orchards, tea, rubber or other such cash crops, which is not only leading to fast depletion of biodiversity but also resulting in a new class of landowners – because those who do so are given the incentive of having that plot of land registered in their own names. For instance, among the Chang Naga community, land is being increasingly privatized as a result of such state-subsidized farms. If this trend continues unabated, it could soon bring an end to the communal form of landownership that prevented landlessness for thousands of years.

In fact, there is a powerful pro-environment argument in favour of shifting cultivation. First of all, a plot of land remains under some vegetal cover at least during the fallow period, which is now reduced to three years in many parts of the region, which prevents erosion of the soil for at least that period. Second, a hoe or dibbler used in shifting cultivation causes minimal disturbance to the topsoil, unlike ploughs or mechanized tilling tools. Third, because of multi-cropping, the cultivated area remains under some kind of vegetal cover almost for eight out of twelve months in a year, which also reduces soil erosion. Fourth, cultivated areas provide at least some food throughout most of the year, not only to the cultivators, but also to wild birds and to animals belonging to the cultivator of the land.

The government's unhappiness with this form of cultivation may well be related to the fact that it cannot easily show in its annual reports how much food was produced in a given year in a given area in order to decide how much revenue it should collect from the cultivators. At the same time, many shifting cultivators are also unhappy, as this form of cultivation is becoming increasingly tedious with lower economic returns due to less time available for the land to recuperate its lost fertility and lack of manpower for cultivation. Instead of good harvests, many are facing more and more aggressive weeds. Above all, however, the younger generation is mostly uninterested in this form of cultivation. Even less educated youths with few economic prospects increasingly opt for wage labouring in many areas rather than toiling in their ancestors' fields, and chasing away wild monkeys, bears and elephants almost daily. That said, there is also a notable counter-movement among educated Naga, who have begun to defend shifting cultivation as a symbol of their identity, and even romanticize living in the field houses constructed on trees.

## 5 Influx of outsiders

The problem of outsider influx is an unavoidable feature of almost all tribal areas in India. Influx of outsiders began as early as the colonial days, and has increased rather than lessened in recent years. Many outsiders living in tribal areas cannot easily go back to the places they or their ancestors came from, because not only have they lost their moorings in their places of origin, but having lived where they do for the past several generations they have become culturally different from those in their places of origin and similar with those in their places of present habitat.

The outsiders were actually welcomed in the beginning when there was plenty of land and there were few local people willing to work on construction of roads, or educated enough to teach in schools and serve in hospitals. Outsiders control most of the trade and commerce in the region. Marriages between local women and outsider men have been quite common since the early days, and so were traditions of adopting outsiders as members of existing clans, or the creation of new clans to accommodate the outsiders within a community. Outsiders often adopted the language and culture of the local people at the expense of their own. However it is only during the past four to five decades that the outsiders have started to become so numerous and entrenched that they have started to pose a threat to the cultural and political identities of local tribes, most of whom are numerically rather small. The two most notable examples are those of Tripura and Sikkim, in which the indigenous and previously dominant tribes have been transformed into insignificant minorities in their own homelands due to the influx of people from outside. Even large regional groups like the Marathis and the Assamese have reacted violently to outsiders, be it against the Nepalis and Bengalis in Assam in the early 1980s or the Biharis in Maharashtra in 2008.

This phenomenon cannot be simply wished away. The demands of globalised markets, skills distribution and development processes often result in redistribution of people across vast geographical areas whether or not this is favoured by the laws of the land. In general, if employment opportunities are poor, there is little or no immigration even if it is encouraged by the people or the state. But if employment opportunities exist, immigration takes place no matter how unwelcoming the people are about outsiders. Hence, population redistribution leading to heavy influx in some areas is perhaps inevitable and sometimes even consciously promoted by the state – as was the case as in Sikkim and Tripura.

What is significant to observe in Northeast India recently is the out-migration of youths belonging to both local and outsider communities, whether it is for better educational and employment opportunities, or due to some push factors in the region. The skilled and educated tribal as well as non-tribal youths are increasingly moving out of the region and thronging cities like Bangalore, Pune, Mumbai, Chandigarh, Hyderabad and New Delhi. Even the seasonal and

annual exodus of large numbers of unskilled labourers from tribal areas of central India to India's metropolises has not gone unnoticed. The 'creamy layer' of Northeast India is investing in real estate in cities like Delhi and Mumbai on the plea that many of their own traditional localities have become 'dangerous' areas, with no scope for the future and no peace for now. The usual refrain one hears from the youths is 'there is no night life', or 'there is no scope for employment', although the reasons that actually drive them out of the region are perhaps more complex than that. While the issue of large scale migration of non-tribal people to Northeast India is of serious concern, the Policy needs to confront the issue of migration of tribal people to various urban destinations within India, particularly in view of the 'racial' attacks on them.

## 6 Tribes and territories

The association between tribes and territories is pointed out in almost all important discussions on tribes. Members of every tribe are believed to have a sense of belonging to a particular territory whether that territory is mythical or real and whether or not such a territory is actually under their control and ownership. What is new about this association is the desire to redraw political and administrative boundaries along the cultural boundaries of a tribe, or conglomeration of tribes, such as the Naga, Bodo and Mizo.

The desire for political unification of cultural areas is not new, but has been nourished by cultural groups such as the Germans, the Turks, the Swedes and the Han Chinese, among many others, for centuries. Tribal India is full of such aspirations. Some groups, such as the Naga, have been able to draw considerable international attention, whereas others, like the Zomi Re-unification Organisation, are only now laying the groundwork for similar demands.

It is often true that cultural boundaries are far older than political boundaries, but what is ignored is the fact that while political boundaries tend to be rigid and resilient once they are drawn, cultural boundaries are always fluid due to both voluntary and involuntary migrations of people for various reasons like war, epidemics, employment, land for cultivation, trade and pastoralism. What is important to understand is why such aspirations exist and are nurtured across the globe. What purpose does it serve if, for instance, all Nagas live under one nation-state? Is that at all possible to attain? I for one would not think so.

## 7 Tribes and identity

Issues of identity are perhaps the most significant issues of tribal India. Many tribal people are nowadays dissatisfied with their traditional tribal identities, not only because of whatever objectionable features they may feel inhere in them, but also because significant social, economic, political, and even religious changes have taken place among many tribes. In many cases, traditional tribal

identities seem unable to adapt to such changes. Many also do not find that their tribal identities sufficiently address issues of advancement and development, and are therefore engaged in the construction of broader identities that can have a more significant political voice. Many tribes outside India's Northeast have undergone sweeping acculturation or detribalization processes which have rendered them indistinguishable from their non-tribal neighbours. There are others who are reinventing their language, culture and religion with the hope of being included as the Scheduled Tribes of India. There are still others who have moved away from their cultural milieu due to religious conversion. They are at the same time reinventing their traditions and adopting them as true markers of their identity.

Such issues of identity are not of course unique to tribes. The issue of tribal identity, or the consequences of its loss of identity, becomes more important if tribes are seen as segmentary societies and castes as organic. That tribes are often seen as an organic part of caste societies, as they are often absorbed at the bottom of caste hierarchy and/or are often considerably 'Hinduised', perhaps makes the issue of tribal identity a lot more complex than that of caste identity.

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## Emergent insights into Proto East Bodish agricultural economy<sup>1</sup>

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### 1 Introduction

Very little is known about the linguistic history of the Eastern Himalayas. Bhutan, in particular, has been mostly absent from academic enquiry. The only prehistoric archaeological study in Bhutan was Meyer *et al.* (2009), who found that by circa  $4280 \pm 130$  cal BP there was human inhabitation in north-western Bhutan, as evidenced by the presence of cereals (barley) and over-grazing and trampling, which would be evidence of yak pastoralism. Meyer *et al.* speculate that those prehistoric inhabitants migrated south from Tibet, but it is not yet clear whether or not there are any modern remnants of that culture in Bhutan. Ongoing genetic research suggests that Bhutan has been continually inhabited for at least the past 10,000–20,000 years, if not longer (Peter deKnijf, in personal communication). Historical reports begin only in the past fifteen hundred years, with Tibetan chronicles detailing the invasion of Tibetans into Bhutan, coercing the indigenous people there to become Buddhists (Hoffman 1975). We are still very far from knowing what effects this and the remaining unknown past has had on shaping the current ethnolinguistic picture.

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<sup>1</sup> Some of the ideas in this chapter have been presented at the 22nd International Conference on Historical Linguistics, the 48<sup>th</sup> International Conference on Sino-Tibetan Languages and Linguistics, and the second meeting of the International Consortium for Eastern Himalayan Ethnolinguistic Prehistory and I am grateful to the participants there for their comments, especially Mark W. Post, George van Driem, and Karma Tshering. I would like to acknowledge the assistance of Nathan Hill and Stephen Morey, who offered valuable comments on a previous draft of this paper. I am also indebted to Karma Tshering, André Bosch, Sarah Plane, Kuenga Lhendup and Gonpo Tenzin for assistance with data collection. This work has been generously funded by a Discovery Project award from the Australian Research Council. Of course, I alone am responsible for the content in this chapter.



One line of inquiry into the past is through linguistic archaeology. Southworth (1974) appears to be the first use of the term ‘linguistic archaeology’, which he further elaborates upon in Southworth (2005). This interdisciplinary sub-field endeavours to reconstruct a socio-linguistic context for the ancient linguistic forms reconstructed based on data present in daughter languages. Linguistic archaeology draws on five subfields in linguistics: historical-comparative linguistics, linguistic palaeontology, sociolinguistics, glottochronology/lexicostatistics, and philology. Central to the endeavours of linguistic archaeology is the assumption that words and their forms can be reconstructed, and that direct inferences can be made with regard to the nature of the proto speech community. For example, Mallory (1991) demonstrates that we can attribute stockbreeding to the proto Indo-European community based in part on the fact that forms for ‘sheep’, ‘cattle’, ‘goat’ and ‘pig’ can be reconstructed to the proto language. The aim of this paper is to use linguistic archaeological methods in order to make inferences regarding the past culture of people who spoke an older form of East Bodish.

Linguistic archaeology has been particularly successful in providing insights into the Proto Austronesian-speaking culture’s natural world and material culture (including crops and domesticated animals, metals, clothing, cultural practices, etc.) based on lexical reconstructions. For example, Blust (1995) reconstructs words for ‘typhoon’ and ‘snow; ice; frost’ for Proto Austronesian, suggesting that the people who spoke the proto language lived in an environment where there were typhoons and snow, ice or frost (fitting the picture for Taiwan). Based on faunal terms that reconstruct, Blust (1995) shows that Proto Austronesian speakers were familiar with monkeys, squirrels, pangolins and sharks. A considerable amount can also be inferred about Proto Austronesian speakers’ economy. Blust (1995) shows that this culture was familiar with rice agriculture, based on reconstructible words for ‘paddy’, ‘harvested rice’ and ‘cooked rice’. In addition, they also exploited several millet species. Blust (1995) goes on to identify root crops (such as wild taro), tree crops, domesticated animals, means by which animals were captured (hunting and fishing), food preparation, tools and implements, settlements and housing, clothing, music, social organisation, disease and death, and the spirit world.

Another well-known study examined 77 lexical items from close to 200 Native American languages in order to make inferences about the cultural impact of European contact (Brown 1999). Rather than look to reconstructions, this study looked at words for items which were known to come through European contact (such as ‘rice’, ‘chicken’, ‘soap’, ‘Saturday’) and examined how the languages acculturated the item lexically. The conclusions included the observation that different sociolinguistic patterns led to different acculturation patterns. In the case of both Blust (1995)’s and Brown (1999)’s study, a language’s lexicon led to inferences about a culture’s past social history.

Linguistic archaeology has been put to some use in the Tibeto-Burman language family. Bradley (1997a), for example, compares crop terms in the

Burmic subgroup (Lisu, Sani, Lahu, Nosu, Akha, Burmese), specifically identifying terms for ‘grain’ (as a general term), ‘rice’, ‘millet (*Setaria* and *Panicum*)’, ‘sorghum’, ‘buckwheat’, ‘barley’, ‘wheat’, ‘Job’s tears’, and ‘maize’. Of these, Bradley (1997a) proposes that ‘rice’, ‘*Setaria* millet’, and ‘sorghum’ can be confidently reconstructed to Proto Burmic and therefore used by speakers of the proto language.

The aims of this paper are most similar to those in Mallory (1991), Blust (1995) and Bradley (1997a). The focus here will be on the East Bodish (a sub-branch of Tibeto-Burman) economy lexicon; we will go through a small subset of comparative East Bodish data as a means to ascertain what words reconstruct to Proto East Bodish and as such what can be inferred about the cultural practices of the people who spoke the proto language, with a focus on grain and dairy terms. The East Bodish languages will be introduced in §2; §3 presents the comparative data and proposes reconstructions; and §4 summarises the findings and offers some conclusions.

## 2 Background

### 2.1 East Bodish languages

Of the nineteen languages in Bhutan, seven belong to the ‘East Bodish’ family of the larger Tibeto-Burman family. The term ‘East Bodish’ was first used by Shafer (1954) to identify a cluster of languages which appeared to be closely related to Tibetan, but were not Tibetic languages, or direct descendants from Old Tibetan. As shown in Hyslop (2013), the East Bodish languages are lexically united by a set of numerals and a few other core vocabulary items. East Bodish languages are spoken in Central and Eastern Bhutan (e.g. Bumthap, Kurtöp, etc.), the adjacent region in Tibet (e.g. Dzala) and some languages in Arunachal Pradesh (e.g. Dakpa). The general understanding in the field has been that the parent of East Bodish languages would have been a sister language to Classical Tibetan, making the modern day East Bodish languages ‘cousins’ to the Tibetic language, including Dzongkha (e.g. Bradley 1997b). Of course, it is also possible that the apparent similarity between East Bodish and Tibetic languages could be attributed to language contact. The exact placement of East Bodish within Tibeto-Burman remains unknown, a fact which is compounded by the dearth of published research on East Bodish languages.

The East Bodish language group comprises seven languages which are spoken in an area that ranges from the shared Indian-Bhutan border, just north of the point where the Brahmaputra river turns south into Bangladesh, as far east as the Indian state of Arunachal Pradesh, and north into Tibet. This region spans elevations of as low as 300m in the south, and upward of 7,000m in the North. Inhabited areas range from 300m to approximately 4,000m (see Figure 1).

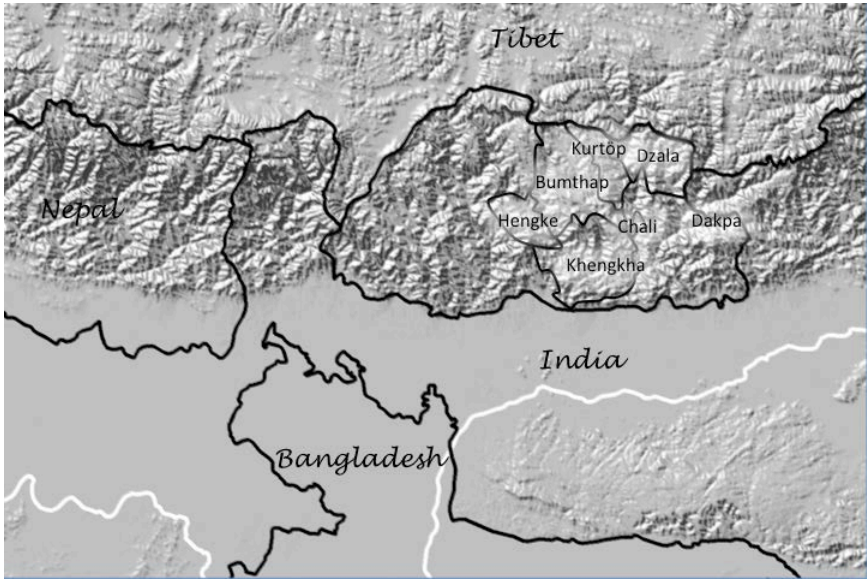


FIGURE 1 – Approximate location of East Bodish languages<sup>2</sup>

Beginning in the southern region of Bhutan, Khengkha is spoken by approximately 40,000 speakers. Chamberlain (2004) presents a phonological analysis and proposed an orthography but otherwise very few Khengkha data have been published. Adjacent to the Khengkha's northwestern region is the Hengke language, spoken by approximately 15,000 speakers. There is considerable diversity within this group, such that people from some regions may not necessarily understand each other. However, in the absence of detailed descriptive work from several villages, it is not possible to coherently argue in favour of or against the varieties spoken in this region to be best grouped as one or more languages. Aside from data presented here and in Hyslop (2013, 2014), Hengke data have only appeared in Nishida (2009). Immediately east of the Hengke region is Bumthap, a language with approximately 30,000 speakers. A grammatical sketch of Bumthap has recently been made available in English (van Driem 2015). Kurtöp has received the most attention, with several articles and theses, including a full reference grammar (Hyslop to appear). Dakpa and Dzala are spoken on the eastern edge of the East Bodish region. Dakpa has perhaps 50,000 speakers spread across Bhutan, Tibet, and Arunachal Pradesh while Dzala has perhaps 40,000 speakers, primarily in Bhutan and Tibet. Hyslop and Tshering (2010) offer some data and analysis on Dakpa and van Driem (2007)

<sup>2</sup> Elevation data were obtained from Jarvis *et al.* (2008) and synthesized by Joseph Lehner.

presents data for both and offers the observation that the two seem to form a subgroup within East Bodish (a claim also substantiated in Hyslop 2013). The smallest language in the family is Chali, with around 1,000 speakers. Other than the few lexical items presented in Hyslop (2013, 2014), Chali is completely undescribed. Obviously, there is still little work on the subfamily as a whole, but Hyslop (2013) does provide evidence that links the languages together into one family.

Despite the paucity of data, some observations regarding the phonology of Proto East Bodish can be offered. All of the synchronic languages have a robust three-way voicing (voiceless unaspirated, voiceless aspirated, voiced) contrast at labial, dental, and velar places of articulation<sup>3</sup>. All languages also have palatal stops 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. Several but not all varieties of East Bodish languages also have retroflex stops. As such, it should be possible to reconstruct a three-way voicing contrast at minimally labial, dental, and velar places of articulation; whether or not palatal stops will reconstruct is a matter of ongoing research; retroflex stops do not reconstruct to Proto East Bodish. Dental affricates, dental fricatives, and palatal fricatives are also found in all languages and as thus probably reconstruct as well. To date, one language (Bumthap) also has retroflex fricatives, the origin of which is still unclear. All East Bodish languages have a voiced rhotic and lateral and four voiced nasals (labial, dental, palatal, velar) as well as a voiceless lateral. Some of the varieties also have a voiceless rhotic and voiceless sonorants, though in these cases the diachronic development via sonorant-obstruent consonant clusters is usually obvious.

In terms of vowels and suprasegmental features, we can propose a tentative five vowel inventory for Proto East Bodish: /i, e, a, o, u/. Khengkha and some varieties of Kurtöp have retained this while other languages have more complex systems. The variety of Hengke spoken in Phobjikha, for example, has these five cardinal vowels plus /y, ø, ɔ, æ/. Some of East Bodish languages have contrastive vowel length (open syllables only) and some also have nasalisation. It is clear the vowel length has recently developed via loss of a coda consonant while nasalisation has recently developed via loss of a nasal coda or a borrowing from Dzongkha. All of the languages have contrastive tone following sonorant consonants. It is not yet clear if this is to be reconstructed to the parent

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<sup>3</sup> In this way the East Bodish languages look very similar to Tibetic languages. Differences in the phonology are found elsewhere, however. A systematic comparison of Proto East Bodish phonology with that of Tibetic or other languages that have been called “Bodish” is beyond the scope of this article, but one difference between, say Central Tibetan or Dzongkha and the East Bodish languages is in the tone system. Whereas for East Bodish languages tone is predictable following (most) obstruents (see Hyslop 2009) the situation for Central Tibetan and Dzongkha is more complicated (see, for example, Caplow 2009 for some discussion).

language or if all the daughter languages have undergone the same tonogenetic developments; this is a matter of ongoing research.

There has not been enough detailed grammatical analysis of enough East Bodish languages to say much about aspects of grammar that reconstruct to the parent language. Preliminary observations show that the grammatical forms are substantially different across the different languages and not as easily reconstructible. Much more research is needed in this domain.

## 2.2 Sound changes

Despite the paucity of available data, there has been some work identifying sound changes which can be used to reconstruct Proto East Bodish. Hyslop (2013) proposes a few sound changes used to put forth a tentative phylogeny of East Bodish. Slightly updated versions of these sound changes and some newly identified sound changes are shown in Table 1.

