Preliminary Notes on Gyalsumdo, an Undocumented Tibetan Variety in Manang District, Nepal

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1. INTRODUCTION

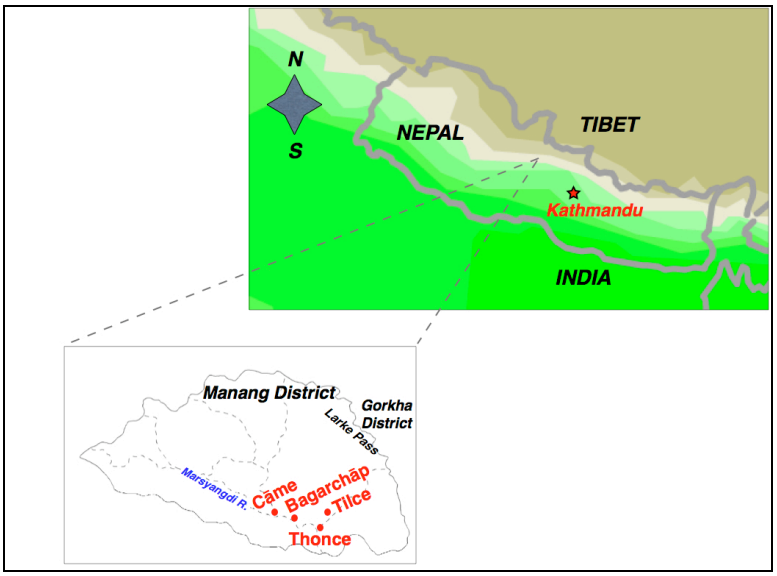
This report contains preliminary (lexical/phonetic) descriptive and comparative information on Gyalsumdo, a variety of Tibetan that is spoken in a cluster of villages in the lower Manang District of Nepal (Gandaki Zone, 22° 59' N; 84° 22' E). There is currently no ISO 639 code assigned to Gyalsumdo. To our knowledge and based on existing available literature, Gyalsumdo has very little prior documentation available on it aside from passing mention of Tibetan-speaking peoples in some Manang villages, and there is still question as to its specific placement/affiliation within lower levels of the Tibeto-Burman taxonomy. Our goal is to provide selected information on Gyalsumdo in order to hypothesize its location within the Tibetic grouping of Tibeto-Burman, and to set the stage for further investigative analysis of this variety.

While our observations here are restricted to a set of approximately 164 lexical items (see Appendix), we are able to locate these observations in a comparative context with available data from other (Tamangic) languages and with other Tibetan varieties spoken in nearby regions of Nepal, including Nubri (Gorkhā District) and Kyirong Tibetan (Rasuwā District and Kyirong County, Tibet). We are also able to provide some historical-comparative commentary on Gyalsumdo based on data from Classical Tibetan. In addition, we are able to paint a very early picture of the phonetics of tonal contrasts in Gyalsumdo. Our goal therefore is to propose that Gyalsumdo, while clearly a member of the Tibetic sub-grouping within Himalayish, is distinct enough to warrant further focused documentation efforts such that its classification can be established (perhaps within the Central Tibetan branch) with greater accuracy and certainty.

2. OTHER AVAILABLE INFORMATION ON GYALSUMDO

The presence of Tibetans in the region known as Gyalsumdo (lower Manang) is first mentioned by David Snellgrove (1961), who identifies three Tibetan villages, the names of which he notates as Tshä-me (Nep. Cāme, now the Manang district headquarters), Tshap (Nep. Bagarchāp), and Thang-jet (Nep. Thonce), as well as a mixed Gurung-Tibetan village called Tiljet (Nep. Tilce) (see Map 1). He makes little comment on the language, though he

states that it is "as close to the dialect of Central Tibet as to make little difference" (Snellgrove 1961:238), and that children are taught to read and write Classical Tibetan.



Map 1: Location of Main Gyalsumdo Villages (adapted from World Atlas of Language Structures and Digital Himalaya)

Gurung (1976) adds the villages of Dharapani and Tal to the list of predominantly Tibetan settlements in Gyalsumdo, and states that the Gyalsumdo Tibetans have diverse origins within Nepal and Tibet, including Nubri (spoken in Gorkha District, to the east of Manang), Kyirong (Rasuwa District, also to the east) and Tingri, among other areas. Nowadays, Dharapani and Tal are considered by local residents to be Gurung settlements, although speakers of Gyalsumdo and Nyeshangte (Manange) also make their homes and livelihoods there. Based on an interview with one Gyalsumdo man, Mr. Norbu Lama of Cāme, there are around two hundred speakers, and the UNESCO Interactive Atlas of the World's Languages in Danger notes that there is no known estimate of the number of Gyalsumdo speakers; it is simply identified as 'definitely endangered' (http://www.unesco.org/culture/languages-atlas/index.php).