TABLE 1 – Sound changes within East Bodish<sup>4</sup>

Sound change	Conditioning environment	Da	Dz	Ku	Bu	Kh	Ch	He
l > j	all/unknown			x	x	x		
a > e	unknown	x	x					
e > i	unknown	x	x					
e > i	preceding coronals							x
a > æ	preceding coronals							x
o > ø	preceding coronals							x
u > y	preceding coronals							x
k <sup>h</sup> w > φ	Syllable onset					x		
kr, k <sup>h</sup> r, gr > t, t <sup>h</sup> , d	Syllable onset/unknown			x	x			
krV, kwV > rV <sub>+H</sub>	Syllable	x	x	x	-	-	x	x
wV <sub>+H</sub>	onset/unknown							
gj > j	Syllable	x	x					
kj, k <sup>h</sup> j, gj > c, c <sup>h</sup> , j	onset/unknown							
kjV, k <sup>h</sup> jV, gjV >	Syllable onset			x	x	x		
kjV <sub>+front</sub> , k <sup>h</sup> jV <sub>+front</sub> , gjV <sub>+front</sub>	Syllable onset							x
u > o	unknown	x	x					

The above table represents the current state of the art with regard to East Bodish sound changes. In many cases we have found exceptions to these sound changes and as such more work is still needed to refine the conditioning environment

<sup>4</sup> An ‘x’ indicates we have evidence that the sound change has happened in the language while an ‘-’ indicates we have evidence that the sound change has not happened in the language. If a cell is left empty that indicates we are lacking the necessary data to know one way or the other.

and be able to account for borrowings. For example, both  $kr > t$  and  $krV > rV_{+H}$  are easily seen in Kurtöp, as in Kurtöp *toŋ* ‘village’ and *rá* ‘hair’ versus Bumthap *kroyŋ* and *kra*. We may eventually find out that the sound changes actually characterise different stages of the language; for example, perhaps the sound change  $krV > rV_{+H}$  happened first but then Kurtöp borrowed a Tibetic word for ‘village’ and later the sound change  $kr > t$  happened.

Despite the uncertainties, the above observations offer some help as we move forward into reconstructing some aspects of Proto East Bodish. See Hyslop (2013) for more details and examples of some of the above.

### 3 Data and reconstructions

With the relevant background information in place we can turn to the data and examine what reconstructs to Proto East Bodish, lexically. Table 2 shows synchronic East Bodish grain terms in all seven languages, represented using IPA. If a cell is left blank it is because we have not been able to confirm presence or absence of the grain in the speech community. Use of ‘N/A’ indicates we confirmed the speech community does not use the grain. For example, in the case of Bumthap, we were able to confirm that Broomcorn millet is not used; as such ‘N/A’ is written in the cell. However, we are still researching use of the grain within the Kurtöp speech community and so that particular cell is left blank.

TABLE 2 – Grain terms in East Bodish languages

Gloss	Da	Dz	Ku	Bu	Kh	Ch	He
‘maize’	<i>uʃom</i>	<i>aʃam</i>	<i>bakc<sup>h</sup>ukpa</i>	<i>ɛʃəm</i>	<i>ɛʃəm</i>	<i>ahamar</i>	<i>geza</i>
‘paddy’	<i>dep</i>	<i>dep</i>	<i>mras</i>	<i>mras</i> ; <i>mrat</i>	<i>mras</i>	<i>teŋbu</i>	<i>sem</i>
‘husked rice’	<i>depzi</i>	<i>depzi</i>	<i>c<sup>h</sup>uŋ</i>	<i>t<sup>h</sup>uŋ</i>	<i>t<sup>h</sup>uŋ</i>	<i>te<sup>h</sup>uŋza</i>	<i>te<sup>h</sup>um</i>
‘cooked rice’	<i>to</i>	<i>to</i>	<i>ipa</i>	<i>zama</i>	<i>to</i>	<i>zumala</i>	<i>to</i>
‘broomcorn millet’	<i>c<sup>h</sup>oŋ</i>	<i>c<sup>h</sup>oŋ</i>		N/A	<i>jon</i>	<i>jon</i>	
‘finger millet’	<i>k<sup>h</sup>re</i>	<i>k<sup>h</sup>re</i>	<i>t<sup>h</sup>e</i>	<i>koŋbo</i>	<i>koŋko</i>	<i>koŋpu</i>	<i>t<sup>h</sup>e</i>
‘foxtail millet’	<i>món</i>	<i>món</i>	<i>ran</i>	N/A	<i>ran</i>	<i>ran</i>	
‘wheat’	<i>ko</i>	<i>ko</i>	<i>go</i>	<i>go</i>	<i>kar</i>	<i>kar</i>	<i>kar</i> ; <i>zẽ</i>
‘barley’	<i>ná ~ ne</i>	<i>na</i>	<i>nas</i>	<i>nat</i>	<i>na</i> ;	<i>nâ</i>	<i>nes</i>
‘bitter buckwheat’	<i>brem</i>	<i>bremo</i>	<i>brama</i>	<i>branma</i>	<i>brama</i>	<i>brama</i>	<i>brem</i>
‘sweet buckwheat’	<i>kjabre</i>	<i>kjabre</i>	<i>cara</i>	<i>carae</i>	<i>cere</i>	<i>teara</i>	<i>gere</i>

Beginning with terms for ‘maize’, we see at least three roots used within the languages and it is not possible to reconstruct a term to Proto East Bodish. Dzala, Bumthap, and Khengkha all use the term *afam* and the Dakpa term *ufom* term is clearly derived from the same root. Note that *afam* is also the Tshangla<sup>5</sup> form for ‘maize’. The Chali form *ahamar* may also be related to this root but there is not enough data from Chali in order to ascertain whether or there are regular correspondences between the sounds in the Chali word and the reflex in other East Bodish languages. Kurtöp is the only language to make use of the term *bakc<sup>h</sup>ukpa*; it is not known where this term originates from. Hengke *geza* is borrowed from Dzongkha *geza*. The fact that a term for ‘maize’ does not reconstruct is not surprising as maize is a new world crop, only brought to Bhutan within the past 500 years. It is hypothesised that Proto East Bodish was spoken at least one millennium prior to this. The other grains, however, presumably were in use in Asia at the time Proto East Bodish was spoken.

We also see several roots when looking at the terms pertaining to rice. Within the East Bodish languages we can identify terms for ‘paddy’ versus ‘husked rice’ versus ‘cooked rice’ even if for some languages ‘paddy’ and ‘husked rice’ are homonymous. The form *mras* is found in Kurtöp, Bumthap and Khengkha, perhaps borrowed from an older form of Tibetan (cf. Written Tibetan *hbras*<sup>6</sup>). Dakpa and Dzala have a different root, *dep*, which also occurs in their word for ‘husked rice’. The origin for *dep*, along with Chali *teaybu* and Hengke *sem* is unknown. Terms for ‘husked rice’ also vary, involving both the root *dep* and a form with a voiceless palatal or retroflex initial, followed by a high back vowel and velar nasal. Note that the Bumthap and Khengkha forms are probably borrowed as there is no evidence for native retroflexes in either language.

The Bumthap and Chali forms for ‘cooked rice’ are nominalisations of the verb *zu* ‘to eat’. Dakpa, Dzala, Khengkha and Hengke *to* is probably a borrowing from Dzongkha *to*. Kurtöp *ipa* is of unknown origin.

Millet terms also show remarkable variation within the family. Broomcorn millet (*Panicum miliaceum*) is not used by all communities who speak East Bodish languages; it is not grown in the Bumthang region and its status in the Kurtöp region is unknown. In the Hengke-speaking region there is variation; for example, millets are not used in Phobjikha but are in regions of lower elevation, such as Tshangkha. Even there, though, the presence or absence of Broomcorn millet has not yet been confirmed. Dakpa and Dzala communities use the term *c<sup>h</sup>oy* while in Khengkha and Chali the form *jon* is used. Foxtail millet (*Setaria Italica*) is also absent in the Bumthap-speaking region and in Phobjikha. For Dakpa and Dzala speakers this grain is referred to as *món* while in Kurtöp,

<sup>5</sup> Tshangla is Bhutan’s second largest language in terms of speakers and the *lingua franca* of eastern Bhutan (van Driem 1998).

<sup>6</sup> See Sagart (2003), who first posits a form *\*mras* for ‘paddy’ and Hill (2011) who shows how the Tibetan form has developed from older *\*mras*.

Khengkha and Chali Foxtail millet is *ran*. Finger millet (*Eleusine coracana*) is the only millet for which all East Bodish languages have a term. We see two different roots in the languages. The Kurtöp and Hengke terms are retroflexed version of Dakpa and Dzala *k<sup>h</sup>re* while Bumthap, Khengkha and Chali all have forms with a root *koŋ*.

East Bodish terms for ‘wheat’ seem to reflect three different roots. Kurtöp and Bumthap *go* and Dakpa and Dzala *ko* are perhaps related to Written Tibetan *gro*. A form *kar* is used in Khengkha, Chali, and some varieties of Hengke, likely borrowed from Dzongkha<sup>7</sup>. The Tshangkha variety of Hengke uses the word *zẽ*, for which no source is currently known.

The lack of common roots for ‘maize’, ‘rice’, and millet terms makes reconstruction impossible, suggesting that these crops were not used by speakers of Proto East Bodish. Instead, after the breakup of the family, different language groups adapted new terminology as they acquired the grain<sup>8</sup>.

While it is not possible to reconstruct maize, rice and millets to Proto East Bodish, we do see evidence in favour of reconstructing ‘barley’, ‘bitter buckwheat (*Fagopyrum tataricum*)’ and ‘sweet buckwheat (*Fagopyrum esculentum*)’. For ‘barley’, all East Bodish languages have a monosyllabic form beginning with *n*. The following vowel is low in all languages except for Hengke and some varieties of Dakpa, for which it is *e*. The sound change *a* > *ε* when preceding a coronal is typical for Hengke and so *nes* is a regular reflex. Likewise, *s* > *t* in coda position is a sound change in some varieties of Bumthap and Kurtöp and as such the form *nat* in Bumthap is predictable. Not enough is known about the sound changes in the other languages to be certain that the reflexes are predictable but nonetheless we can confidently see that the forms are all derived from the same root, which we tentatively reconstruct as *\*nas*.

We can more confidently reconstruct both ‘bitter buckwheat’ and ‘sweet buckwheat’ to Proto East Bodish. *\*branma* remains as *branma* in Bumthap but coda *n* is dropped in the other languages. The sound change *a* > *ε* is again reflected in the Hengke form *brem* and the loss of the final vowel is also a regular sound change. The change *a* > *e* is also reported in Dakpa and Dzala, and as such it is not surprising to see to see forms with *e* in place of *a*. It should be highlighted however, that the Dzala form has a final *o* in place of *a*. This is likely the result of influence from Written Tibetan *brabo*. Sweet buckwheat reconstructs as *\*kjabre*, with all languages showing a reflex except Hengke, which has replaced the native term with the Dzongkha term. *kj-* palatalises in all East Bodish languages except Dakpa and Dzala. The first vowel fronts in Khengkha and diphthongises in Bumthap; the motivation for these changes re-

<sup>7</sup> The synchronic Dzongkha form for ‘wheat’ is *ka:*. However, the coda *-r* is reconstructible based on the spelling in ‘Ucen: རྩྭ་ལྷོ་ལྷོ་ <dkar>.

<sup>8</sup> Note that being able to identify the source of all the disparate terms, and an understanding of how their history reflected adoption of the new grain technology, in each language, would offer considerable support to this hypothesis. However, in most cases this is not known and remains a matter of ongoing work.



mains unknown. As mentioned above,  $a > e$  is a common sound change in Dakpa and Dzala and is reflected in the second syllable of the reflex. The lack of fronting of the first vowel in the Dakpa and Dzala reflexes is probably due to conditioning environment of the  $a > e$  sound change, which is still a matter of research.

While it is not yet possible to understand all the detailed sound changes which have given rise to the modern East Bodish reflexes for ‘barley’, ‘sweet buckwheat’ and ‘bitter buckwheat’, we can reconstruct a term for the three grains to the parent language shared by modern East Bodish languages with some confidence. Ultimately, of course, we will need to explain all the sound changes in the modern languages, in addition to the replacement of the Hengke reflex for ‘sweet buckwheat’ by the Dzongkha equivalent. This is certainly a different picture than that for the other grains.

All modern East Bodish-speaking populations also rely heavily on dairy production for their livelihoods. Table 3 presents dairy terms in the modern East Bodish languages.

TABLE 3 – Dairy terms in East Bodish languages

Gloss	Da	Dz	Ku	Bu	Kh	Ch	He
‘milk’	<i>jo</i>	<i>jo</i>	<i>ju</i>	<i>dʒu</i>	<i>dʒu</i>	<i>dju</i>	<i>gy</i>
‘buttermilk’	<i>tarba</i>	<i>tarwa</i>	<i>tarwa</i>	<i>tarpa</i>	<i>ɽarwa</i>	<i>ɽarwa</i>	<i>dau</i>
‘cheese’	<i>tʰur;</i> <i>pʰrom;</i> <i>pʰrum</i>	<i>pʰrom</i>	<i>pʰrum</i>	<i>pʰrum</i>	<i>pʰrum</i>	<i>pʰrum</i>	<i>pʰrum;</i> <i>ɽatsʰi</i>
‘whey’	<i>tarcʰu;</i> <i>cʰurgu</i>	<i>cʰurbu</i>	<i>cʰurkʰu</i>	<i>tʰakʰuk</i>	<i>tɕʰorko</i>	<i>tɕʰurkʰu</i>	<i>da:tʰu</i>

We easily see more similarity in dairy terms across the languages than we saw with most of the grain terms. Words for ‘milk’, ‘buttermilk’ and ‘cheese’ appear to readily reconstruct to Proto East Bodish. 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 is needed to understand the precise conditioning environment. All of the other languages, except for Hengke, show palatalisation of the onset cluster. Hengke keeps the velar initial but fronts the vowel, another sound change which is found in the language elsewhere. Reflexes for ‘buttermilk’ are almost identical in all the languages; we reconstruct a form with *-pa* as the second syllable, based on the Bumthap form and that we have seen *pa > ba > wa* elsewhere. We have three roots for ‘cheese’. Kurtöp, Bumthap, Khengkha and Chali all have *pʰrum* and Dzala similarly has *pʰrom*. Some varieties of Hengke make use of the East Bodish form *pʰrum* while others have borrowed Dzongkha

*ɖats<sup>hi</sup>*. Dakpa also has East Bodish *p<sup>h</sup>rom* and *p<sup>h</sup>rum* in addition to Tibetan *t<sup>h</sup>ur*. We reconstruct *\*p<sup>h</sup>rum* to Proto East Bodish, noting that Dakpa and Dzala have lowered *u* to *o*, as has been seen elsewhere. It is worth noting that this root is not unique to East Bodish as it is found in Archaic Tibetan as well to mean yoghurt and buttermilk.<sup>9</sup> We assume the sound change *u > o* has resulted in the Dzala and Dakpa reflex *p<sup>h</sup>rom*, noting that some varieties of Dzala have borrowed the form with the high vowel, probably from neighbouring Kurtöp.

Finally, looking at the different words for ‘whey’, we see a different picture. In Chali, Khengkha, Kurtöp and some varieties of Dakpa we see a form which probably reconstructs as *\*c<sup>h</sup>urk<sup>h</sup>u*, and is etymologically cheese-water (cf. PEB *\*k<sup>h</sup>we*). However, the root for ‘cheese’ is the Tibetan word for ‘cheese’ and thus probably a borrowing into these languages and not reconstructible to Proto East Bodish. The Tibetic root for ‘cheese’ is also present in the Dzala form *c<sup>h</sup>urbu*. Hengke *da:t<sup>h</sup>u* is a borrowing from Dzongkha. Bumthap has a unique first syllable in *t<sup>h</sup>ak<sup>h</sup>uk*; the etymology for this remain unknown though we suspect it is borrowed as there is currently no evidence for Bumthap to have retroflexes in native words.

The grain and dairy terms which we can reconstruct to Proto East Bodish are summarised in Table 4. Because we can reconstruct the grains ‘bitter buckwheat’, ‘sweet buckwheat’, and ‘barley’, we can assume the people who spoke Proto East Bodish were familiar with these crops and made use of them. We have also reconstructed a term for ‘milk’, which should not be surprising as any culture would be expected to have a word for milk. We have tentatively reconstructed a word for ‘buttermilk’ and ‘cheese’, milk products which would suggesting that the people who spoke Proto East Bodish were milking cows or yaks and producing cheese.

TABLE 4 – Reconstructed East Bodish grain and dairy terms

Gloss	*Proto East Bodish
‘milk’	<i>*gju</i>
‘buttermilk’	<i>*tarpa</i>
‘cheese’	<i>*p<sup>h</sup>rum</i>
‘barley’	<i>*nas</i>
‘Bitter buckwheat’	<i>*branma</i>
‘Sweet buckwheat’	<i>*kyabra</i>

<sup>9</sup> I am grateful to Nathan Hill for consulting *Bstan lha*’s dictionary of archaic terminology in order to ascertain this for my benefit.

## 4 Summary and conclusions

The East Bodish language group remains one of the least described sub-families within Tibeto-Burman yet is important for our understanding of the cultural history of the Eastern Himalayas. We have tried in this paper to make some contribution by looking at terms for grains and dairy products from a historical perspective. We saw that most of the grains did not reconstruct to Proto East Bodish. In other words, we do not think that the people who spoke Proto East Bodish used rice, millets, or wheat. We also offered lexical evidence against the reconstruction of a term for ‘maize’, which we already knew was not used in the eastern Himalayas at the time when Proto East Bodish would have been spoken.

Lexical evidence, however, does favour the reconstruction of ‘barley’, ‘bitter buckwheat’, ‘sweet buckwheat’, ‘cheese’ and ‘buttermilk’. We can therefore put forth the hypothesis that speakers of Proto East Bodish cultivated these crops and were dairy farmers. However, it should also be pointed out that we have not ruled out the possibility that similar terms for these grains and dairy products have been borrowed into the different East Bodish languages independently. For example, it could be the case that these grains and dairy technology were introduced into East Bodish speaking communities after the breakup of the family<sup>10</sup>. However, unlike for the other crops, where different language groups show evidence of borrowings from disparate languages, the East Bodish speaking communities were all exposed to the same source. If this turns out to be the case, it would still be worth noting that there appeared to be only one source for ‘buttermilk’, ‘cheese’, ‘barley’, ‘bitter buckwheat’ and ‘sweet buckwheat’. That is, regardless of whether or not we state Proto East Bodish had words for ‘buttermilk’, ‘cheese’, ‘barley’, ‘bitter buckwheat’ and ‘sweet buckwheat’ but not for rice, millets, or wheat, the lexical evidence do suggest that the former group were somehow different than the latter group when it comes to how East Bodish speakers interacted with these.

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<sup>10</sup> See, for example, the discussion in Weiss (2015) about the term for ‘coffee’ being borrowed into several Romance languages.

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## 17

Language documentation improved through  
rhetorical structure analysis<sup>1</sup>

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## 1 Introduction

**T**raditional narratives provide reliable data on clause structure, vocabulary, and morphology and thus documenting verbal artistry has increasingly become a standard language documentation best practice. But verbal artistry also re-forms language for its own artistic purposes. Robbins Burling recognized this in his analysis of the ‘humble’ nursery rhyme, where across several languages he finds a repeated pattern of 16-beat verses. He says, ‘If these patterns should prove to be universal, I can see no explanation except that of our common humanity. We may simply be the kind of animal that is predestined not only to speak, but also, on certain occasions, to force our language into a recurrent pattern of beats and lines.’ (1966: 1435).

The analysis of a Meitei traditional narrative provided in this article demonstrates one way in which humans force language into recurrent patterns for rhetorical effect. Third person narratives share organizing principles that appear to be universal. These principles are based on intonation and pauses (Tedlock 1977, 1983, Sherzer 1982, and McLendon 1982), lexical repetition (Halliday and Hassan 1976) and syntactic constituency (Hymes 1981). These organizing principles create constituents, e.g., pause phrases, intonational phrases, and familiar syntactic and

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<sup>1</sup> To Robbins Burling, thanks for many conversations at conferences from Assam to Arizona and for everything you’ve done for the support of language and culture in Northeast India. The following Meitei speakers gave generously of their time and expertise in transcribing and translating the narrative discussed in this article: Radhe Sham Singh for introducing me to the narrator, Harimohon Thounaojam Singh for his excellent ear and help with transcription, and Somi Roy for his elegant translations. Thanks to Tony Woodbury for teaching me how to appreciate poetics. This work was supported by a Junior Fellowship from The American Institute of Indian Studies (1989–1990) and Research Initiative Grants from the University of North Texas (1996–2000), and a Charn Uswachoke International Development Fund award (2006–2007).

morphological constituents such as clauses, phrases, and words. Woodbury (1985, 1987) demonstrates an overarching organizational principle of narrative that conspires to create what he calls ‘rhetorical structure’. In the default, independent organizational ‘components’ correspond in their chunking of narrative. To signal special meaning such as suspense or heightened emotion, however, expected correspondences can be skewed. This paper investigates the implications of rhetorical structure for language documentation. In particular, grammar presented in narratives should be analyzed keeping in mind that overall narrative organization can modify sounds, morphology, and syntax for artistic effect. This paper is organized as follows: §2 demonstrates the rhetorical structure of a narrative from the Tibeto-Burman language Meitei showing the default overlaps between prosodic, syntactic, and lexical organization; §3 points to unusual grammatical facts due to rhetorical structuring. Following the conclusion in §4, I provide in §5 a detailed rhetorical structure transcription of the narrative under consideration following in general the conventions of Woodbury (1987).

## 2 Rhetorical structure of a Meitei narrative

This section illustrates the rhetorical structure, created through the default and skewed alignments of different phrasings, of a traditional narrative from the Tibeto-Burman language Meitei. Meitei (also known as Manipuri, Meiteilon) is a Tibeto-Burman language spoken by approximately 1.2 million people primarily in the Imphal valley of Manipur, a northeast Indian state.

Meitei exhibits typical features for Tibeto-Burman languages of the region including verb final clause structure, unique differential A and P marking (Chelliah 2016), clause chaining, high agglutination and low synthesis, and small tone inventory. Details on Manipuri grammar can be found in Chelliah (1997). Meitei is a high vitality language; not only do children speak the language in most functional domains, they can tell stories from the canon of Meitei folktales. Core stories from the canon, including the one discussed here, can be found with sound files, interlinear analysis and cultural notes in Chelliah (forthcoming).

The narrative discussed in this article, *Hənúba Hənúbí Pán Thabə Wári* (The story of the planting of Pan by Old Man and Old Woman) (HHPT), was recorded in the course of fieldwork towards language description conducted by me in Manipur in 1986. The narrator is a native Meitei speaker and professional storyteller, Mr. L. Kalachand Singh of Imphal, Manipur. The narrative was transcribed and translated with the assistance of my consultant, Mr. Ningomba Mangla, also of Imphal, Manipur. Translations and transcription were later refined through discussion with Dr. Harimohon Thounaojam and Mr. Somi Roy. The genre title in Meitei is *puŋga wári*, ‘fireside story’ (Soibam 1987). The language used in these stories is colloquial as opposed to the literary style used for the narration of religious epics. Meiteis are well acquainted with the characters

in these stories. Plots may vary slightly with each telling depending on the audience and the narrator. As with most traditional Meitei fireside stories, HHPT contains multiple episodes with main and sideline plots. These are summarized in (Table 1) which is divided roughly into episodes and categorized loosely using Labovian episodic analysis (Labov 1972):

TABLE 1 – Summary of HHPT using Labovian episodic analysis

<b>Abstract</b> (formulaic beginning, summarize the narrative) A long time ago, there lived a married couple.
<b>Orientation</b> (scene setting, background information) They decide to plant a vegetable garden, specifically to plant taro.
<b>Complicating Action</b> (move action forward) A monkey chief tricks the old man into planting cooked taro. The monkeys steal the taro. The couple is duped. The couple takes revenge.
<b>Evaluation and Resolution</b> (states why the story is worth telling) The monkeys are fooled and chased away. Humans are more clever than monkeys.
<b>Coda</b> (formulaic ending) 'That is where I'll end for today.'

At this point, the reader may wish to turn to §5 to read a translation of the story in full. This section also includes a transcription of the rhetorical structure of the narrative HHPT.

## 2.1 Prosodic phrasing

To study the prosodic organization of HHPT I created a transcription of the audio file and divided the transcript into 'lines' (Tedlock 1977, Woodbury 1987). Lines are composed of a single word or string of words which end with a clearly discernible terminal pitch which in the default is followed by a short pause. In the transcription, lines are numbered on the left; lines which follow without separation of pause are preceded by a (%). Flushed to the right hand margin is an indication of the terminal pitch of the line. Possible terminal pitch sequences are listed in Table 2.

TABLE 2 – Line terminal pitch values

<b>H</b> signifies rising pitch
<b>L</b> signifies falling pitch
<b>H+</b> signifies emphatically high pitch, characterized by a strained voice quality, falsetto and a clipped (shortened) vowel
<b>L+</b> signifies emphatically low pitch, characterized by a guttural voice quality and softness

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**!H** signifies membership in a sequence of **H**, where lines echo each other in rhythm.

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**!L** signifies membership in a sequence of **L**, where lines echo each other in rhythm.

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**!L+** signifies **!L** with emphatic low pitch

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The unit higher than the line is the group which is a collection of lines. Groups are indicated and numbered in the transcription where they begin, at the left hand margin, as **G** followed by the group number. A taxonomy of group types is given in Figure 1.

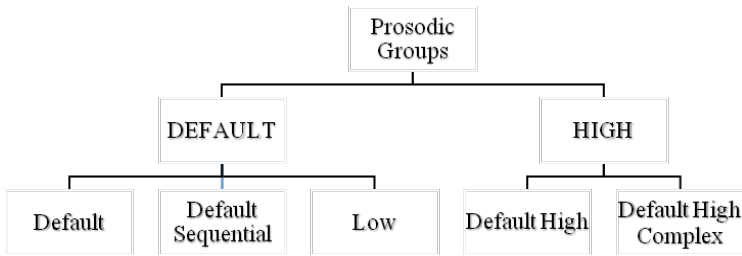


FIGURE 1 – Prosodic group types in HHPT

There are two basic group types: the **DEFAULT** and the **HIGH**. In most languages of the world, a non-falling intonation indicates that the speaker has more to say whereas a falling intonation indicates that nothing more need follow.<sup>2</sup> In keeping with this, a default group follows a **H...L** schema, that is a series of lines with an **H** (**H<sup>n</sup>**) terminal pitch, where the last line of the group has **L** (**L<sup>n</sup>**), where **n**=any number. In the **DEFAULT SEQUENTIAL** group **H** is rewritten as **(H)!H(H)(!H)** and **L** is rewritten as **((!L)(!L)+**, where the parentheses signify optionality. The **L** group is a series of **!L** followed by **!L+**. Default groups end with an **L** that is characteristically **L+** or **!L+**.

There are two types of **HIGH** groups. The terminal pitch sequences of such groups form an obvious unit because of their characteristic **H+** endings, often accompanied by emphatic intonation and loudness. In addition final lines of such groups can exhibit a marked lack of expected pause. High groups follow a **H<sup>n</sup>... H+** schema. High complex groups exhibit the following schema: **{(!L<sup>n</sup>)(H<sup>n</sup>)}(!H<sup>n</sup>)L<sup>2</sup>...(H)H+**, where the raised 2 indicates any number up to two.<sup>3</sup> The

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<sup>2</sup> This should not be taken to mean that illocutionary types model similarly in Meitei: declaratives typically have a phrase final falling intonation but interrogatives have a typically phrase rising-falling intonation. The effect of tone and pragmatics on speech acts and intonation needs to be studied further.

<sup>3</sup> There is no instantiation of **!LnHn!HnLn**, thus the necessity for bracket notation.



internal **L** of the high complex group does not exhibit the characteristics of a default group final **L**. Additionally, it interacts in an interesting fashion with other prosodic features within a group; typically it appears before a group ending with an **H+** where the final line has a marked suppression of pause. Its function seems to be to act as a ‘false ending’ to a group, creating a sub-group within group, adding dramatic effect to the final **H+** that is to come. Table 3 gives an exhaustive listing of groups along with a specification of group type, line terminal pitch sequences within the group and the characteristics of group terminal pitch transcribe by ear and confirmed by instrumentally.

An example of a Default H group is given in (1). This is group (16), which consists of lines 49–54. The number of seconds at the end of a line is indicated in angled brackets if that pause is notably longer than other pauses in the narrative, e.g., line 49 ends with 1:08 second pause. There is a marked suppression of pause between (51) and (52) and this is indicated by the %. A sudden fall in pitch is indicated by the asterisk.

(1)	(G16)				
49.	<i>háydánə,</i> so.saying	<i>magi</i> his	<i>núpi</i> woman	<i>ásínə</i> <1:08>	(H)
50.	<i>mukhí</i> best.variety	<i>pán</i> arum			(H)
51.	<i>phəzəkhərábə</i> being.beautiful	<i>nóy-nóy</i> very.plump			(H)
52.	%( <i>hék</i> ) just.now				(H)
53.	* <i>ləwbədu</i> taking.that.out				(L)
54.	<i>laytəŋ</i> basket	<i>əmə</i> one	<i>puθorəkʔi</i> (.) <1:27>		(L+)

Table 3 should be read as follows: Column A indicates the group number; Column B lists the lines which belong to this group; Column C indicates the group type (D = default group; DS = default sequential; LG = low group; HG = high group; HC = high complex); Column D indicates line terminal pitch sequences within the group (numerals indicate number of instantiations); and Column E indicates the characteristics of group terminal pitch; V^ = strained vowel; and [] = line with marked suppression of pause,

TABLE 3 – Taxonomy of group types

A	B	C	D	E
G1	1-2	D	HL+	
G2	3	LG	L+	
G3	4-5	HG	HH+	V^
G4	6-7	HG	HH+	V^
G5a	8-10	HC	H2L	
G5b	11-12	HC	HH+	V^,strained ,[]
G6	13-16	DS	!H3L+	V^
G7	17-19	D	HLL+	soft
G8a	20-26	HC	!L3H3L	
G8b	27	HC	H+	V^,[]
G9	28-30	D	HL+	[]
G10	31-33	D	H2L+	
G11	34-35	D	HL+	[],soft
G12	36-39	LG	!L3L+	soft
G13	40-43	D	H5H+	V^
G14	44-45	D	HL+	
G15	46-48	D	H2L+	
G16	49-54	D	H4L2+	
G17	55-57	HG	H2H+	[],V^
G18	58-63	D	H4L+	
G19	64-65	D	HL+	[],soft
G20	66-68	D	H2L+	
G21	69-71	D	H2L+	soft
G22	72-74	LG	!L2L+	
G23	75-76	D	HL+	
G24	77-82	DS	H!L4L+	soft
G25	87-90	D	H7L+	[],soft
G26	91	LG	L+	[],soft
G27	92-100	DS	H4!L4L+	
G28	101-102	D	H2L2+	[]
G29	107-108	D	H3L+	
G30	109-112	D	H2!H2L+	
G31	114-117	DS	H!2HH2L+	
G32	119	D	HL+	
G33	120-127	DS	H2!H5L+	
G34	128-129	D	HL+	soft
G35	130-142	DS	!H5H6LL+	soft
G36	143-145	HG	H4+	[],strained
G37	146-147	D	HL+	
G38	148-159	DS	H!H4H5L+	
G39	160-162	LG	!L2L+	
G40	163-174	DS	H!H4H5L+	
G41	175-179	D	H4L+	

A	B	C	D	E
G42	180	D	HL+	[]
G43	182-184	HG	(HL)HH+	[],strained
G44	186-187	D	H2L(HL)L+	soft
G45	192	LG	L+	
G46	193-198	D	H5L+	
G47	199-200	D	HL+	
G48	201-203	D	H2L+	
G49	204-209	D	H5L+	
G50	210-213	D	H3L+	
G51	218-219	D	H6L+	
G52	221-229	DS	H5!H3HL+	
G53a	230-232	HC	H4L	
G53b	233-234	HC	H+	V^
G54	235-236	D	HL+	V^
G55	237-240	D	H3L+	[]
G56	241-244	D	H3L+	
G57	245-254	D	H8LL+	[],soft
G58	255	LG	L+	[],soft
G59	256-258	D	H3L+	
G60	259	LG	L+	soft
G61	260-272	D	H5(HL)H2L+	soft
G62	273-275	D	H2L+	
G63	273-281	D	H5L+	
G64	282-287	D	H4L+	
G65	288	HG	HH+	[],strained
G66a	290-295	HC	H!H3L2	
G66b	296	HC	H+	V^
G67	297-300	D	H4L+	soft
G68	301-307	DS	H!H2H4!H4!L3!L+	
G69	308-316	DS	H2!H2H7L+	
G70	317-328	DS	H5!H3H!H3L+	
G71	329-341	H	H2H+	V^
G72	342-344	D	H2L+	
G73	345-346	HG	LH+	V^
G74	348	DS	!H6L+	
G75	350-354	D	H4L+	
G76	355-356	D	HL+	
G77	357-358	D	HL+	
G78	362	D	H8L+	
G79	363-373	D	H8L+	
G80	374-382	D	H8L+	

An example of a default Sequential Group, Group 6, is given in (2). Here we find a sequence of three metrically similar lines, all with final H high pitch and culminating with a line with emphatic low pitch.

- (2) (G6)
- |     |                       |               |      |
|-----|-----------------------|---------------|------|
| 13. | <i>ásum</i>           | <i>háynə:</i> | (!H) |
|     | thus                  | that.way      |      |
| 14. | <i>áni</i>            | <i>ási:</i>   | (!H) |
|     | two                   | this          |      |
| 15. | <i>čannə-čínnənə:</i> |               | (!H) |
|     | with closeness        |               |      |
| 16. | <i>palləbə(.)</i>     | < :80 >       | (L+) |
|     | living                |               |      |

The narrative is not a collection of loosely juxtaposed prosodic groups. Instead, cohesive devices work to provide a unified texture to the narrative (Halliday and Hasan's 1976). Sentence internal cohesion is obtained through the use of adverbials as those listed in (3). These connectives occur within and across clauses. Interestingly, they occur regularly at the boundaries of prosodic groups where they serve to establish cohesive semantic relations, e.g., causal (G5–6, 69–70, 78–79); temporal (G8–9, 34–35, 39–40, 45–46 51–52), referential (G12–13, 32–33, 52–53a), adversative (G10–11), and additive (G31). A morphological analysis for each of these forms is given in Chelliah (1997).

- (3)
- a. *ádu* 'this'
  - b. *ádudə* 'at that, and, but'
  - c. *ádugi* 'of that, for that'
  - d. *ádugumbə* 'like that'
  - e. *ádunə* 'then, therefore, thus, that'
  - f. *ádunidənə* 'in that way'
  - g. *ásum* 'thus'
  - h. *mádudi* 'that'
  - i. *másidə* 'in this'

Consider now the relationship between prosodic groups, syntactic constituents, and pauses. There are default interactions between the edges of groups listed in Table 3 and lines as constituted by the occurrence of pauses: out of 79 groups, 66 end with notably long pauses. The length of pause is indicated in angled brackets < >. The lack of pause at the end of group clearly feels like a suppression of a natural prosodic break. This suppression is used for special effect such as the rapid back and forth of conversation between the old man and monkey

chief; a quick sequence of actions; or a tight link with a following group indicated by a well-placed connective, i.e., adverbials or quotatives at the edge of the Group. In fact, there is a repeated and therefore expected association between clauses, prosodically defined groups and connectives. For the most part, the ends of clauses coincide with ends of prosodically defined groups. This is true for 73 syntactic units; for example, in **G4, G7, G20, G24** there is one clause per prosodic group and in **G25, G29, G35, G37, G38** there is more than one clause per prosodic group. But in exceptional cases clauses can be spread out between two or more groups. In these instances, an adverbial or quotative occurs at a group boundary. An example is provided in (4).

- (4) (G15)
46. *O!* <1:26> H  
O!
47. *pu-puthorəkʁu* H  
bring-carry.out
48. *áy tharəge* <1:20> L+  
I will.plant
- (G16)
49. *háydána, magi núpí ásinə* <1:08> H  
so.saying his wife this
50. *mukhí pán* H  
best.variety taro
51. *phəzəkhərəbə nóy-nóy* H  
being.beautiful plump.plump
52. *%hek* H  
just
53. \* *ləwbədu* L  
which is
54. *laytəŋ əmə puthorəkʁi.* <1:27> L  
basket one brought.out

Line (49) ends a Group and coincides with a long pause but line (50), the beginning of a new Group, begins with a quotative that refers back to line (49). In this way, the mismatched overlay of syntactic constituents on prosodic groups caus-

es an underlying raggedness which is mitigated through the use of the connectives and quotatives.

## 2.2 Lexical cohesion

Lexical cohesion is obtained through repetition of a phrase or word or a part of a phrase or word. This repetition, or what Halliday and Hasan call ‘reiteration’, allows for the identification of a previously introduced concept in a new frame of reference. Repetition within prosodic groups is frequent: G30 (lines 109–110); G40 (lines 171–172); G41 (lines 178–179); G46 (lines 195/196–198); G48 (lines 204–205); G56 (lines 244–245). An example is provided in (5) with the repeated portions bolded.

(5) (G41)  
 176. *túren*      ***khoybándə***      ***həwbə***,      **H**  
 stream      at.the.canal      growing

(G42)  
 177. ***khoybándə***    ***həwbə***    *ləmbán*    *əčəwbədu*    *purəkʔəgə*,  
 at.the.canal    growing    plant    that.big.one    after.bringing  
*loynə*      *thazəlləmmə*.      **H**  
 all      planted.over.there

Often, cohesion through repetition is accomplished through the head-tail linking construction (Thurman 1975) where the final content of a clause is repeated as a converb at the beginning of an adjacent clause as in (6).

(6) (G30)  
 109. [*khétle háyrəgə*,      *čəphú*      *əmədə*  
 scrape having.done      pot      in.a  
  
*phəjənə*      ***yanthokpiro***] <1:00>      **H**  
 beautiful      steam  
  
 110. ***yanthokʔe***      *háyrəgə*,      *lá-látóndo*      **H**  
 steam,won't,you      having.done      top.of.banana.leaf

Tail-head linkage across prosodic group boundaries is especially effective in tying together the narrative. See (7) and (8). Here, at the end of the prosodic group, we see the line end (pause), and syntactic boundary coincide to form a hard break in the flow of the narrative. The repetition at the beginning of new prosodic group, line, and syntactic unit, reinitiates narrative flow.

(7)	(G62)				
275	<i>khárúŋ</i>	<i>áčəwbə</i>	<i>ámədə</i>	<i>hápčəllu.</i> <1:18>	<b>H</b>
	pot	big	one.in	put	
	(G63)				
276.	<i>hápčillerəgə,</i> <1:02>				<b>H</b>
	putting.in.when				
(8)	(G9)				
30.	<i>thábák</i>	<i>kháradi</i>	<i>təwbə</i>	<i>čummína.</i> <0:95>	<b>L+</b>
	work	some	do	is.desirable	
	(G10)				
31.	<i>čummída</i>	<i>íbəmmá</i>			<b>H</b>
	it.is.desirable	dear.woman			

Other examples of repetition across prosodic groups are in G9–10 (lines 29–30); G50–51 (lines 214–216); G53a–53b (lines 238–239); G62–63 (lines 276–277) ; G66b–67 (lines 297–298) ; G70–71 (lines 331, 329–330) ; G75–76 (lines 356–357, 358).

Finally, interjections, indicated in the transcription through underlining and bold font, are also repeated for rhetorical purposes. Interjections interact with prosodic phrasing in that they occur line initially. Increased amplitude and higher pitch bring interjections in sharp focus. They function to introduce the speech of characters as in G13–15 and G35–36, where the old man and woman converse and in G26–34 where the old man and the monkey chief converse. Repetition of the interjections functions to match up adjacency pairs especially when there is a verbal duel taking place between characters. Predictably, adjacency pairs begin with different, non-repeated, interjections when signifying the close of conversational exchanges, as in the beginnings of G13–15, 33–34. Following a similar pattern, interjections mark off sections of the monologue delivered by the old man as he complains about the effects of the curry on his body. In the first two sections, marked by ‘Eh!’ he identifies his problem and states his symptoms. In the concluding section, which begins with the same interjection he blames his wife for his condition.

### 3 Grammar, pronunciation, and rhetorical structure

Clause chaining, intonational and pause structuring, and lexical repetition create strong cohesive bonding between these episodes. It is important for the language documenter to recognize that grammar can be bent to these rhetorical needs. For instance, in order to get an equivalent number of syllables in 36–38,

the narrator breaks a morphological word (37 and 38 together would constitute that word) into two, i.e., lines 37 and 38. See (9) for this example.