The most extensive work dealing with Tibetans in the Gyalsumdo area is an account of the interaction between Tibetan and Gurung religious practices in the region, by Stan Mumford (1989). Like the previous authors, Mumford does not include any description of the language, though he gives a number of Written Tibetan renditions of the place-names of the Gyalsumdo region, as well as of a variety of religious terms used in the area. Mumford states, apparently contrary to Snellgrove's view, that, despite having learned Lhasa Tibetan, "their dialect was so difficult that it would be months before I would be able to converse with them adequately."(Mumford 1989: 4)

References to the language of Gyalsumdo in the linguistic literature are sparse. Michael Vinding (1979) provides a small list of kinship terms in the language and mentions that its speakers assert it to be closely related to the dialects of Nubri and Tsum. Khadgi (2006) reports in her sociolinguistic survey of Nubri (Gorkha District) that of 13 people surveyed regarding attitudes about clan-external marriage, one person responded that it would be permissible for a Nubri person to marry someone who is "Gyasumdar", (mis-) identified apparently as "Gurungs in Lamjung" (6). The language is also mentioned by van Driem (2001), but is likewise misidentified as a Tamangic language.

3. LEXICAL CORRESPONDENCES WITH REGIONAL LANGUAGES

The Gyalsumdo wordlist used in this account was recorded during a 2009 visit to the Manang District, from Mr. Norbu Lama, who was 65 years old in 2009 at the time of the recording, and who was born and raised in Cāme village. The data include words from the Swadesh Wordlist, along with some additional words as context provided opportunities, and a couple of elicited phrases. We are able to compare the phonetic and lexical correspondence patterns in Gyalsumdo with data from other Tibetan varieties and from various Tamangic languages of Manang District based on an array of primary and secondary sources.

We are also able to compare the Gyalsumdo data with identical wordlists recorded from two Nubri speakers, Mr. Sonam Nyengtse ('Dorje') Lama, age 31, who was born and raised in Bihi village, Gorkha District, and from Mr. Tshowang Gyeltsang, age 56, who was born and raised in Lö village, Gorkha District. These data were recorded, with the same equipment from the Gyalsumdo encounter, in 2010 in Kathmandu. Transcribed entries from these recordings may be found in Appendix 1.

We are able to check our recordings and observations with material on Kyirong Tibetan (Huber 2002), and with Written Tibetan (Jäschke 1881/1995, Matisoff 2003). Additionally, Webster (1992) has comparative wordlists from Central Tibetan languages and varieties from Gorkha, Nepal, including Nubri, Tsum, Kyirong, Central Tibetan, Ghale (Northern, Southern, Kutang), Gurung (Gorkha varieties) and Western Tamang. The occasional comparisons to Nar, Nyeshangte (Manange) and Thakali come from Noonan (2003), Hildebrandt (2004) and Georg (1996), respectively.

3.1 Lexical correspondences and subgrouping

A very great majority of the elicited lexical items have clear cognates in Classical Tibetan. Those lexical items without a clear correspondence often have a reflex in Nubri or Kyirong

Tibetan. Examples of this include Gyalsumdo [kɦu̯ri] 'cat', which is also found in Nubri and Kyirong but, to our knowledge, in no other Tibetan dialect[1]. Kyirong and Nubri also share with Gyalsumdo the irregular development of CT *gsar-pa* 'new' to [sāmpa] in all of these varieties, rather than expected *sārpa*[2].

As can be seen in Appendix 1, Nubri and Gyalsumdo share a very large proportion of their vocabulary, including a number of words not found in surrounding dialects or in Central Tibetan. Examples of this include the word [pʰūtsi] 'mouse', which appears to be a conflation of two distinct lexemes, attested in Written Tibetan as *phu-se* and *tsi-tsi*, the latter of which is also found in Nubri. The two dialects also share an unusual form of the word for 'nose' – Gyalsumdo [nārki], Nubri [nʌ̱rki]. The first element can be unproblematically linked to the Written Tibetan *sna*, but the remainder of the word does not seem to have an obvious source. The remainder of the vocabulary shared between Gyalsumdo and Nubri seems for the most part to be composed of shared retentions, rather than innovations. However, the quantity of these do seem to point towards a shared origin.