- (9) (G12)
- |     |                |    |
|-----|----------------|----|
| 36. | <i>másídə</i>  | !L |
|     | regarding this |    |
| 37. | <i>phəgədə</i> | !L |
|     | good.          |    |
| 38. | <i>bəsidi</i>  | !L |
|     | that is        |    |

Note that *phəgədəbəsidi* is usually pronounced with low initial pitch and rising pitch through the word. Here it is broken into two so that pitch is reset for each portion. In addition, instead of ending with high pitch, it ends in low. Other examples of morphological words broken between lines are in 197–198 and 308–316.

Both vowel length and vowel clipping (extreme shortening) are used for rhetorical purposes. In lines 13–15 for example, final vowels are all lengthened and then the Group final line, line 16, appear with L final pitch and clipped vowel with heavy stress. This is not ‘normal’ pronunciation and should not be used for phonemic analysis.

- (10) (G6)
- |     |                               |               |    |
|-----|-------------------------------|---------------|----|
| 13. | <i>əsum</i>                   | <i>háynə:</i> | !H |
|     | thus                          | that          |    |
| 14. | <i>əní</i>                    | <i>əsí:</i>   | !H |
|     | two                           | this          |    |
| 15. | <i>čannə-čínnənə:</i>         |               | !H |
|     | with closeness                |               |    |
| 16. | <i>palləbə,^ &lt;0:80&gt;</i> |               | L+ |
|     | lived                         |               |    |

Word order can be highly stylized and is not reflective of core syntax. In (11) for example the agent final order is highly unusual; in fact, in conversation, agents, as is common for this area, first person agents, are rarely expressed.



(11) (G37)

146. 'héy!	<i>núpí</i>	<i>máwá</i>	<i>láwde</i>	<i>áy.</i>	<b>H</b>
What!	wife	your word	don't take	I	

These are a few examples of how verbal artistry reshapes language for artistic purposes. While language documentation and preservation must include data from traditional narratives, the documenter/descriptivist must understand both grammar and rhetorical structure to appropriately separate form from artistic function.

## 4 Discussion and conclusion

In a recent plenary address, Anthony Woodbury stated that

Documenting verbal artistry . . . promotes grammatical and lexical investigation both by necessity—so we can access the material at a basic level—but also encourages deep inquiry to the nature and plasticity of speakers' knowledge of grammar and lexicon . . . [because] verbal art mobilizes the authentic structures, categories, and processes of grammar (Woodbury 2015).

There is no argument that the documentation of verbal art is of the utmost value to the language documentation process and to the revitalization of language and cultural practices such as storytelling. Documenting Meitei *puŋga wári* provides an excellent complement to grammatically focused documentation because data from these stories yields expressive language rarely seen in data garnered through introspection, elicitation, or experimentation. But additionally, it is clear from this Meitei example, that narrators create an extra layer of structure, i.e., rhetorical structure. This structure must be fully understood in utilizing narrative data for phonemic, morphological, and syntactic analysis.

## 5 Rhetorical structure transcription of HHPT

The following is a rhetorical structure transcription of *Hənúba Hənúbí Pán Thabə Wári* 'The Story of Old Man and Old Woman Planting Taro'. The following conventions have been used to try to bring to life the prosodic and other phrasing organization: adverbials: underlined and italic; falsetto: bold italic; interjections: underlined and bold; loud, emphatic: bold; marked suppression of pause: []; no pause preceding phrase: %; soft: italic strained voice quality: ^; sudden fall or rise in pitch \*; by way of clarification: <>; group number (Gnumber); line number Arabic numerals followed by period; pause in seconds <>; line terminal pitch (H), (L), (H+), (L+), (!H), (!L), (!L+).

1. **tháyna** (H)  
long
2. tháyna      mémaŋŋəydə (L+,**G1**) <1:43>  
long          during
3. mígə          láygə          səmnəriŋəydə  
man and      god and      during the joining together
  
- kal          *ədudə* (L+,**G2**) <1:48>  
time      at that
  
4. hənúbə      hənúbí: (H)          5. *palləm̄mi*.^ (H+,**G3**) <3:36>  
old man      old woman          lived  
'A long long time ago, in the era when the gods and man lived together,  
there lived an old man and woman.'
  
6. óní      ésí      éśúkki-mátík (H)          7. nuŋšinóy.^ (H+,**G4**) <1:85>  
two      these      completely compatible          love each other  
'These two were very much in love with each other.'
  
8. mápúróybəgi: (H)          9. yathəŋ      mótúŋ      innə: (H)  
her husband's          command      behind      following
  
10. mági      núpí      *ədúnə* (L,**G5a**)  
his      wife      that
  
11. tálóy      éđúnə      čətli.^ (H)  
wife      that      followed
  
12. [tálóy      éđúnə      háybə      wádo      mápúróybədunə  
wife      that      that      word      her husband that one  
  
yámnə      niŋthinə      illí.^] (H+,**G5b**) <1:80>  
a lot      nicely      follows  
'The wife followed her husband's instructions and the man followed his  
wife's instructions to the letter.'
  
13. ésum      háynə: (!H)          14. éní      ésí: (!H)  
thus      that way          two      this
  
15. čənnə-čínənə: (!H)          16. palləbə.^ (L+,**G6**) <0:80>  
with closeness          living

17. tháyne mómamehəygi (H)  
long of before
18. \*mótəmgi (L) <1:21> of the past  
‘Thus did the two live together in harmony with closeness and intimacy. After all they were a man and woman of those ancient times.’
19. nípi-nípanido. (L+,G7) <2:00>  
that man and woman were
20. nohmədi (!L) one day
21. kəmdəwri, (!L) it so happened
22. hənúbíduna (!L) the old woman
23. máy núpádudə háyrəkʔe, (H)  
her to her man said to
24. “íbúhho: (H) dear one
25. áykhóybu: (H) to us
26. yúmbanlón ésidə ónthoknə wáredé, (L,G8a)  
household that extreme amount be only grief  
‘One day, as it so happened, the old woman said to her husband, “Dear one, the way we are running our household is difficult, I’m not happy with this.”’
27. [káytheldəgi póttə lóydúnə sum čábəsi  
from the market things buying continuing for eating  
nuhəytəre;^] (H+,G8b) <1:05>  
not pleasing  
‘It is not satisfactory that we buy things from the market this way’.
28. édúnə, (H) then
29. [əhəmbə iŋkhol kóybəgi(H)  
much as possible vegetable garden gardening
30. thábək khérədi təwbə čummína”]. (L+,G9) <0:95>  
work some effort is correct  
‘So, as much as possible it would be right to put our best effort towards vegetable gardening.’
31. “čummídá íbémmá: (H)  
correct my mistress
32. máčutaydə nəŋ ésé, (H)  
good judgment you this

33. ádúnidánə yúmbanbáyduði, (L+,G10) <0:99>  
that is how running a household
34. ádá (H) well 35. [iŋkholnedánə táwribsinə  
saying about gardening by doing that  
átəy yénšəŋ thabəði íphát-phátʔedo,] (L+,G11) <0:80>  
other vegetables that planting not at all good  
'<The husband replied>, "My mistress, how right you are. You show  
excellent judgement. Now that is what we call good housekeeping. Well,  
because of the condition this garden is in, it will not be desirable to plant  
just any vegetable.'
36. mäsídə (!L) regarding this 37. phəgədə (!L) good 38. -bəsidí (!L) that is
39. pángə tharəbəði yamnə phənihé." (L+,G12) <1:20>  
taro if we plant a lot it will be good, I say  
'In view of this it would be very good if we planted taro.'
40. "é?! ádúy wá oyrəboyrədi, (H)  
Great! that idea if that is it
41. əynə nəhál ádo, (H)  
I other day that
42. pán írónbə<sup>4</sup> čáge háydánə (H)  
taro curry intend to eat after saying
43. pándu laytəŋ əmə hék ləyrəkprəni^ (H+,G13) <2:01>  
taro basket measure one just bought
44. ádúnə^ (H) so then 45. tharəbəði ónthoknə  
if we plant extreme amount  
phəkhərənídə." (L+,G14) <0:92>  
going to be perfect  
'<The wife said>, "O.K.!, That would be good. Just the other day I bought  
a basket measure of taro for making *ironba*. If we planted *taro* it would be  
very suitable to our needs.'

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4 Spicy mashed taro with chilies and dried fish. It can be made with a variety of additional vegetables.

46. “**62!** (H) <1:26>  
Good!
47. pu-puthorəkʔu, (H)  
bring it out
48. áy tharəge,” (L+,**G15**) <1:20>  
I want to plant
49. háydánə, mági núpí ósínə (H) <1:08>  
after saying his woman this
50. mukhí pán (H)  
best variety taro
51. phəzəkhərəbə nóy-nóy (H)  
being beautiful very plump
52. %hék (H)  
just
53. \*ləwrəbədu, (L)  
that which is
54. laytəŋ əmə puthorəkʔí. (L+,**G16**) <1:27>  
basket measure one brought out  
“‘Good, bring it out’, I’ll plant it”, and so, the wife brought out a basket full of plump, healthy looking taro of the best variety.’
55. hənúbəsinə (H) <0:84>  
this old man
56. pán laytəŋdumə purəgə, (H)  
taro a basket after taking
57. [mági iŋkhol phəjənə^ təwrəbədu, kəŋkhún əsí  
his garden beautifully prepared hole this  
phəzənə həndúnə thəmməbə,^] (H+,**G17**) <1:08>  
beautifully planting putting
58. ədó, “pán ósí thage,” háydánə, (H) <0:90>  
then taro this intend to plant after saying
59. hék (H) <1:10>  
just
60. kəŋkhúl ədúdə(H)  
hole in that
61. pán mənawsi (H)  
taro this young one
62. hék (H) <0:75>  
just
63. phumbədudə, (L+,**G18**)  
when covering

64. garden that  
iṅkhol éđúđə (H)
65. [ákovábə lóm éđúđə ləybə yonḵaw khulákrə  
tilled land that to be big monkey chief  
háybə, mígə čǎp-mánnə síḵbə  
that man and exactly-like being wise  
yoy ḁmə ləyye.ʌ] (L+,G19) <1:50>  
monkey a was  
'This old man, carrying the basket of taro, after hoeing the garden well, after making perfect holes, wanting to plant the taro, placed the new taro in each hole and covered each hole with earth; now, at that time in the surrounding land, there was a monkey known as the big monkey chief, who was just as smart as man.'
66. yoy éśínə (H) 67. **phón** (H)  
monkey this sound made when jumping
68. čonṯhorəkʔəgə, (L+,G20) <0:99>  
after jumping out
69. **“ípu:!(H)** 70. **“ípu!”** (H) 71. háynə (L+,G21) <0:99>  
ipu! my grandfather that said  
'This monkey jumped out and having jumped out said, “Yoohoo! grandpa”.'
72. hənúbədú (!L) 73. kidónə (!L) 74. yeḡḡí. (L+,G22)  
that old man fearfully looked  
'The old man looked up in fright.'
75. %**“ípu:!** ípu,” (H) 76. háynə háy. (L+,G23)  
ipu! my grandfather that said  
“‘Itu! Grandfather!’,” <the monkey> said.'
77. %“kəyno háy, (H) <0:77> 78. nəḡnə (!L) 79. əyḡóndə, (!L)  
what’s up you to me
80. “ítúhu! (!L) 81. ípu,” (!L) 82. háybədi?” (L+,G24) <1:00>  
uhoo my grandfather saying that  
'<The old man said>, “What is it, why do you keep calling out, ‘Grandfather!’ , to me?”'

83. “ípúnə pán tharibədu lallene.” (H)  
by my grandfather taro planting is wrong  
“Grandfather, your method of planting taro is not correct.”
84. “kərəm-háyənə lallibə?” (H)  
how is that being wrong  
“Why do you say that I am wrong,” <the old man replied>.’
85. “čawrəroy mádúdi, (H) 86. yam kuynə hówroy. (H)  
<1:75>  
won't get big that lot length won't start to grow  
'<The money said>, “It will not be big, it will not grow for a long time.”
87. áydi (H) 88. ípúnə khəḡdrábənəni, (H)  
it is I my grandfather is not knowing
89. ípúdəgi pháwbə, (H)<1:20>  
from my grandfather to divert into
90. [iḡkhol kóybədə  
two garden at that gardening  
áy yamnə həybə jatni.”] (L+,G25) <0:95>  
I a lot proficient type  
'<The monkey said>, “Grandpa doesn't know this but even more than  
grandfather I am really good at gardening.”
91. [“é! nəḡgumbə yoḡnəbu mídəy  
Hey! like you just a monkey from man  
hennə síḡbə hównəbrəne.”^] (L+,G26) <1:25>  
more clever is it possible  
'<The old man said>, “Oh yeah? How can a monkey like you be cleverer  
than man?”
92. “é! “mí: yoḡ (H) 93. hənúbədi (H)  
well man monkey old men
94. yoḡ malli:,” (H) 95. háybə wá ləy, (H)  
monkey be like that word so be
96. hənúbəgi (!L) 97. mótəwdi (!L) 98. yoḡ áykhóygi (!L) <1:00>  
of old men behaviour monkey our





109. [khétle háyráǵə, čǝphú ǝmədə  
scrape after doing pot in one  
  
phǝǵənə ɲanthokpiro]. (H) <1:00>  
beautifully steam  
'After having scraped the taro, steam it well in a pot.'
110. ɲanthokʔe háyráǵə, lá-látóndo (H) 111. ǝdúnə (!H)  
steamed well after doing top of banana leaves then
112. phǝǵənə (!H) 113. máyóm-máyóm yómbiro.  
(L+,G30)beautifully wrap make a packet, won't you
114. % pán (H) 115. % ǝní-ǝní (!H) 116. ǝhum-ǝhum(!H)  
taro two by two three by three
117. ǝdúǵə (H) 118. káɲkhún ǝdúdə thabirəmmo. (L+,G31)  
then hole in those please plant  
'After having steamed the taro, nicely make packets of two or three pieces  
of taro in banana leaves and put a packet in each hole.'
119. % [həyeɲ noɲɲalləkɔədədi khwáɲmúk  
tomorrow when dawn has broken about waist  
  
wáɲǵədəbənine.]" (L+,G32) <1:03>  
is certainly going to be high, you know  
'By tomorrow morning they will as high as your waist.'"
120. "ǝ! (H) mǝdúdi phənəbu, natəy-čáyhé," háydənə (H) <0:80>  
Really! that is good fitting after saying
121. pǝɲtáktəwrǝbə ǝhən (!H) 122. ǝsínə, (!H) <0:85>  
dimwitted elder this
123. "phǝre! (!H) 124. ǝdúdi (!H) 125. həyeɲyeɲnəni. (H) <0:90>  
that's good at that tomorrow we will see
126. sóybə tarəbədi nəɲ (H) 127. phúbə taydo." (L+,G33)  
mistaken if it falls out you beating will fall out  
"That sounds wonderful, how fitting," thus saying, this somewhat  
dimwitted elder, "O.K., let's see <what happens> tomorrow; if it turns out  
that there is some mistake, I'll surely beat you."

128. % “**hé!** phúbiyu ipú,” (H) <0:80> 129. háynə. (L+, **G34**) <1:70>  
 Sure please beat grandfather said that  
 “‘Sure, please beat me grandfather”, said <the monkey>.’
130. māsídəgi (!H) 131. hənúbəsinə (!H) 132. čəŋŋədənə (!H)  
 then this old man on entering
133. máy núpídə háyre, (!H) 134. % “**háý!** (H)  
 his woman said Hey!
135. [pán thabəga həyrəbə yon khulákrəmə  
 taro of planting proficient monkey a chief  
 theŋnəre yonjaw khulákrə əmə.] (H)  
 met big monkey being chief one  
 ‘Then, on entering <his house>, the old man said to his wife, “Heh! I’ve met a monkey who is well trained in the art of planting taro.’
136. mánə háybəbu, (H) 137. “**phǎjənə** (H) 138. khétokʔəgə (H)  
 he according to beautifully after scraping  
 well
139. ŋalləgə (L) 140. máyóm-máyóm thaw, (L)  
 after steaming wrapping plant!  
 ‘According to him by planting the taro after scraping and steaming well.’
141. həyeŋ khwáŋmúk waŋni,” háyrine, (L)  
 tomorrow around waist will be tall that was said
142. % *ibémmá.*” (L+, **G35**) <1:29>  
 my dear woman  
 ‘Tomorrow it will be about waist high, he said, my dear madam.’”
143. “**é!** íbúŋŋo mádú natəy-əmə-čádedə.  
 Hey! dear one that a crazy thing  
 ‘<The old woman says>, “Oh, dear one, that is not possible.’
144. mádú əy thájədedə. (H)  
 that I do not believe  
 ‘I do not believe that.’



163. [nuŋdaŋ      éđúdə      móynə      túmdúnə      læyriŋŋəy      kandudə,  
 night      at that      they      while sleeping      being      at that time  
 yoŋʃaw      khullákpədunə      yoŋ      móyam      purəktónə,] (H)  
 big monkey      that chief      monkey      many      bringing from there
164. káŋkhúl      əməgə (!H)      165. yoŋ      əməgə (!H)  
 hole      within each      monkey      within each
166. káŋkhúl      əməgə (!H)      167. yoŋ      əməgə, (!H)  
 hole      within each      monkey      with one
168. loynə (H) <0:69>      169. pán      éđú      haydohtónə, (H)  
 all      taro      that      uncovering
170. məkhum      haŋdohtónə (H)      171. lóykhómsú (H)  
 packet      opening      also dirt
172. táydre. (H)      173. **hawre:**,      mónmón (H)  
 not smeared      were tasty      softly
174. láy čáthokkhəre. (L+,**G40**) <0:99>  
 were      ate up all  
 ‘That night while they were sleeping, the monkey chief came bringing a large number of monkeys, there was one monkey for each hole <who> uncovering all the taro plants, opening up the packets, <finding them> with not soil on them, so soft, and so tasty, ate them all up.’
175. čénkhidúnə, (H)      176. túren      khoŋbándə      hówbə, (H)  
 ran away      river      bank      grow
177. khoŋbándə      hówbə      lám**bá:n**<sup>5</sup>      əčəwbədu      purəkʔəgə, (H)  
 bank to      to grow      wild arum      that big      carrying
178. loynə (H)      179. thazəlləmme. (L,**G41**) <1:10>  
 all      planted  
 ‘They ran down to the river bank where the big wild arum grew, brought back <the wild arum> and planted all of it <in place of the real taro plants>.’
180. əhən      əsínə (H)  
 old man      this

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<sup>5</sup> *Ləmbal* is a type of inedible wild arum found in meadows and near ditches.





206. *utoŋðə* *námdónə* (H)  
in bamboo cylinder by force
207. *čəphúðə* *námme,* *háyrəgə,* (H) (L+,G49)  
in clay pot pressed after doing
208. *səmbə,* (H) *hénták* *kəwwído.*  
preparing seasoned dried fish that is called  
'How is dried fish prepared: first, the small fish are dried, then pounded finely <into a powder>, then <the fish powder is> pressed into bamboo cylinders or an earthen pot. Seasoned dry fish is made this way.'
210. *ədúgumbə* *hénták əsé* (H) 211. *mási* *móygidi*  
being that dried fish this their  
*ləyrəmdədónə,* (H) 212. *mánaw núpígídə* (H)  
not having at little sister's
213. *lówbə* *čətli.* (L+,G50) <1:40>  
to take went  
'That being said, finding that they did not have this kind of dried fish, (the woman) went to her younger sister to get some.'
214. *mánaw núpígídə* (H) 215. *hénták* (H)  
at little sister's dried fish
216. *káŋdrúm* *məčá^*(H)  
hockey puck small
217. *písák* *əmə* *khútəŋ^* *pírəkʔí.* (H)  
a little a very little gave  
'From her little sister's house she got a very tiny, small hockey-puck size piece of dried fish.'
218. *máy* *núpísínə* *páyənə* *lakpədə,* *wákhóŋ* (H)  
his this woman holding while coming bamboo grove
219. *%ədúðə* (H) 220. *nánthoktənə* *takhre.* (L+,G51) <1:10>  
at that by slipping fell  
'His wife (on her way home), holding (that piece of dried fish) slipped and it fell at the foot of the bamboo grove.'
221. *ədəgi* (H) 222. *thibəm* *khəŋdrəbdudə,* (H)  
then searching place did not know where to look

223. mǎdúgi mǎʔóŋmanbǎ, (H) <1:35>  
so smell alike
224. [thǎŋgǎysǎŋbǎ héntákti nǎttǎbǎ,  
found that dried fish not  
mǎsǎk-mǎtǎwǎdi manbǎ,] 225. ádúgǎ (H)  
appearance being similar that
226. mǎnǎm mǎhádi (!H) 227. ludrǎbǎ (!H)  
smell bad unknown smell
228. thǎŋgǎysǎŋbǎ (!H) héntákti nǎttǎbǎ, (H)  
found that dried fish not
229. %kǎrigumbǎ pót ámǎkhák phǎŋŋe. (L+,G52) <1:20>  
something thing one found  
'Since she did not know where to look for it, she found something that looked like the dried fish but truly not the dried fish, it was alike in every way (with the dried fish) but had additionally an unknown strong smell that was truly not that of dried fish.'
230. pót ádú púrǎkʔǎgǎ, (H) <1:39> 231. čǎphú čǎmǎyǎdǎ  
thing that after bringing pot on surface
- ǎa:lle háyrǎgǎ, (H) 232. ŋǎsǎygi lǎmbál ádúgǎ (H,G53a)  
steamed after doing earlier wild arum and
233. írǎndudǎdi (L) 234. hénták mǎnǎm nǎmdǎre. (H+,G53b) <1:12>  
this ironba dried fish smell not smell good  
'Having brought the thing, they steamed it <by putting it in the pot in which something was cooking, the resulting ironba of the wild arum about which we heard of some time ago did not have the smell of dried fish.'
235. mǎnǎm nuŋšidǎbǎ, (H)  
smell not pleasant  
'The smell was not pleasant.'
236. nǎmthíbǎ pót ámǎ nǎmme. (L+,G54) <:85>  
bad smelling thing one smelt  
'They smelt something bad.'
237. “é! kǎyno nǎmthíkhredǎ! (H)  
Oh! what is it smells just terrible  
'<The man said>, “Oh what is going on? The smell is terrible!'



238. *sídi* (H) <:96>                      239. *hénták*nə      *phátəbəne* (H) <1:30>  
 this    dried fish              it is bad, you see  
 ‘This dried fish is bad, it seems . . .’
240. [*háybədudə pán*    *ódúnədi*    *ləmbánninə*    *léŋŋedə*.] (L+,G55) <1:15>  
 then                      taro      that    by wild arum              irritate  
 ‘It is because of the wild arum that <my stomach> is irritated.’
241. **é!**              **léŋbənə**              **yadrenehé**. (H)  
 Oh!              irritation              is unbearable
242. *čábə*              *yadrenehé!* (H)  
 to eat              am unable  
 ‘Oh! I cannot bear the irritation. It cannot be eaten, I tell you!’
243. **hénták**              **hénták**              **hénták**              **hénták,**” (H)  
 dried fish              dried fish              dried fish              dried fish
244. *háynə*              *ómúksú*              *lávwi*. (L+,G56)  
 say that              once again              shouted  
 ‘I need some dried fish right now!’ he shouted.’
245. [*ŋəsáy*              *phəttəbə*              *pótnə*              *tádúnə*              *tarəgə*              *sáribədo*] (H)  
 previous              wrong              thing              being ball              shaped              eating
246. *ódúsú*              *ómúk*              *hék* (H)              247. % *čárure*. (H)  
 that too              once              just    ate there, I hear  
 ‘Remember that bad thing that was made into a ball? The old man ate of it at this point.’
248. “**ómúk**              *hennə*              *nənthíkhəre!* (H)  
 again              from first              such a bad smell  
 ‘<It> smells worse than before.’
249. *tukkəčəkhəre!* (H)                      250. **óniŋkhəre!** (H)  
 there was hatred within                      desired to vomit  
 This disgusts me.                                      I feel like vomiting.
251. **é!**              *máŋŋenə*              *təwrisidi*, (H) <:80>  
 oh no!              all lost              is happening  
 ‘Oh no! I am undone by what is happening.’
252. *kədaydenohé* (H)  
 from where

253. *papi*      *máčáy*      *níηηol*      *ásidi*, (L)  
 sinner      child      woman      this
254. [*ádúgumbə*      *héntákpu*      *purəkpə*      *hównəbəro*,”] (L+,**G57**)  
 like that      dried fish      having brought      made possible
255. [*háynə*      *mátáy-ménaw*      *əsi*      *pəηkhát-khátnəre*.] (L+,**G58**)  
 said that      husband and wife      this      argue crazily  
 ‘From what evil sister did you have to bring dried fish,” and saying this,  
 the husband and wife argued like crazy.’
256. *ədáy*      *konthəηdə*      *budhí*      *ləybə*      *əhən*      *əsínə* (H)  
 from      at the door      intelligence      to be      elder      this
257. *háy*, (H)      258. “*túminləyro!* (L+,**G59**) <1:10>  
 say      quiet together
259. *yoη*      *phúdrədi*      *yarəroy*. (L+,**G60**) <:96>  
 monkey      if not beat      not be agreeable  
 ‘Then at last this sensible old man said, “Keep quiet, it won’t do if we do  
 not beat the monkeys.’
260. *móy*      *áybu*      *həηbə*      *šóydənə*      *lakkəni*. (H)  
 they      of me      to ask      certainly      will come  
 ‘They will surely come to ask how I am’.
261. *áy*      *násinnərege* (H) <1:05>      262. **kó**. (H) <1:00>  
 I      pretend to be sick,      do you agree  
 ‘I shall pretend to be sick.’      ‘All right?’
263. *ədúnə*, (H)      264. *nasinnəregəne*, (H)  
 then      when I pretend to be sick
265. “*nəη*      *nəpúse*”, (H) <1:15>      266. *nəη*      *kəppune*. (L)  
 you      your grandfather      you      pretend to cry
267. *kəri*      *háynə* (H)      268. *kəpkədəge*:      *háybu*, <:99> (H)  
 what      say that      will you cry      thus
269. “*aaa*      *pán*      *čádúnə*      *sikhibə*  
*aaa*      *taro*      *by eating*      *has died*  
*máyren*      *čádúnə*      *həlləkʔu::*,”(H)      270. *háynə*, (!L)  
*pumpkin*      *by eating*      *return*      say that

271. kápsənnəw (!L)                      272. *ibémmá.*” (L+,G61) <:85>  
pretend to cry!                      my dear madam  
‘When I pretend to be ill, you should pretend to cry so, “You died by eating taro, return to life by eating pumpkin.”’<sup>7</sup>
273. áduǵə (H)                              274. óy              ášé (H)  
and then                                      I              as for me
275. khárúŋ              áčəwbə              əmədə              hápčəllu. (L+,G62) <1:18>  
pot              big              in one              put in  
‘And then put me in a big earthen pot.’
276. hápčillerəǵə, <1:02> (H)              277. “nápúse (H)  
having put in                                      this grandfather
278. sirəbəni. (H)                              279. nóy              čátlo, (H)  
has dead                                      you              won't you go
280. **phummučo,**” (H)  
go and bury, O.K.
281. háynə              háyyu. (L+,G63)  
say that              say  
‘After putting me in the pot you should say to them, “Your grandfather is dead so go and bury him.’
282. % [móynə              khárúŋ              əsí              páydənə  
they              pot              this              holding  
  
əybu              phumməni,              háydənə] (H)  
of me              will bury              after saying
283. thaŋdorəkpədudə, (H)              284. konthóŋ (H)              ákhúbədudə  
lifting out                                      gate              at the narrow
- čəŋthokʔəǵə, (H)              285. čəynə              **phúthədənə** (H)  
having jumped out                              with stick              by beating down
286. mási (H)              287. **héktə**              loysilləǵə              loyre.” (L+,G64) <:74>  
this                                      just              after doing              is finished  
‘They will carry the pot out to bury me, then I will jump out when they cross the narrow gate and I will beat those monkeys with a stick and just then, it will be best if I finish off those monkeys right then and there.’”

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7 *Mayren* is a type of pumpkin that the Meiteis believe has restorative power.

288. áđúnə, “phəre,” háydə́nə (H) 289. [háyrībə (H)  
 then that's good after saying which saying  
 núpísigə mój ání tánəre.] (H+, **G65**) <3:82>  
 with his wife they two discussing  
 “‘O.K., that's good’, <the old woman said> then with his wife the two  
 discussed <the plan>.’
290. **máthə́ngi numít áđúđə́đi**, (H) <1:30>  
 of the next day that very
291. hənúbəsi (!H) <:90> 292. narədə́nə (!H)  
 this old man being sick
293. ηəsáygi **khə́rúη** ménuηdudə mási (!H)  
 previously pot inside this
294. čə́ηdə́nə ləyre, (L) 295. širə́bəni háysinnədúnə (L, **G66a**)  
 entered was there being dead by pretending that
296. máy núpísinə phi əmə kúpsə́lle,  
 his this woman cloth a covered  
 háyrə́gə **kə́ppi**. (H+, **G66b**) <1:60>  
 after doing cried  
 ‘The next day: the old man, pretending to have been sick and then dead,  
 hid in the aforementioned pot and was in there and then his wife covered  
 the pot with a cloth and cried.’
297. kərə́m-háyənə kə́ppi: (H) 298. ηəsáy háykhībə  
 how said that cried mentioned thus  
 ə́đum háynə, (H) <1:95>  
 say that
299. “pán čáđə́nə šikhībə aaaummm  
 taro eating to have died <vocalizing>  
**máyren čáđúnə hə́lləkʔu**,” (H) 300. háyye. (L+, **G67**) <:97>  
 pumpkin eaten return that
301. ə́đum háynə kə́ppədudə yəη mójamse lakʔe. (H)  
 thus say that then crying monkey many came  
 ‘In what way did she cry out: As she was told to before, “By eating taro  
 you died, come back to life by eating pumpkin,” and when she cried like  
 this many monkeys came.’

302. “íbén (!H) 303. kəyðəwre?” (!H)  
 my grandmother what happened  
 ‘<The monkeys said>, “What’s the matter, Granny?”’
304. “é! (H) 305. nəpúsi sirenehé. (H) <:90>  
 oh your grandfather has died  
 ‘<She said >, “Oh! See, your grandfather is dead!”’
306. kənasú ləytrene, məsígi (H) 307. phumbinóbə.” (H+, **G68**) <1:10>  
 nobody is there of his in order to bury  
 ‘There is nobody to bury him, you see.’”
308. tháyne məmaŋŋəydə (H) <1:10> 309. lidá (!H)  
 long at that time most ancient
310. -libə (!H) 311. mətəm(!H)  
 being times
312. -də, (!H) 313. míóybə- (!L)  
 at man that was
314. -se ləy (!L) 315. -núŋdə (!L)  
 this ground under
316. phumləmmí. (!L+, **G69**) <:88>  
 buried  
 ‘A long time ago, in very ancient times, it was that men were buried underground.’
317. éđúgi mətəwgumdónə, (H) 318. ləynunđə  
 then doing in the same way underground  
 phumnənóbəgi (H) <1:00> 319. səŋskar-təwbə, (!H)  
 in order to bury final rites-do
320. həwʃíkki məróndə (!H)  
 today's in language
321. səŋdoknəbəgidəməktə, “puro: (H)  
 for purification Bring!
322. nóy məyam čəŋđúnə,” (H) 323. háyđənə (H)  
 you many entering after saying



gate and then when they were trying to come out of the gate, some in the front, some in back, at that moment the old man of whom we heard about some time ago, jumped out and beat the monkeys with a club, and with a stick by which some monkeys' heads were broken, some ears were torn and some small monkeys were killed and thus many monkeys were driven out.'

342. mǎsídǎyǎdi (H)                      343. nuηηaytǎdǎnǎ (H)  
because of just this                      not being happy
344. yoη              mǎyamsi              kǎynǎ              čǎnkħǎre. (H+,G72)  
monkey              many              disbanded              ran away  
'Then the monkeys were unhappy and so scattered and ran away.'
345. [numídǎηdǎ              mǎpú-mǎbén              ǎnínǎ  
that night              old man and woman              those two  
  
túmminǎyǎdǎ              yoη              mǎyamnǎ              háyǎre.] (H)  
when sleeping              monkey              many              said
346. “ηǎsidi (H)  
this day
347. ípúíbǎnsi                      hátpǎ              tare,”. (L+,G73) <1:50>  
old man and woman              kill will              fall out
348. háydǎnǎ (L)                      349. čǎηηǎkʔí. (L+,G74) <1:68>  
after saying                      then entered  
'That night when the grandmother and the grandfather were sleeping, the monkeys said, “We must kill the old man and woman,” and so they entered <the house>.'
350. hǎnúbǎgi (!H)              351. lǎwsǎηnǎ (!H)              352. yoηsǎηdǎ (!H)  
of old man                      being wise                      those monkeys
353. čǎηηǎkpǎdǎ, (!H) <1:54>              354. hǎnúbǎnǎ (!H,G75)  
at entering                      old man
355. phǎyšúp              mǎnǎηdǎ (!H)              356. híptǎnǎ              lǎybǎ, (L+) <1:00>  
blanket              inside                      sleeping              was
357. phǎyšúp              mǎnǎηdǎ              híptúnǎ              lǎybǎdudǎ, (H)  
blanket              inside                      while resting              to be







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## 18

Symbiosism, Symbiomism and  
the perils of memetic management

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Symbiosis is a widespread phenomenon in the living world that has been recognised for about as long as natural selection has been. Most multicellular life forms arose ontogenetically as symbiomes. Language too is an organism which arose as a semiotic symbiont within the hominid brain. The etymology of the term *meme* and a number of competing definitions thereof as the unit of selection in cultural evolution are explained. A concise exposition of Symbiosism and Symbiomism is provided, distilled from previous writings. The perils of memetic management are discussed, and the desirability and necessity of memetic management are called into question.

## 1 Evolution and symbiosis

Evolution as a phenomenon in the natural world resulting from cumulative changes in heritable traits from one generation to the next looms large in the writings of Pierre-Louis Moreau de Maupertuis (1698–1759), Georges-Louis Leclerc, Comte de Buffon (1707–1788), Jean-Baptiste Pierre Antoine de Monet, Chevalier de Lamarck (1744–1829) and Thomas Robert Malthus (1766–1834). Inspired by the writings of Malthus, the naturalist Alfred Russel Wallace conceived of natural selection as the key mechanism that drove evolution, and in 1856 at the age of thirty-three Wallace seeded the brain of Charles Darwin, then aged forty-seven, with this seminal idea in a letter which he wrote from the Indonesian archipelago. Darwin eagerly incorporated Wallace's ideas into his own writings and propagated natural selection as the principal mechanism driving evolutionary change.

Generations of biologists have heaped obloquy onto Lamarck and his conception of evolution, for it is too easily forgotten that Darwin too was a Lamarckian. Not only were Wallace and Darwin both deeply influenced by the 1844 English popularisation of Lamarck's work, entitled *Vestiges of the Natural*

*History of Creation*, Darwin explicitly counted ‘the inherited effects of use and disuse’ as being amongst the ‘general causes’ and ‘general laws’ which govern whether or not variations are transmitted to offspring (1871, I: 9). Darwin’s views are clearly spelt out in the *Descent of Man* (e.g. 1871, I: 116-121). He conceived of ‘natural selection’ as ‘the chief agent of change, though largely aided by the inherited effects of habit, and slightly by the direct action of the surrounding conditions’ (1871, I: 152-153).

With respect to the inheritance of characteristics acquired during the lifetime of an organism, Darwin was just as much a Lamarckian as Lamarck. As the celebrated linguist Friedrich Max Müller pointed out, ‘Darwin’s real merit consisted, not in discovering evolution, but in suggesting new explanations of evolution, such as natural selection, survival of the fittest, influence of environment, sexual selection, etc.’ (1889: 273). Meanwhile, in light of the promiscuous intricacies of molecular genetics, the old polemic about Lamarckian vs. Darwinian evolution will have come to strike readers today as a trifle dated, for our understanding of evolutionary dynamics has progressed well beyond such a simplistic confrontation of dogmas.

In the same period that natural selection came to be understood as a pivotal mechanism operative in evolution, the role of symbiosis in evolution began likewise to be understood. Pierre Joseph van Beneden, professor at the Catholic University at Leuven, adopted the term *mutuellisme*, brandished by the French social reformer Pierre-Joseph Proudhon for his ostensibly benign variety of communism, to apply to mutually beneficial relationships between species. The Flemish marine biologist later popularised the idea in his 1876 book *Les commensaux et les parasites*, which also appeared in German and English translations that same year. He distinguished various types of symbiotic relationship, i.e. parasite, free-living commensal, resident or obligate commensal and mutualist.

In the natural world van Beneden observed that beneficial reciprocity was as prevalent as commensalism. He described in detail how commensalism and mutualism contrasted strongly with the deleterious effects of parasitism, and he likewise carefully distinguished between various forms of commensalism and the intimate and reciprocally beneficial interdependency which characterised mutualism. The most far-reaching form of symbiosis is a relationship in which both organisms can no longer live without the other and so in time effectively become as one life form. It is understood today that most life forms on the planet originated as symbiotic relationships.

The influential work of van Beneden inspired the German botanist Heinrich Anton de Bary, who in 1879 popularised the word *Symbiose* ‘symbiosis’. He used this already extant term of Greek origin in a public address to German biologists and physicians at Cassel as a cover term to designate all forms of ‘Zusammenleben ungleichnamiger Organismen’, i.e. the living together of organisms with different names, viz. belonging to differently named taxa. Symbiosis included ‘der *vollständige Parasitismus*’ (viz. full-fledged parasit-

ism, which de Bary for some reason considered to be the ‘most exquisite’ form of symbiosis), various types of commensals, and what de Bary called ‘van Beneden’s *Mutualisten*’, which were neither parasitic nor commensal. Anton de Bary’s most fascinating examples were lichens. All lichens are symbiomes of fungi of the phylum ascomycetes with either algae or cyanobacteria. His description of these fascinating symbiomes made lichens into the emblematic classroom example of symbiosis.

Friedrich Schmitz, professor of botany in Bonn, observed that the chloroplasts of eukaryotic algae, along with their associated starch-accumulating structures called pyrenoids, were not fabricated anew in the cytoplasm, but reproduced independently by division within individual cells (1882). Schmitz first made this observation in 1880 ‘für eine Anzahl von Algen . . . während eines Aufenthaltes an der Zoologischen Station zu Neapel’, but within two years he had established that the independent reproduction of *Chromatophoren* or chloroplasts was a feature of all eukaryotic algae.

This observation regarding the autonomous nature of chloroplasts in eukaryotic algae inspired botanist Andreas Schimper, who in 1883 showed that *Chlorophyllkörner* or chloroplasts in green plants too ‘nicht durch Neubildung aus dem Zellplasma, sondern durch Theilung aus einander entstehen’ (1883: 106). This discovery led Schimper to venture that all green plants had originated through an original symbiotic association of two unlike organisms: ‘Möglich-erweise verdanken die grünen Pflanzen wirklich einer Vereinigung eines farblosen Organismus mit einem mit Chlorophyll gleichmäßig tingierten ihren Ursprung’. In a similar vein, the botanist Albert Bernard Frank (1885) afterwards recognised mycorrhiza too to be a symbiotic relationship between terrestrial plants and subterranean fungi which subsist on their roots and provide these plants with essential nitrogen and minerals.

In Russia, Constantin Mereschkowksy made the same observation in 1905 that Schmitz had made in 1880 and Schimper in 1883, namely that chloroplasts are not assembled from scratch in the cytoplasm, but are cytoplasmically inherited and replicate themselves autonomously within the host cell. However, Mereschkowksy went a step further than Schmitz and Schimper in claiming that chloroplasts remained genetically independent of the nucleus. Mereschkowksy also argued that ‘*Cyanophyceae*’ or cyanobacteria, which until relatively recently used to be called blue-green algae, were basically free living chloroplasts that had not entered into the cytoplasm of a host cell, where they had taken up a reduced symbiotic existence and rendered the host cell autotrophic. For the genesis of a new life form through symbiosis, Mereschkowksy coined the term *symbiogenesis* in 1909.

Mereschkowksy had drawn inspiration from the work of Andrej Sergeevič Famintsyn, who studied the ontogeny of chloroplasts in green plants (1889, 1893, 1907). In Famintsyn’s writings, the term *symbiosis* began to acquire a new anodyne flavour because he reserved the term *symbiosis* for relationships that were mutually beneficial in the sense of van Beneden’s mutualism rather

than in the broader sense of de Bary's symbiosis. Since then a spectrum of symbiotic relationships has been identified, ranging from inquilinism, parasymbiosis, social parasymbiosis, phoresy to symbiotrophism. One of the most striking example of symbiosis is fundamental to our own existence as a life form and to that of most aerobic life forms on the planet.