There are a few elements which Gyalsumdo shares with Kyirong Tibetan but not with Nubri. One shared irregular development can be seen in the word for 'big'. The initial syllable in Nubri [ʧʰēmpo] has the original vowel of WT *chen-po*. In both Kyirong and Gyalsumdo this becomes [u] - Gyalsumdo [ʧʰūmpu], Kyirong /ʧʰūmmo/. The word for 'ashes' is also shared between Gyalsumdo and Kyirong – we observe Gyalsumdo [tʰāla] and Kyirong /tʰālā/ opposed to Nubri [kʌ̱ktʌl].

Given the large proportion of shared vocabulary in Gyalsumdo, Nubri and Kyirong Tibetan, it seems reasonable to link the three languages together within the Central Tibetan sub-grouping of Sino-Tibetan. Webster (1992) shows that Nubri and Kyirong share a significantly larger proportion of their vocabulary than either language does with Central Tibetan proper, and, on the basis of the data gathered so far, Gyalsumdo seems to share more with the two languages than either do with each other. Whether this connection is genetic or areal, however, is something that cannot be firmly stated at this point. Certainly Gyalsumdo and Nubri are very closely connected, and it would be difficult to account for all their shared vocabulary (and especially those items unique to the two languages) without supposing a relatively recent common ancestor. A proposed subgrouping illustrating the position of these languages within Tibetic is shown in Figure 1 below. The specific relationship amongst all three languages is more difficult to pin down, as we may also be witnessing contact effects. The items of vocabulary which Kyirong and Gyalsumdo share

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[1] However, one of our reviewers has pointed out that Hale (1973) lists *kuhri* as the word for 'cat' in Sahu Tamang.

[2] Again, our reviewer has pointed out that is not unique to these specific Tibetan varieties, and is found in Tibetan varieties throughout Nepal, as well as nearby Tamangic languages Thakali, Seke and Nyeshangte.

to the exclusion of Nubri are perhaps best accounted for by continued contact between Kyirong and Gyalsumdo after the latter split with Nubri. This would accord with the assertion of Mumford (1989) that the earliest Tibetan settlers in the Gyalsumdo region had their origins in Kyirong.

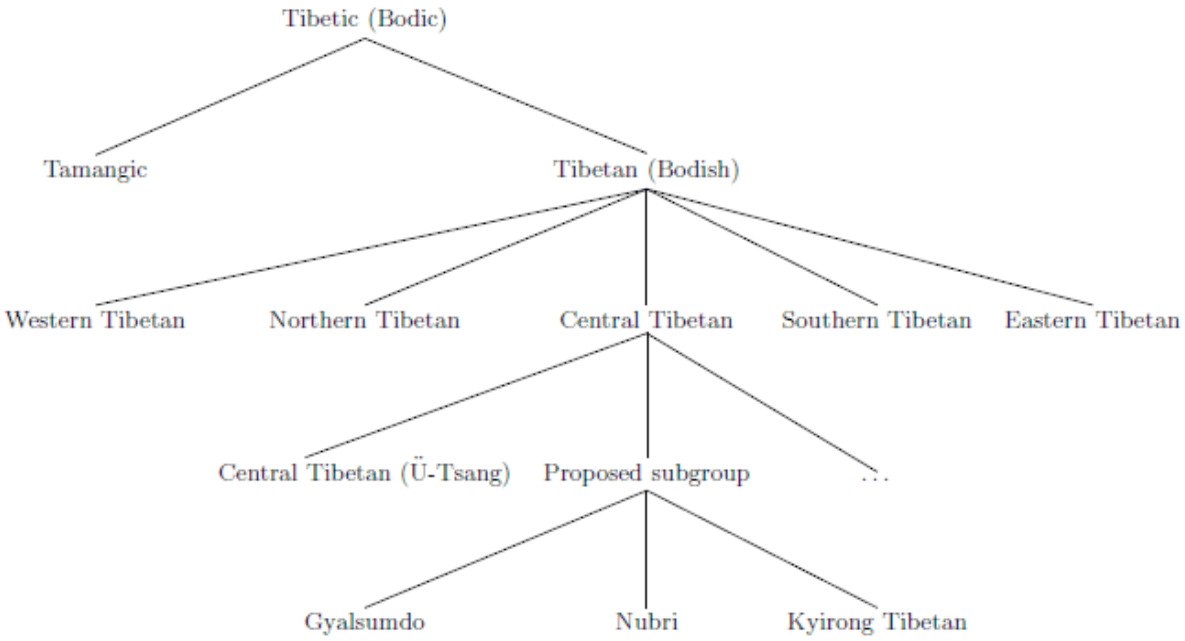

Figure 1: Proposed classification of Gyalsumdo within Tibetic. Names of subgroups given are from Ethnologue, with alternatives in parentheses where appropriate.

3.2 Distinguishing features of Gyalsumdo

One argument against a genetic grouping of Gyalsumdo (and Nubri) with Kyirong Tibetan is the differing fate of initial *Pr* clusters in the two languages. In Kyirong Tibetan (as well as in Langtang and Helambu dialects, according to Huber), initial *Pr* clusters are preserved, whereas in Gyalsumdo it seems that these clusters become retroflex stops or affricates, as in Central Tibetan. We can therefore contrast Gyalsumdo [ʈʰa̱k] 'hill' with the first syllable of Kyirong Tibetan /pra̱kɛ̀ː/ 'echo = cliff-sound', both derived from Written Tibetan *brag* 'cliff'. This is, however, the only reflex of a *Pr*-initial Written Tibetan word that we have noted, and it may be premature to draw conclusions from a single lexical item.

Turning to a comparison with Nubri, while the two languages share a large amount of lexemes, Gyalsumdo has a number of distinguishing phonological features. The first of these is the realization of word-final *o* as [u]. For example, the common Tibetan nominal suffixes *–po* and *–mo* are realized throughout the Gyalsumdo lexicon as [pu] and [mu].

Another feature unique to Gyalsumdo is the complete loss of word-final glottal stops, retained in Nubri. Interestingly, final glottal stops have two different endpoints in Gyalsumdo. The first is simply zero, as in [kɦjɛ̲] 'eight' (Nubri [kjɛ̲ʔ]), or [mɦi̲nto] 'flower' (Nubri [mɛ̲doʔ]). However, we also see at least one instance of a word-final glottal stop becoming [k]: The Gyalsumdo word for 'blood' is [tʰāk] (Nubri [tʰāʔ]). The reason for this is not clear; it does not seem to be conditioned by the preceding vowel (we also see Gyalsumdo [pɦa̲ta] opposed to Nubri [bʌ̲daʔ]). It might therefore be speculated to be the result of contact between different dialects, or with Tamangic (cf. 3.3). Given the diversity of origins of the Gyalsumdo Tibetan population that has been reported, this certainly seems plausible. Nubri itself already seems to show a distinction between word-final /ʔ/ and /k/, the latter of which is retained by Gyalsumdo. Hence we see /ʃīk/ 'louse' and /ta̲k/ 'hill' in both varieties.

A further development in Gyalsumdo is the loss of front-rounded vowels from many words. For example, we see Gyalsumdo [ʧʰēma] 'small' opposed to Nubri [ʧʰœ̄ma], or Gyalsumdo [ro̲kɦo] 'bone' opposed to Nubri [ʑy̲ba] (both being derived from WT *rus-*). However, this process seems to be somewhat incomplete. We find at least two lexical items with front rounded vowels in our elicited data, namely [ʧʰœ̄] 'eat, drink (honorific)', and [ty̲n] 'seven'. This apparent lexical diffusion is, like the behavior of /k/ above, suggestive of dialect or Tamangic contact.

3.3 Shared correspondence with Tamangic

The Gyalsumdo villages are located geographically at a major cross-roads area of lower Manang. In particular, Cāme is the District political and commerce headquarters. This factor, along with the ample availability of timber and a longer growing season has resulted in the area becoming populated with many Nyeshangte, Gurung and Nar-Phu families over the past two-to-three generations. Bagarchāp and Thonce are also located near Gurung villages such as Nace and Thancowk. Personal correspondence with speakers of these Tamangic languages indicates that contact with Gyalsumdo has been regular and ongoing for a long time, with no clear lingua-franca (although some variety of Tibetan is frequently heard when people from different language backgrounds meet and Nyeshangte functions as a kind of regional lingua franca in upper Manang). Since Gyalsumdo has been in this contact context for an extended period of time, we might expect to see an influence from these languages in the lexicon and possibly in other areas of the grammar of Gyalsumdo.