Mitochondria are organelles in the cells of aerobic life forms which assemble and metabolise the energy-rich molecule adenosine triphosphate (ATP). Richard Altmann first discovered what he called *Bioblasten* within cells using a new staining technique at Leipzig, and he published his results in *Die Elementarorganismen* in 1890. Altmann speculated that bioblasts replicated themselves. Carl Benda renamed these organelles *Mitochondrien* or *Fadenkörnchen* 'thread granules' in 1898. The French marine biologist Paul Jules Portier of the Institut Océanographique de Monaco argued that symbiosis was a widespread process in the evolution of complex life and in 1918 hypothesised that even mitochondria had originated as *symbiotes*. Portier's once daring hypothesis has become today's biological orthodoxy.

The first step in the emergence of aerobic eukaryotic life took place about 1,800 million years ago when a protist organism incorporated a free swimming, facultatively oxygen breathing  $\alpha$ -protæobacterium very much like the purple bacteria of the genera *Bdellovibrio* or *Paracoccus*. Mitochondria are the oxygen respiring descendants of this bacterium. After these bacteria had taken up residence within the host organism, the original number of mitochondrial genes was reduced from probably well over a thousand to a baker's dozen because, as endosymbionts, our ancestral mitochondria were compelled to enjoy the luxury of relinquishing central control to the nucleus, whither much of their genes were transferred in the course of time.

Endosymbiosis resulting from the entry of prokaryotes and archaea into the cytoplasm of eukaryotes, whether by ingestion or intrusion, thus led to transfer and incorporation of endosymbiont genes into the host cell nucleus, indelibly altering the genetic composition of the host genome (Ku *et al.* 2015). Yet the DNA of chloroplasts and mitochondria still retains its original circular shape, reminiscent of the bacterial genophore, and mitochondria and chloroplasts have kept their own machinery for protein synthesis, including their own ribosomes.

## 1.1 The semiotic symbiont and the history of the meme

Language is an organism that lives within us. Language exhibits the essential traits of a life form. Languages and language-borne units can reproduce themselves, and languages and language-borne units can die and go extinct. Language can grow and change, and language exhibits a panoply of functional activities that other living organisms display. The idea that language is a life form in its own right was already popular amongst linguists in Germany in the early 19th century. Friedrich von Schlegel described language as 'ein lebendiges Gewebe' (1808: 64), and Wilhelm von Humboldt spoke of the 'Organismus

der Sprache' (1812: 8). Yet language differs from all other known organisms. As distinct from other life forms, language is a semiotic organism. Unlike other symbionts, language first arose and then evolved within its host rather than invading the host's brain and colonising the host organism from outside.

The high-fidelity replicators of which language consists are fecund and possess considerable longevity. For a unit of natural selection in cultural evolution the term *meme* was proposed in 1976, though the preceding etymological history of this word is not widely known and the competing definitions for the term which have arisen since then are not generally appreciated. Of greater antiquity than the term *meme* itself is the historically widely propounded view, espoused by various lineages of linguists and semioticians, that words or linguistic signs are the replicators which sustain language as an organism.

An idea often takes shape in more than just one human brain. Sometimes the same idea occurs independently to the minds of different individuals at very different times or even recurrently to various people throughout history. Alternatively, the cultural environment may be ripe for an idea which occurs independently to the minds of different individuals at roughly the same time in history. Yet scholars seldom recount the course of events in precisely that way, and the history of ideas is usually told as a tale that does not reflect this more complex reality. The view of culture as a dynamic evolving process in which words and ideas act as the transmitted units of evolution is in fact a rather obvious way of looking at human culture, and so this conception of culture has occurred to many people. For those well versed in his writings, it is obvious that Victor Hugo was not just toying with a metaphor when he wrote 'le mot, qu'on le sache, est un Être vivant' (1856, I: l. 675).

Darwin's *On the Origin of Species* was published on the 24th of November 1859. The German translation by the palaeontologist Heinrich Georg Bronn appeared in 1860 as *Über die Entstehung der Arten*. The maverick German biologist Ernst Haeckel sent a copy of the German translation to his friend, the linguist August Schleicher. Inspired by this work, Schleicher adopted the view of individual languages as species, which compete against each other 'im Kampfe ums Dasein' (1863).

By contrast, Friedrich Max Müller conceived language as such to be an organism. On the 6th of January 1870, in the very first issue of the journal *Nature*, Müller took issue with Schleicher's idea of the survival of languages in terms of 'die Erhaltung der höher entwickelten Organismen' and instead argued that language evolution was a more complex issue.

Although this struggle for life among separate languages exhibits some analogy with the struggle for life among the more or less favoured species in the animal and vegetable kingdoms, there is this important difference that the defect and the gradual extinction of languages depend frequently on external causes, i.e. not on the weaknesses of the languages themselves, but on the weakness, physical, moral or political, of those who speak them. A much more striking analogy, therefore, than the struggle for life among separate

languages, is the struggle for life among words and grammatical forms which is constantly going on in each language. Here the better, the shorter, the easier forms are constantly gaining the upper hand, and they really owe their success to their inherent virtue. (1870: 257)

It is moot whether we should consider these two contrasting approaches, i.e. language as an organism vs. individual languages as species, as representing opposing or complementary conceptions of language evolution. Until recently, I was less receptive to the latter of the two approaches (van Driem 2015).

Müller was a vocal proponent of evolution by natural selection and applied the theory not just to language, but also to religion and cultural evolution. In his *Descent of Man*, Darwin cites Müller and explicitly adopts his conception of language evolution, saying ‘The survival or preservation of certain favoured words in the struggle for existence is natural selection’ (1871, I: 60-61). Darwin ventured to add ‘novelty’ to Müller’s repertoire of traits that might enhance the appeal and thus survival potential of a word. In the same vein, Gottlob Adolf Krause wrote: ‘Für mich ist jedes Wort ein sprechendes Lebewesen, das seine Geschichte erzählt, sobald ich es kennengelernt habe. Ich sehe die Zeit kommen wo man von einer etymologischen Biologie sprechen wird’ (1885: 257). So, already in the nineteenth century, *words* and *grammatical forms* were conceived as the living units of cultural evolution by Hugo, Müller, Darwin and Krause.

In a related but different vein, a zoologist in Germany began to contemplate the notion of transmissible neural entities. It was Richard Wolfgang Semon who coined the term *Mneme*. Semon was born on the 22nd of August 1859 in Berlin. He became Ernst Haeckel’s favourite student at Jena, conducted zoological expeditions to Africa and Australia, produced a number of zoological studies, converted from Judaism to Protestantism in 1885, and later became a Monist, all before he developed his mneme theory. Semon published the book *Die Mneme als erhaltendes Prinzip im Wechsel des organischen Geschehens* in Leipzig in 1904, two revised editions of which appeared in 1908 and in 1911. A first sequel to *Die Mneme* appeared in 1909 entitled *Die mnemischen Empfindungen*. Yet Semon never completed the second sequel about ‘die Pathologie der Mneme’. Unable to reconcile himself with the defeat of Germany at the end of the First World War, he shot himself through the head on the 27th of December 1918. His lifeless body was found the following day sprawled out on the old black, white and red German tricolour.

Imbued with the work of Darwin and Haeckel, Semon’s conception of the mneme was an idea which biological theoreticians would later brand as Lamarckian. Semon developed an epigenetic theory of memory based on the notion of the *Engramm*, a modification in the neural tissues corresponding to a memory triggered by a *Reiz* ‘stimulus’. Semon conceived of the mneme as the collective set of *Engrammata* or neural memory traces, whether conscious or subconscious, that he believed were inherited genetically. Semon described the *Mneme* as ‘das für die organische Entwicklung unumgänglich notwendige er-



*haltende Prinzip, das die Umbildungen bewahrt, welche die Außenwelt fort und fort schafft*' (1911: 407). Largely forgotten today, Semon's ideas were quite influential in the first half of the twentieth century, and some of his other coinages such as *Engramm*, *Engraphie* and *Ekphorie* have likewise taken up lives of their own, both in the scientific literature as well as in the genre of science fiction.

The term *Mneme* was adopted as *mnème* by the Belgian entomologist, poet and playwright Maurice Maeterlinck, whose work was preoccupied with symbolism and who won the Nobel prize for literature in 1911. His entomological works *La vie des abeilles*, first published in 1901, and *La vie des termites*, first published in 1926, were translated as *The Life of the Bee* and *The Soul of the White Ant* respectively. Both books went into numerous printings in English in the first half of the twentieth century. Maeterlinck invoked Semon's Lamarckian heresy, whereby 'la plupart des instincts ont à l'origine un acte raisonné et conscient', to explain hereditary patterns of complex behaviour in termites, bees and ants in terms of 'des engrammes de la mnème collective, comprenant aussi leurs ephories' (1928: 202). Only much later was it noticed that, with the exception of his incorporation of Semon's concepts, Maeterlinck's book had been largely plagiarised from the beautiful Afrikaans original *Die Siel van die Mier* by the South African naturalist and literary figure Eugène Marais.

After the discovery of the double helical structure of deoxyribose nucleic acid (DNA) and the chemical identity of genes in the Cavendish lab in Cambridge by Francis Crick, James Watson and Rosalind Franklin in 1953, Müller's view of language evolution being driven by natural selection operating on 'words and grammatical forms', which had resonated so well with Darwin, was rapidly and widely succeeded by a more general public awareness that there existed units of cultural replication analogous to the gene.

Leslie White came up with the term *symbolate* for 'something that results from the action or process of symboling', coarsely conceived as encompassing all 'phenomena dependent upon symboling' (1959: 231, 246). The term *symbolate* had been used already by Lady Victoria Welby much earlier in the sense of 'thing symbolised' (1896: 196). For White, however, symbolates were observable not only as acts and external events, but, in keeping with his neoevolutionist definition of culture, symbolates also included 'concepts, beliefs, emotions, attitudes' within the human brain and acts and events mediated by 'symboling' and all external objects and events which are cultural artefacts or in some way the result of human intervention (1959: 235).

An awareness of cultural evolution as a Darwinian process prompted Hudson Hoagland in 1962 to state an idea that had surely long occurred to many people when he proposed that *ideas* are the units of selection and that 'ideas may be considered to social evolution what genes are to biological evolution' (Huxley 1962: 203). For Hoagland competing ideas were units of 'psychosocial selection'. In 1964, Henry A. Murray coined the term *idene* as an analogue in social evolution to the gene in biological evolution (Hoagland 1964: 111). In

1963, inspired by the works of Semon and Maeterlinck, Harold Blum coined the term *mnemotype* for a unit of 'information determining the cultural pattern of a society' residing 'in the brains of its members where it is stored as personal sets of memory images'. Blum envisaged the cultural evolution of a society in terms of 'changes in the collective mnemotype', and that these innovations were precipitated by 'changes in the individual mnemotypes which compose it' (1963: 39).

Ralph Burhoe coined the term *culturetype* for assemblages of cultural and linguistic information. He saw this as a new type of information in evolution representing a relatively stable, transmissible 'heritage' largely independent of the genotype, but just as subject to natural selection (1967: 83). Carl Swanson (1973: 313) proposed the term *socio-genes* for the ideas or cultural molecules as units of selection in a process of cultural evolution governed by the principles of Darwin and Mendel. Cloak wrote of the 'natural selection of cultural things', such as behavioural instructions which he termed *tuitions* and defined as 'the programming of an instruction upon one's hearing a linguistic analogue of that instruction uttered by a conspecific', a process which 'is almost surely unique to humans' (1975: 167). Cloak described *tuitions* as 'corpuscles of culture' residing in the central nervous system.

It was amidst this flurry of activity to devise neologisms for the widely assumed units of cultural selection that Richard Dawkins coined the term *meme* in 1976. Laurent (1999) identified Maeterlinck's *mnème* as the direct source of Dawkins' coinage, just as *mnème* had earlier spawned Blum's *mnemotype*. Yet in terms of substance, the Oxford zoologist departed from all earlier definitions of cultural replicators for which various labels had previously been proposed such as *words*, *symbolates*, *ideas*, *mnemotypes*, *idenes*, *culturetypes*, *socio-genes* and *tuition*. Whereas the putative units of cultural selection had all previously been conceived as linguistic or language-mediated entities, Dawkins defined his meme as 'a unit of *imitation*', with the italics supplied by himself (1976: 206).

As opposed to earlier views of the unit of cultural selection, Dawkins' *meme* was inspired as much by the mindless mimicry observed in the patterns on butterfly wings or actual learnt behaviours such as some types of bird song as it was by human culture. With its single-minded focus on imitation, a deafening silence reigned about the crucial role of language. In contrast to earlier conceptions of the units of selection in cultural evolution, the meme in Dawkins' conception was therefore actually a substantive step backward. Several years later, he brought his definition of the meme slightly more into line with the earlier conceptions of a unit of cultural selection by adding that a meme was 'a unit of information residing in the brain' (1982). This later modification clearly establishes that Dawkins had essentially done no more than to anglicise Semon's original term, just as Maeterlinck before him had rendered the term into French. Accordingly, Dawkins' meme remained fundamentally a 'unit of imita-

tion', and therefore something neither specifically human nor necessarily linguistic.

This definition found its way into the Oxford English Dictionary as 'an element of a culture that may be considered to be passed on by non-genetic means, esp. imitation'. The Oxonian meme is not essentially a semiotic construct. Blackmore, an ardent proponent of Dawkins' view of the meme, envisaged 'spoken grammatical language' as resulting from 'the success of copyable sounds' and, rather astonishingly, explicitly denied the relevance of the meanings borne by linguistic signs (1999). The inadequacy of the Oxonian *meme* underlay Kortlandt's choice not to use the term in the early 1980s in his treatment of the replicating units of language, viz. linguistic signs whose meanings exhibit the propensities of non-constructible sets in the constructivist mathematical sense.

Pursuant to the discovery of the double helical structure of DNA in 1953, the coinage *gene*, by truncation from *genetic*, aided and abetted the popularisation of the term that was anglicised as *meme* in 1976 so that the label *meme* soon outcompeted all other coinages. The inadequacy of the Oxonian conception of this unit of selection, however, necessitated either the redefinition or replacement of the term. The term's popularity and its largely unknown but interesting etymological lineage, traceable directly back to Semon, made it more expedient to redefine the term in 2001 rather than to coin yet another neologism. The Leiden definition brought the term back into line with the conception of earlier thinkers by redefining the meme as a neuroanatomical unit corresponding to a sign in the Saussurean sense.

A meme *sensu Lugdunensi* is a meaning together with its associated phonological form and grammatical ramifications. Each linguistic sign has a practically isofunctional but speaker-specific neuroanatomical manifestation in the brains of the individual speakers within the same speech community. By contrast, a meme *sensu Oxoniensi* is a unit of imitation, whereas in Leiden a unit of imitation was termed a *mime*. In contrast to a meme, a mime fails to meet the criteria of fecundity, high-fidelity replication and longevity which could qualify it as a successful life-sustaining replicator. Amongst memes the competition between observable populations of patterns is more fierce than in the case of mimes.

Meaning and language account for the difference between the behaviour of pre-linguistic mimes, such as the rice washing of Japanese macaques or the elaborate songs of whales, as opposed to the comportment of post-linguistic mimes, such as music, clothing fashions, dancing styles. In ethology, the term *culture* has come to apply to complex learnt behaviours transmitted between conspecifics in numerous species other than just our own. This usage is apt, but an essential difference persists between the semiotically enriched culture of our species and the mimetic culture of other species, whose brains have not come to be inhabited by a language organism. Other species lack memes in the Leiden sense of a Saussurean sign.

Mimes behave differently once they have come to find themselves awash in a sea of linguistic meanings with their multitudinous neuronal associations and interconnections. Our patterns of imitation as humans are more elaborate because our mimetic culture has been semiotically enriched and enmeshed with our inordinately more complex language-mediated or memetic culture. Yet the melodic themes of Johann Pachelbel's canon in D major or Anthony Holborne's *Muy Linda* are none the less mimes, not memes. Music is a paralinguistic phenomenon that is causally intimately connected with the evolutionary emergence of language, but music is not language, and music may, in part, actually serve to drown out the memetic din and temporarily to assuage the relentless tides and untamed randomness of language-mediated thoughts.

The Leiden redefinition of the meme as a linguistic sign would have rendered the term superfluous, except that meanings characteristically travel in packs within which a hierarchical structure obtains. In popular usage, the term *meme* has evolved to denote a plethora of phenomena such as internet messages, video clips and digital posters which 'go viral' for some fleeting episode of time. As explained in previous writings, natural selection operates at various semiotic levels. The random example which I adduced in Prague in 2003 was that the idea that 'America is one nation, under God, with liberty and justice for all' is not a linguistic sign. Independent of the truth value of this statement and any of its component assertions and in-built assumptions, this sentence is a syntactically articulate idea composed of a number of constituent lexical and grammatical linguistic signs.

Both this idea as well as its various constituent parts are subject to natural selection. The decomposability of units of function, such as words, phrases, sentences and narrative, is a central feature of linguistic phenomena and underscores the need for analysis to be conducted at the different levels of granularity traditionally distinguished in linguistics. The smallest structural units in language, viz. phonemes, tend usually to be smaller than the smallest semiotic units, viz. single morphemes and monomorphemic words, though on occasion a phoneme does of course incidentally happen to be equal in size to a word or a morpheme.

Expositions of the Leiden model of language evolution with its multi-tiered ramifications for the dynamics of linguistic replicators by natural selection have been available for some time in the writings of Kortlandt, Salverda, Wiedenhof and myself. Recently, Hadikin (2015) has come around to embracing view that 'words' and 'extended lexical units' are replicators. However, Hadikin erroneously traces this notion of the linguistic replicator to Dawkins. As we have seen, the Oxonian definition actually represented a deviation from the linguistically informed conception of semiotic units subject to natural selection which had preceded it. The linguistic view was rendered explicit by Müller, whose insights were appreciatively adopted by Darwin, and this conception of language evolution has been espoused by many linguists ever since, and it is to this older view that Hadikin has now essentially returned.

Meanings that have colonised a human brain seek to reproduce through meaningful contacts. Just as an ant or termite that has strayed far afield may discover a new source of food, so too meanings find new conceptual havens from which to proliferate. The dynamics of this process yields vast repertoires of linguistics meanings. During reproduction in the process of transfer from one host to another, a meaning is reduced and, as it were, stripped of its connotations and associations, which are constructed anew in the brain of the new host. Just as a human is reduced to a haploid sperm cell in the process of reproduction, the isofunctional set of neuronal configurations constructed in the brain of a new host is unique and microanatomically specific to that individual. Just as the needs and prerogatives of an ant colony supersede those of the individual ant, language and linguistically mediated thought shape human societies and may supersede the interests of the individual.

## 2 The first utterance, Symbiosism and Symbiomism

The expositions of Wiedenhof (1996) and Kortlandt (1985, 1998, 2003) attempt to explain how syntax arose from meaning and argue that naming and syntax are two faces of the same phenomenon. The first primaeva holistic utterances with a meaning in the linguistic sense inherently constituted projections of reality with a temporal dimension. First-order predication arose when such a holistic utterance was split. This point of view was already put forward by Pierre de Maupertuis (1756, III: 444) and Hugo Schuchardt (1919a, 1919b) and contrasts with the naïve view that syntax arose from the concatenation of labels or names. The splitting of a signal for something like ‘The baby has fallen out of the tree’ could have yielded meanings such as ‘That which has fallen out of the tree is our baby’ and ‘What the baby has done is to fall out of the tree’. Mária Ujhelyi (1998) has considered long-call structures in apes in this regard, and recently Wray (2000) too has begun to champion the idea of an original holistic utterance.

The empirical basis for the Leiden conception of language is language’s own lingering and tangible evolutionary legacy in the shape of the semiotic workings of meaning. The arbitrary nature of the linguistic sign is a perennial theme which goes back at least to Plato’s *Cratylus*. Ferdinand de Saussure cautioned his students vigilantly to distinguish, however, between the meaning of a linguistic sign and its reference in extra-linguistic reality. It is the relationship between the phonological form of a sign and the associated meaning which is arbitrary. On the other hand, the relationship between the meaning of a linguistic sign and its reference has presented a conundrum to philosophers, who have often failed to distinguish between the two. Charles Lutwidge Dodgson, alias Lewis Carroll, spoke through the voice of Humpty Dumpty to express his delight at the apparent quandary:

‘When *I* use a word,’ Humpty Dumpty said, in rather a scornful tone, ‘it means just what I choose it to mean — neither more nor less.’ ‘The question is,’ said Alice, ‘whether you *can* make words mean so many different things.’ ‘The question is,’ said Humpty Dumpty, ‘which is to be master — that’s all.’ (Carroll 1872: 124)

The problem is elucidated by Kortlandt, who wrote that ‘a linguistic meaning thrives by virtue of its applications, which cannot be deduced from its implications. The latter must be derived from its applicability, rather than the other way around. Thus, a linguistic meaning has the properties of a non-constructible set’ (1985: 480).

This insight led Kortlandt, rather morosely, to view language as a parasite: ‘The view of language as a tool of the human species is less well-founded than its converse’ (1985: 478). The fact that language has augmented our reproductive fitness to the detriment of countless other species and is also likely to have contributed to the extinction of several hominid species which whom our ancestors stood in direct competition would instead indicate that language is a mutualist symbiont. Our language-driven pre-eminence has made us the blight of the biosphere. I call this opposing model Symbiosism, and this model has been explained in greater detail on previous occasions (van Driem 2001b, 2003, 2004, 2005, 2008a, 2008b, 2015).

Language is part of us, and we are not fully human without it, as shown by the sad example of feral children (Ball 1880, Burnett 1784, de la Condamine 1755, Dresserus 1577, Itard 1801, 1894, Mason 1942, Rauber 1885, Singh and Zingg 1942, Sleeman 1858, Squires 1927). We humans are not just flesh and blood, for we are also what we think and believe. We are symbiomes of body and soul, whereby the soul is not to be construed as some metaphysical entity but instead as a semiotic one, subsisting on the neuronal substrate of a hominid brain. From this particular physicalist perspective, we may reinterpret Helen Keller’s use of the word *soul* when she described as her ‘soul’s sudden awakening’ the moment on the 5th of April 1887, when suddenly and heart-rendingly ‘the mystery of language was revealed to’ her (1905: 23). As a species, we are incomplete without language or, as Wilhelm von Humboldt put it, ‘Der Mensch ist nur Mensch durch Sprache’ (1822: 244).

Our species is a unique type of symbiome in the natural world. A human being is the symbiotic relationship of the hominid body of a particular variety of great ape with all of its inherited primate social and physiological propensities and a semiotic symbiont lodged in its brain, which has grown bloated in the long course of the human host’s coevolution with the language organism which has arisen within it. Our soul is this semiotic organism residing within our skull along with everything else inside our brain that happens to be mediated by language. The whole panoply of language-mediated thought, conceptions and sensibilities make up our human soul.

Our brain houses a consciousness which sustains the illusion of a thinking self with a free will. In reality, our feelings, thoughts, yearnings and behaviour are the outcome of the jostle and interplay of the biological propensities and lust for creature comforts of the human host in symbiotic association with a capricious linguistic symbiont which serves as the vehicle for the ideas waging war within us. So when we speak, who is doing the talking? As individuals we are both body and soul, and human behaviour and health can best be understood in terms of the complex anatomy of this relationship. The key to good health and contentment is keeping both components of the symbiome happy, healthy and in some kind of harmonious equilibrium. This guideline embodies the essence of Symbiomism, the practical philosophy entailed by Symbiosism.

### 3 The perils of memetic management

In my previous writings, I have qualified religion as a disease of language and contended that many characteristically human behaviours must be understood as language-mediated psychopathologies (2008: 394). These ideas are not entirely original. Friedrich Max Müller called mythology ‘an affection, or even as a disease, of language’ (1889), and his understanding of mythology was quite comprehensive, although he was prudent enough to phrase his insights gingerly. In North America, we have recently seen proponents of secularism combat the teaching of intelligent design and creationism in schools, where creationists present the theory of evolution as if it were merely some alternative opinion. The atheist fervour of Richard Dawkins and Bobby Henderson is admirable, but it may prove to be an exercise in futility to strive to eradicate empirically unsupported belief systems from our culture entirely.

We humans are inoculated with language at birth, and language infests our brain and stays with us until we are entirely brain-dead. Müller forecast:

Mythology is inevitable, it is natural, it is an inherent necessity of language, if we recognise in language the outward form and manifestation of thought: it is, in fact, the dark shadow which language throws on thought, and which can never disappear till language becomes altogether commensurate with thought, which it never will. Mythology, no doubt, breaks out more fiercely during the early periods of the history of human thought, but it never disappears altogether. Depend upon it, there is mythology now as there was in the time of Homer, only we do not perceive it, because we ourselves live in the very shadow of it, and because we all shrink from the full meridian light of truth. (1881 [1871]: 590, 1895: 168)

Our brains teem with linguistic signs, and each time a linguistic form with its associated meaning is activated in our brain, a Darwinian generation time elapses in terms of the neuronal group selection which characterises the rapid life cycle of linguistic signs. A passage in the writings of Douglas Adams captures

with appropriate levity the mental predicament which afflicted our ancestors once language had taken root in our brains.

They knew that when the rains came, it was a sign.

When the rains departed, it was a sign.

When the winds rose, it was a sign.

When the winds fell, it was a sign.

When in the land there was born at the midnight of a full moon a goat with three heads, that was a sign.

When in the land there was born at some time in the afternoon a perfectly normal cat or pig with no birth complications, or even just a child with a re-troussé nose, that, too, would often be taken as a sign. (1996: 466)

Symbiosism predicts rites and rituals, ideologies, suicide, hypocrisy, sports, theatre, the belief in gods or a God, the supernatural, crusades and jihads and numerous other cultural and psychological phenomena, both delightful and baneful, that result from language and make us uniquely human, marking our species as an anomaly in the biological world.

If it feels good to live in a linguistically constructed reality, can this delusion really be so bad for us? In those cases where we are driven to immolate ourselves for some abstract ideal, or to kill ourselves and murder others for the sake of some tenet or belief, then the answer to this question might strike us as obvious. Perhaps it is misguided, however, to fight against belief systems such as astrology, as Dawkins has done with religious zeal, since the scientifically untrained and the intellectually challenged may perhaps always require a modicum of mythology, and a bit of make-belief and self-delusion may even provide some comfort and solace to intellectual giants. Not all empirically unsupported belief systems are obviously deleterious, and the feel-good quality and non-hostile doctrine of popular astrology, for example, renders this belief system perhaps no more than a harmless distraction which an omniscient physician might even choose to prescribe as a suitable opium for the people.

Memetic management or thought control is a reality which has been with us or a long time. The thought police of the past burnt heretics, blasphemers and homosexuals, with the *auto-da-fé* providing an abject form of community entertainment, of which we still see many perverse forms in different parts of the world today. Today's mainstream Western corporate news media tend to exhibit such a blatant bias that collusion with government is as obvious as it was in the erstwhile Soviet press. Fashions of political correctness can at times be socially enforced with as much intolerance today as they were in the historical past. The internet offers hope, yet the internet has from the outset been both conspicuously as well as surreptitiously managed. Certain content is restricted, monitored and flagged. Eric Arthur Blair, alias George Orwell (1949), predicted that governmental infringements upon privacy and personal freedom would lead to a dystopian surveillance state, and the internet has provided a powerful tool to those who work towards effectuating a form of totalitarianism thinly veiled.



Today's corporate and governmental memetic manipulators and both the covert and unabashedly outspoken enemies of privacy master and zealously practise the arts of newspeak and doublethink described by Orwell.

In November 2003, the social website face-pic already had more than one million users worldwide (<http://web.archive.org/web/20031124030457/http://face-pic.com/>). By the autumn of 2004, the site enjoyed considerable popularity amongst young users in Europe, India and the rest of the world. The Wikipedia article about face-pic has been suppressed since 2008, perhaps because the holders of certain vested interests have sought to squelch historical evidence that might indicate that the originators of Facebook may directly have copied the idea from a then already thriving social website. Facemash opened as a social website for Harvard university students in October 2003. In 2004, Zuckerberg was accused of stealing ideas from his fellow Harvard students, and a settlement was reached, ultimately awarding his victims assets worth \$300 million. That same year, the company was renamed Facebook and moved to Palo Alto, California. In September 2005, Facebook experimentally opened its site to secondary school students. In 2006, Facebook expanded membership eligibility to the employees of Apple and Microsoft. Only in September 2006 did Facebook open membership to everyone aged 13 years or older with a valid email address (<https://en.wikipedia.org/wiki/Facebook>, accessed 23 August 2014).

According to disclosures in the European press, Facebook entered into partnership with the NSA and FBI some time between 2006 and 2009, spying on its customers and passing on their private data. In chronological order, Microsoft, Yahoo, Google, PalTalk, YouTube, Skype, AOL and Apple also reportedly each entered into the PRISM spying programme between 2007 and 2012, and their complicity sometimes extends to the pre-installation in citizens' devices of malware *sensu* Stallmann (2015). In sequel to these revelations in the press, Max Schrems filed a class action lawsuit against Facebook on the 1st of August 2014. On the 6th of October 2015, the Court of Justice of the European Union in Luxembourg declared the European Data Protection Commission's U.S. Safe Harbour Decision invalid because the persistent and pervasive prying into people's privacy perpetrated by the National Security Agency, often in collusion with private corporations, as exposed by whistleblower Edward Snowden, 'enables interference, by United States public authorities, with the fundamental rights of persons' (Judgment in Case C-362/14).

In the wake of Brezhnev's invasion of Afghanistan, certain Western actors made a very unwise choice to fan the flames of militant Islam as a tool against the Soviet occupation. Close reading of the Qur'ān and the Ḥadīth would have enabled memetic content assessors to realise that they were letting a genie out of a bottle. The ongoing situation in the Near East in combination with the plight of the dissident Edward Snowden, who was compelled to seek asylum in what used to be the Soviet Union, appear to indicate that today's thought police are neither necessarily competent nor altogether benign. We are urged to dis-

miss as conspiracy theories any of the ubiquitous indicators that an actual malignancy may have taken hold in the halls of power.

The late George Carlin pointed out that the act of entertaining hypotheses such as ‘that powerful people would get together and plan for certain outcomes’, that ‘powerful interests would operate outside of the law and maybe even kill people’ or that ‘secret government agencies might feel the need to assassinate a person and cover it up’ renders a person prone to being considered a ‘kook’ or discredited as a ‘conspiracy buff’. Linguistic signs such as *character assassination*, *set up*, *patsy*, *identity theft* and *false flag* no doubt very much have real-world referents, and the phenomena denoted by such lexical items highlight the vulnerability of all citizens in a surveillance state, and not just those who would have the temerity to question the established order.

The exploitation of highly volatile belief systems does not offer a benevolent, safe or prudent strategy for securing access to oil supplies, effectuating the compliance of client states or toppling the regime of a rival’s client state. Memetic management, if exercised at all, should ideally be minimalist, never meddlesome. Those who strive to control, censor or suppress information content ought to ponder whether a natural ecology of freely circulating ideas might perhaps just yield the optimal equilibrium. Non-intervention and relinquishing the reins might be the best policy, but such advice is liable to fall on deaf ears. Surveillance and the policing of content are sadly likely to grow ever more intrusive and oppressive, not just because proponents of memetic management will act on the knowledge that some language-borne packages of ideas can either be beneficial or demonstrably deleterious to the individual human host and to society at large, but probably more so due to the circumstance that particular established actors will continue to exercise a prerogative to defend their vested interests by whatever means.

Bridling the open exchange of information and suppressing free speech is directly hostile to democracy, but many in the West who adopt the politically expedient posture of paying lip service to democracy may very well privately not believe in the desirability or even the feasibility of attempting ultimately to realise this ideal. Predictably, the gradual introduction of increasingly decentralised democracy in Bhutan, where this process was driven from the very centre of power by the highly enlightened fourth hereditary king, has at the local level in some places led to compromises mitigating the country’s otherwise stringent policy of nature conservancy. Given the country’s population growth, though at present this is still modest, the immediate needs of local people have at times predictably begun to prevail above their ideological attachment to preserving their natural environment against man-made encroachments. Ironically, this process of democratisation was first set into motion by the third hereditary king, who was both an autocrat and very much a nature conservationist *avant la lettre*.

The new situation in Bhutan has already held for quite some time on a global scale. In the context of habitat destruction, anthropogenic climate change

and the general ecological degradation of the planet, Nico Stehr (2015) strives to retain an optimistic attitude towards democracy whilst he reiterates Friedrich Hayek's pessimistic admonition regarding the inexorable conflict between the ecologist and conservationist interests of the scientifically well-informed and the democratic tendency to appease the immediate needs of a relentlessly burgeoning and not uniformly well-informed human population, the indulging of whose wants may often be at variance with the well-being of the planet as a whole. Yet Stehr's discussion begs the question inasmuch as a government by a scientific élite has not yet ever been attempted, although Aldous Huxley (1932) did once ponder one conceivable scenario in which such an arrangement might culminate. Instead, throughout history the services of scientists and scholars have hitherto been customarily recruited by extant power brokers, whilst those scientists and scholars whose services cannot be bought are on occasion liable to be perceived as a threat.

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## Kman ethno-ophresiology: Characterising taste and smell in a language of Arunachal Pradesh<sup>1</sup>

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### 1 Introduction: The lexicon of taste and smell

The notion that traditional societies have a rich lexicon applied to taste, smell (and texture in the mouth) goes back more than a century in the psychological literature (Chamberlain 1903; Myers 1904). Various anthropologists have tried to uncover universals in sensory terms (Dupire 1987) but the variety of documented ethnographic examples remains stubbornly small (Howes 1991). The study of taste, smell and texture terms has sometimes been called ‘ophresiology’ and this term is retained here, although it technically applies to smells. Taste and smell are often partly polysemous in many languages, while sensations of texture in the mouth clearly form part of the eating experience. Thus, English has specific words like ‘crunchy’ and ‘chewy’ which only apply to edible things, while more general terms, such as ‘soft’ and ‘hard’ can be transferred to foods. The worldwide literature on the vocabulary of taste, smell and is not extensive and much of it seems to focus on Africa (e.g. Van Beek 1992; Hombert 1992; Blench and Longtau 1995; Nakagawa 2012; Storch 2014). For SE Asia, Kuipers (1993) describes Weyewa, a Sumbanese language, while Enfield (2011) compares the taste and flavour vocabulary in the unrelated Lao and Kri languages in Laos, which show a remarkable conceptual convergence. The Aslian languages of the Malay Peninsula have had considerable attention, for example in Tufvesson (2011) Burenhult and Majid (2011) and Wnuk and Majid (2014). An interesting early analysis of a South Asian language is Rivers (1905) who discusses Toda sense vocabulary from the point of view of psychol-

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ogy. Japanese is a rich field for the lexical field of taste, and indeed has been the source of the claim that there is a fifth ‘taste primitive’, *umami*, the delicious taste of monosodium glutamate (Backhouse 1994). The taste terminology of the Kilivila language of the Trobriands is described in Senft (2012). The oral societies of the New World might be expected to yield of a rich harvest of ophresio-ophresiological terms, but the literature is quite restricted. Aschmann (1946) is an early discussion of odour terms among the Totonac, while Shephard (2004) provides an account of two Amazonian societies in relation to their medicinal plants. The broad hypothesis is that oral societies in a strong dependency relationship with the natural environment tend to have a more complex and elaborate aroma and taste terminology than communities with connections to a wider pluralistic world. Given the complexity of food culture in hierarchical societies with nation states and literacy, this is not necessarily what would be expected. Colour terminology, for example, tends to become more elaborate in such societies.

An aspect of taste research which has occupied the attention of many researchers is the synaesthesia with other sensory modes, both between taste and smell, but in a more extreme case, between phonology and taste. Ward & Simner (2003) describe an individual with what they call ‘Lexical-gustatory synaesthesia’, who experienced tastes in relation to specific phonological conjunctions. Ideophones may not be completely arbitrary, with their sounds somehow relating to deep aspects of brain function. Several of the chapters in Hinton *et al.* (2006) discuss the role of sound symbolism in ethnozoological vocabulary or the non-arbitrary relationship between vowel quality and size. Taste and smell words may be similarly linked, but as this vocabulary is much less well-documented, generalisation is more problematic. In the case of odour terminology, it has been shown that in Africa sensory words form a lexical class distinct from mainstream ideophones (Hombert 1992; Blench and Longtau 1995). They typically fit into a stereotyped syntactic frame and do not show the properties of reduplication and iconic phonology characteristic of ideophones. However, this may not be the case globally, or indeed across other sense modalities.

There is no precise term covering this whole semantic area. The term ophresiology (used in Blench and Longtau 1995) goes back to the Parisian anatomist, Hippolyte Cloquet (1784–1840) who introduced it in 1821, but which appeared in print in German translation (Cloquet 1824). Technically speaking, this refers to the sense of smell (Greek *ophresio-*, *ophresi-* ‘to smell’) but is extended to ‘the senses’ (e.g. Jütte 2005). Even in this expanded definition, there is little or no literature on sensory vocabulary in languages of the Himalayas. Indeed, the regional literature on ethnolinguistics in general is best described as ‘thin’; most linguists working in the area have been concerned with phonology and syntax. Comprehensive dictionaries are rare, especially in Arunachal Pradesh, where only the Tani languages have any coverage (e.g. Post

2011; Mara 2012). This is not a reflection of the properties of the languages themselves which are rich in parallel lexicons and have a wide variety of terms reflecting experiential sensations. As a by-product of a project to create a dictionary and grammar of Kman, a variety of terms were collected describing taste and smell, together with information about the foods or substances they normally qualify. This paper describes those terms together with whatever contextual material is available. As there is no reliable published phonology of Kman, this is outlined in a preliminary section. The conclusion discusses the range of substances associated with sensory words, with some discussion of regional comparisons.

## 2 The Kman and the ‘Mishmi’

The Kman (Kaman, Geman, Miju) are usually categorised in Arunachal Pradesh as ‘Mishmi’. The term ‘Mishmi’ is used in the travel literature as far back as the early nineteenth century to refer to three distinct peoples, the Kman, Tawra and the Idu. While Idu and Tawra are undoubtedly related, Kman is not part of the same linguistic group. Nonetheless, culturally speaking, the Tawra have been historically grouped with the Kman. The Kman people are commonly known in India as Miju, a term found in the early colonial literature (e.g. Robinson 1856). Miju is not used in the vernacular (e.g. Boro 1978 for the Indian side and Li 2003 for the Chinese communities) and local publications have switched to a form of Kman (e.g. Tawsik 2014). Kman is listed as ‘Miju-Mishmi’ [mxj] in the *Ethnologue* (17<sup>th</sup> edition) and it is said to have 18,000 speakers on the Indian side and 200 on the Chinese side. This is almost certainly a considerable exaggeration. Even accounting for individuals claiming Kman ethnicity but not proficient in the language, it is unlikely there are more than 3000–4000 speakers. The core area of Kman villages is in Lohit district, Arunachal Pradesh, and its effective capital is Tezu, where the Kman and Tawra are intermixed with settlers from Assam and other regions of India.

Kman has been little described. The first record appears to be Robinson (1856) which is quite accurate for the period, and his transcriptions are recognisable today. Additional Kman materials are cited in Campbell (1874). The only anthropological sketch appears to be Mills (1952) which discusses all three ‘Mishmi’ peoples in rather general terms. Needham (1886) is the first specific vocabulary of Kman (under Miju) and the first to compare it with Tawra. The only modern publications on the language from the Indian side are Das Gupta (1977) and Boro (1978). These were said to be ‘practical’ guides and the transcription of Kman is highly inaccurate by current standards. Tawsik (2014) is a comparative wordlist of Tawra and Kman, which uses an idiosyncratic transcription but includes much useful cultural information. Despite the small number of speakers on the Chinese side of the border, there have been several publications on ‘Geman’, the Chinese version of the name. These include Sun

(1991, 1999) and most importantly, Li (2003) which is a full-length description of the language. Kman is usually considered a Tibeto-Burman language, part of the ‘North Assam’ group, a characterisation which goes back to Konow (1902). However, there is no published argument defending this classification and Blench and Post (2013) consider it equally likely to be a language isolate.

All the work reported here was conducted in the field in Tezu, the centre and nearby settlements in February–March 2015 and the original field recordings related to all the examples will be archived and should be freely available in due course.

### 3 Phonology and transcription

Kman consonants are shown in TABLE 1.

TABLE 1 – Kman consonants

	Bila-bial	Labio-dental	Alve-olar	Retro-flex	Palato-alveolar	Palatal	Velar	Glottal
Plosive	p, p <sup>h</sup>	b	t, t <sup>h</sup>	d			k, k <sup>h</sup>	g ?
Fricative		f v	s z		ʃ			h <sup>h</sup> h
Affricate			ts dz		tʃ, tʃ <sup>h</sup> dʒ			
Nasal	m		n			ɲ	ŋ	
Flapped			r					
Lateral			l	ɭ				
Approximant	w	v		ʈ		y		

Kman permits a wide range of consonant prosodies, which can be combined with both the aspirated and non-aspirated series. These include labialisation, palatalisation, lateralisation and rhoticisation.

Table 2 presents the vowels of Kman.

TABLE 2 – Kman vowels

Vowels	Front	Central	Back
Close	i	ɨ	u
Close-Mid			o
Open-Mid	ɛ	ə	ʌ ɔ
Open		a	

Despite claims to the contrary in previous publications, there are no long vowels and no nasalised vowels in Kman. Like most regional languages, Kman has a relatively simple tone-system. There are two level tones, High (ˊ) and Low (ˋ), a rising (ˆ) and a rare falling (ˆ) tone. Glide tones also arise from VV sequences,

but the complex tones given in Li (2003) do not seem to be present in the speech of the Tezu area. Either the tones are a product of the author's training in Sinitic languages or represent a dialect under local influence from Tibetan.

## 4 Experiencing sensation

Kman has a generic verb, *mìn*, which expresses the meaning associated with the experiential verbs, such as 'taste', 'smell', 'feel'. It is combined with words such as cold (*kraŋ*) or fearful (*dʒʰil*), in the sense of 'to feel'. However, its widest application is in the domain of smells and tastes. These are not easily mapped against English sensation words, which have a rather limited range. There is clearly also an element of texture in sensation words. For example, mushrooms, *cìnúŋ*, are compared to watery foods, not because of their flavour but because they are easily bitten into and digested. I have translated this by the rather clumsy formulae 'is experienced as' or 'to feel in the mouth', since English does not really have a concise way of expressing the sensation of oral texture. English speakers can 'feel in the mouth' using specialised words 'chewy' and 'crunchy' as well as adopted descriptive terms such as 'gooey' and 'crispy' (Lawless, Vanne and Tuorila 1997).

Importantly, Kman sensory terms are not applicable generically; you cannot use the term *khá* 'bitter' for a previously unknown taste. Bitter (and indeed sweet) objects are thus in a culturally sanctified list. In practice, these lists evolve, since there is a term for 'pungent' (*shyá*), applied to the chili, which is an introduction from the New World, as well as the even more recent apple.

The typical formulation of these expressions is standardised. The object tasted is the headword, followed by the sensation word, which could be considered an adjective, and then the verb *mìn*. The sensation words in context sometimes undergo unexplained tonal changes in relation to the form cited in isolation, but elsewhere the tone remains static. The sensory word is thus intransitive and is preceded by a qualifier, as in example (1);

- (1) *áŋá hlèy kʰá mìn*  
 fish stomach bitter taste  
 'fish stomachs taste bitter'

This is quite distinct from constructions which describe how a protagonist smells a named object. Kman has a noun/verb, *cʰiŋ*, which is both 'aroma, flavour' and also 'to smell'. Thus in the example (2) an SVO structure is used.

- (2) *ki cʰiŋ kwì*  
 I smell dog  
 'I can smell a dog'

This allows speakers to answer open-ended questions or make statements about smells, and is a distinct linguistic sphere compared with the closed set of sensory words.

## 5 Tastes, smells, experiences

### 5.1 Taste

This section lists all the sensation words so far recorded, covering taste, texture and smell, together with a list of the foods or plants to which they apply.

#### 5.1.1 *tím* ‘sweet, salty’

*tím* is in some ways an archetypical taste sensation, since it applies to two tastes which would be sharply differentiated in the Euro-American lexicon, salty and sweet. The strong similarity to the word for ‘salt’, *tímìn*, makes it possible that this underlies its etymology. Examples of the term in use are given in (3) and (4):

- (3) *tímìn*     *tím*     *mìn*  
 salt     salty     tastes  
 ‘salt tastes salty’

- (4) *shùnítǐ*     *tím*     *mìn*  
 sugar     sweet     tastes  
 ‘sugar tastes sweet’

#### 5.1.2 *khá* ‘bitter’

This term is applied to a rather specific range of plants as well as the stomachs of fish, as listed in Table 3. The scientific names of the plants are given in the second column.

TABLE 3 – Items described as *khá* ‘bitter’

bitter gourd	<i>Momordica charantia</i>	<i>kerela</i>
Mishmi tita	<i>Coptis tita</i>	<i>páwá</i>
fish stomach		<i>áηηά hlèy</i>

This is exemplified in (5):

- (5) *páwá*     *khá*     *mìn*  
 Mishmi tita     bitter     tastes  
 ‘Mishmi tita tastes bitter.’

Mishmi tita is a well-known medicinal plant, gathered wild in the mountains and exported to Tibet.

- (6) *áŋá hlèy*      *khá*      *mìn*  
 fish stomach      bitter      tastes  
 ‘fish stomach tastes bitter’

**5.1.3 *shyá* ‘pungent, sharp’**

This term applies to chili and other peppery plants, as in (7).

- (7) *bíci*      *shyà*      *mìn*  
 chili      pungent      tastes  
 ‘chili tastes pungent’

An equivalent term is *băt*, exemplified in (8)

- (8) *bíci*      *băt*      *mìn*  
 chili      pungent      tastes  
 ‘chili tastes pungent’

**5.1.4 *sál* ‘fruity, sour’**

Items that are described as *sál* are listed in Table 4, and exemplified in (9).

TABLE 4 – Items described as *sál* ‘fruity, sour’

tomato	<i>shòwsál</i>
green oranges	<i>téŋá kámbròŋ</i>
bamboo shoots	<i>t.wóŋ</i>

- (9) *shòwsál*      *sál*      *mìn*  
 tomato      fruity      tastes  
 ‘tomato tastes fruity’

**5.1.5 *kráp* ‘sharp, unripe’**

Items that are described as *kráp* are listed in Table 5, and the exemplified in (10).

TABLE 5 – Items described as *kráp* ‘sharp, unripe’

green apple	<i>ápél k.tí</i>
betel nut	<i>támùl</i>

- (10) *ápél k.tí*      *kráp*      *mìn*  
 green apple    sharp    tastes  
 ‘green apple tastes sharp’

Interestingly, both of the items these tastes apply to are relatively recent introductions. Apples were introduced by the British, as the name suggests, and betel nut is from Indian (‘mainland’) culture and also borrowed. A different term, *sál*, is used for green oranges, indicating that unripeness is not in itself a defining character.

### 5.1.6 *sìη* ‘pungent, spicy’

This term is applied to spices and fried food such as those listed in Table (6).

TABLE 6 – Items described as *sìη* ‘pungent, spicy’

garlic	<i>p.lǔw</i>
ginger	<i>dìʔíη</i>

An example in (11):

- (11) *p.lǔw*      *sìη*      *mìn*  
 garlic    pungent    smells  
 ‘garlic smells pungent’

### 5.1.7 *sǎʔ* ‘alkaline’

This word is only applied to uncooked taro (*n.gál*); as exemplified in (12):

- (12) *n.gál*      *sǎʔ*      *mìn*  
 raw taro    alkaline    tastes  
 ‘raw taro tastes alkaline’

Taro, *Colocasia esculenta*, is a tuber crop which must formerly have been of considerable importance, but which is being displaced by rice and other cereals. Fresh or poorly cooked taro is extremely alkaline and can irritate the throat.

Bartoshuk (1978) proposed that there were four ‘basic’ taste qualities, ‘bitter, sweet, sour, salty’, and the basic Kman taste terms fall into these categories, with the other terms recorded here applying to recent introductions and thus outside the traditionally defined categories.

## 5.2 Texture in the mouth

The following terms are recorded for textures in the mouth.

**5.2.1 *lib`n* ‘soft-textured, watery’**

Applied to any food which is soft, pounded and watery, such as kedgery or dal, as well as mushrooms, *cìnúj*, as exemplified in (13):

- (13) *cìnúj*      *lib`n*      *mìn*  
 mushroom    soft      feels in mouth  
 ‘mushrooms feel soft in the mouth’

**5.2.2 *hámákh* ‘soft but with consistent texture’**

Applied to solid food, particularly staple starches, as those listed in Table 7:

TABLE 7 – Items described as *hámákh* ‘soft but with consistent texture’

cooked rice	<i>haku</i>
potato	<i>alu</i>

An example is (14):

- (14) *haku*      *hámákh*      *mìn*  
 cooked rice    soft      feels in mouth  
 ‘cooked rice feels soft in the mouth’

**5.2.3 *címíl* ‘crunchy’**

Applied to foods that come in small hard pieces, such as those listed in Table 8:

TABLE 8 – Items described as *címíl* ‘crunchy’

peanuts	<i>àyàyà sít</i>
popcorn <sup>2</sup>	<i>bǒ phúm</i>

An example is (15):

- (15) *àyàyà sít*      *címíl*      *mìn*  
 peanuts    crunchy    feels in mouth  
 ‘peanuts feels crunchy in the mouth’

**5.3 Smells**

The smells that have a distinctive term in Kman are restricted to urine and faeces.

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<sup>2</sup> Popcorn might not immediately seem to be hard like peanuts, as prepared in Europe or America. However, local popcorn is significantly more difficult to bite into.



### 5.3.1 *nyĩŋ* ‘smell of urine’

This is exemplified in (16):

- (16) *t.shít*    *nyĩŋ*    *mìn*  
           urine    uric    smells  
           ‘urine smells like piss’

### 5.3.2 *nyǎm* ‘smell of dung, faeces’

This word is applied to the smell of human excrement and animal dung, as exemplified in (17):

- (17) *mántsú*    *t.khrì*    *nyǎm*    *mìn*  
           cow            dung    faecal    smells  
           ‘cow dung smells of shit’

## 6 Conclusion: Sensation and the cultural mindset

The application of the Kman sensory terms is constrained, and they cannot be applied to tastes other than those culturally prescribed. Nonetheless, this vocabulary does evolve, as witness their application to recently introduced plants. There is another remarkable feature of these terms in Kman, that smells and tastes seem to be constrained by the domestic world, with cooked foods and cultivated plants predominant. This is surprising because the Kman, like most peoples of Arunachal Pradesh, strongly favour wild foods, of both plant and animal origin, and furthermore are great collectors of medicinal plants. When characterising wild plants and animals, they do not refer to their smells using a specialised lexicon. This is in contrast to the situation in the Amazon, described in Shephard (2004), where a rich vocabulary has developed for predominantly wild, medicinal plants. In the African literature, animals play a much greater role, both as meat (‘the smell of fresh dogmeat’ – in the Kuteb language, or the ‘smell of snakes’ – in the Tarok language). None of the sensory terms identified have any obvious etymologies, although it is not impossible these are loans, since neighbouring languages are almost unknown. The emphasis on the domestic and cultivated plants makes it possible that this lexicon might be relatively recent, evolving at the time when a gradual switch from predominantly foraging to agricultural subsistence was taking place. This would be difficult to prove, but if it can be established that the pattern is similar among neighbouring peoples, such as the Tawra and Idu, then the likelihood would increase. Under all circumstances, this type of lexicon is woefully under-documented in the Himalayan region, but absence of evidence is not evidence of absence and this may yet be another field for researchers that is so far barely exploited.

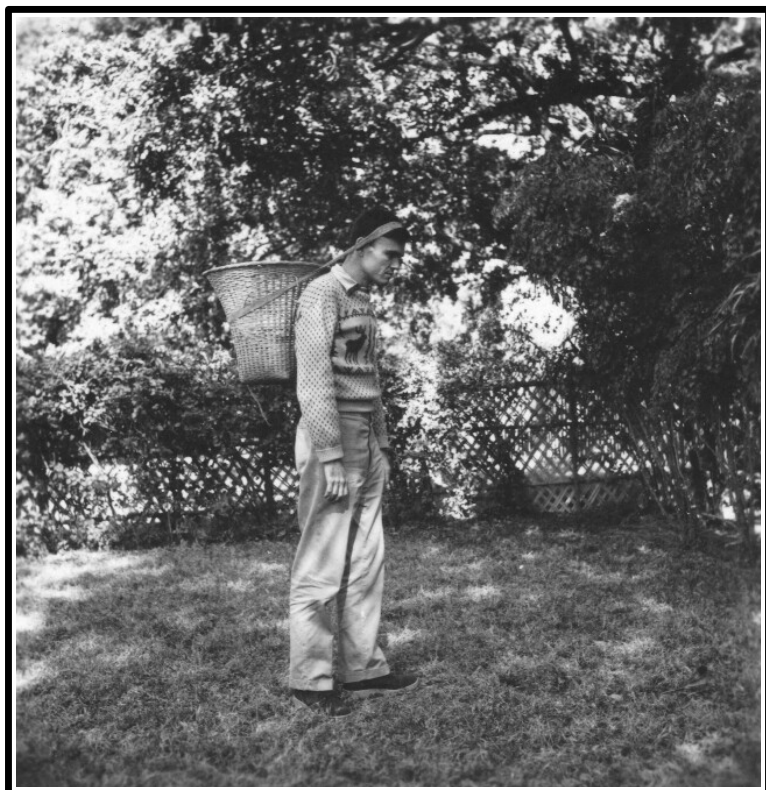
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## Appendix

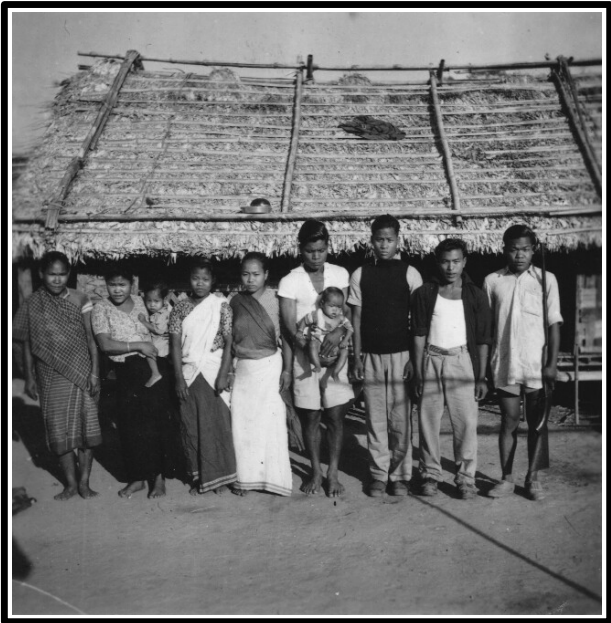
Robbins Burling  
fieldwork in the Garo Hills  
1954–2009



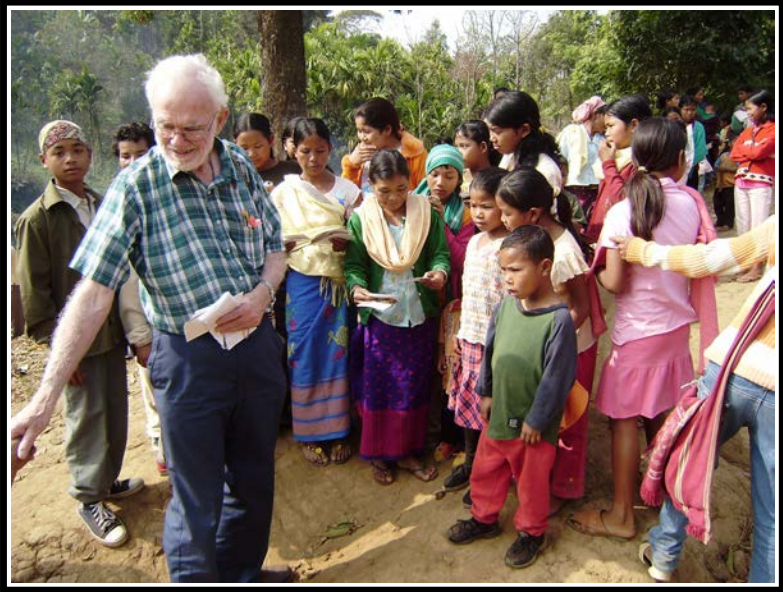
Rob Burling wearing basket, Tura 1955



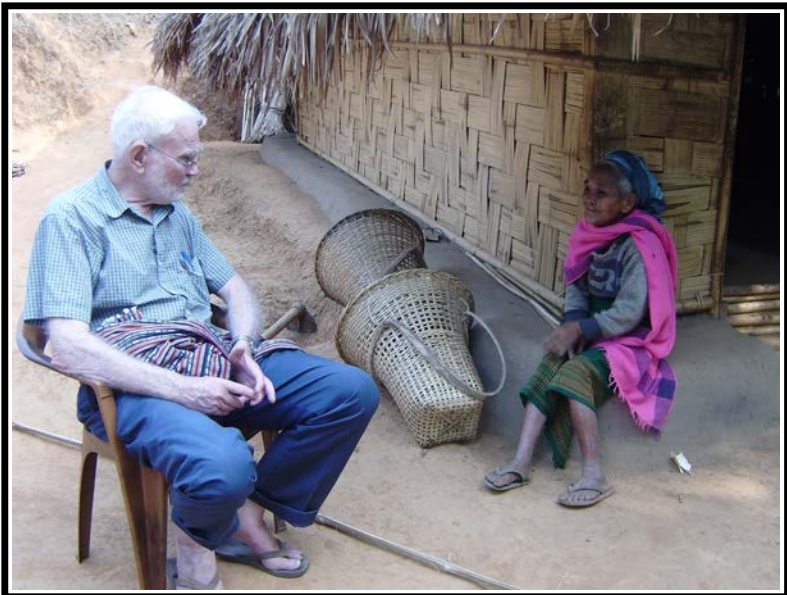
Cooking food at a house thatching, Rengsanggri, December 1954



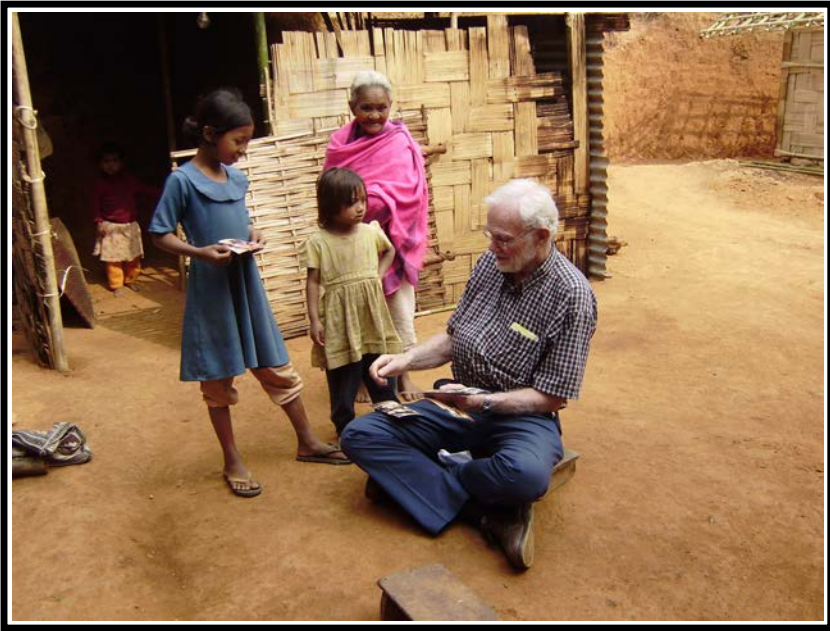
People of Asanangri, February 1956



Return to Rengsanggri, 2009



Rob Burling with Songdi, who appeared on the cover of Burling (1963)  
Rengsanggri, 2009



Rengsangri, 2009



Rengsangri, 2009

Photographs by: 1: Sibyl Burling; 2, 3: Robbins Burling; 4–7: Sheila Procter;  
8: Nono Burling

In the greater Northeast Indian region, one of the richest and most diverse ethnolinguistic areas in all of Asia, Robbins Burling stands out as a true scholarly pioneer. His extensive fieldwork-based research on Bodo-Garo languages, comparative-historical Tibeto-Burman linguistics, the ethnography of kinship systems, and language contact, has had a profound impact on the field of Northeast Indian ethnolinguistics and beyond, and has inspired generations of Indian and international scholars to follow his example. This volume of papers on the anthropology and linguistics of Northeast India and beyond is offered as a tribute to Robbins Burling on the occasion of his 90th birthday, his 60th year of scholarly productivity, and his umpteenth trip to Northeast India.



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