In terms of lexical borrowing, at least, this does not seem to be the case. One possible Tamangic borrowing in the data – [la̲pʈi] 'leaf' (cf. Phu /leptẹ̊/), is also found in

Kyirong (where it is identified as a Tamangic borrowing by Huber)[3]. Also observed is the word [n̲amtse(n)] 'morning,' which is much more similar in form to Nar /namtoŋ/, Nyeshangte /nânaŋ/ and Thakali /nn̥ŋke/ than either the Classical Tibetan *zhogs-pa* or *snga-dro*, or the Nubri [ɖo̲ɣoŋ]. However, we also find the Gyalsumdo form in South Mustang Tibetan (Kretschmar 1995), where <n̲amtšen> means 'dawn'. It might therefore be reasonably assumed that this is the proximate source for the borrowing.

However, the changes to Gyalsumdo segmental phonology, in particular the loss of final [ʔ] and the lack of the front rounded vowels [y, ø] might potentially be explained as due to contact-induced phonological change. Noonan notes that for Nar, glottal stop only occurs in words of Tibetan origin, and its phonetic realization is variable, frequently alternating with final [k, p] or else with a long vowel (e.g. [kɦêʔpɛ] ~ [kɦê:pɛ] 'eighth') (2003: 338). Also in Nyeshangte, the glottal stop is rare in final position, occurring in only a couple of words (e.g. [péʔ] 'really, very') (Hildebrandt 2004: 24-25). The front rounded vowels are absent altogether in Nyeshangte, and in Nar these vowels are usually articulated as diphthongs (e.g. [ø] ~ [wɛ]). These diphthongs are not otherwise attested, and are likely a reflex of the front close-mid rounded vowel (Noonan 2003: 337). It might be that Gyalsumdo phonology is also undergoing similar types of segmental changes via contact with Tamangic, but this is a possibility that is open to further investigation.

3.4 Final remarks on classification

It is clear from the shared lexical items discussed above that Gyalsumdo is a Tibetan language within the Sino-Tibetan family, and is connected to Nubri. It also shows a number of significant divergences from Nubri and is certainly a distinct variety, perhaps owing some of its variation to contact with Tamangic. Unfortunately, however, given the limited data available for both Gyalsumdo and Nubri, it is difficult to assess the true extent of the divergence between them, not only on the lexical and phonological level but also with regard to morphology and syntax. More work will need to be accomplished before the exact relationship between these languages can be made clear.

4. A PRELIMINARY PHONETIC ANALYSIS

Although any observations are preliminary at this point, it is useful to provide some basic descriptive analysis on suprasegmental trends that turn up in data gathered from our single

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[3] However, this particular item may not, in fact, even be Tamangic. Our reviewer points out that it is also found in both Classical Newar and Modern Kathmandu Newar, and has been identified by Jacques (2004) as being linked to Written Tibetan *'dab-ma*.

Gyalsumdo speaker. Based on close correspondence with Central Tibetan for a great deal of the lexemes in this study, we can hypothesize that Gyalsumdo possesses a modern tonal patterning that aligns with the four series of initial stops present in Central Tibetan. In Central Tibetan proper, (Ü-Tsang) this is reflected as a high tone (unaspirated), high tone (aspirated), low tone (aspirated) and low tone (unaspirated), respectively. These four series are represented in Written Tibetan, and are presented here:

Central Tibetan Series	Characteristics in Written Tibetan
1 (high, unaspirated)	voiceless unaspirated, with or without prefixes, e.g. *k-*, *rt-*
2 (high, aspirated)	voiceless aspirated, with or without prefixes, e.g. *ph-*, *mth-*
3 (low, aspirated)	voiced stops without prefixes, e.g. *g-*
4 (low, unaspirated)	voiced stops with prefixes, e.g. *sg-*, *bd-*

In Nubri, for words beginning with obstruent consonants, Central Tibetan series one through four are realized as the following, based on transcribed data from Webster (1992) and our own transcriptions from data from the two Nubri speakers, with *p* representing any unvoiced stop, p^h representing any unvoiced aspirated stop, *b* representing any voiced stop, and *v* representing any vowel:

Central Tibetan Series	Nubri Representation
1 (high, unaspirated)	pv ~ pv́
2 (high, aspirated)	p^hv ~ p^hv́
3 (low, aspirated)	b̥y ~ p̥y ~ bv̀
4 (low, unaspirated)	bv ~ b̥y ~ bv̀

The only exception to this trend in Nubri is the word for ‘nine’, a series 4 word, which is recorded as variably [k^hu] ~ [k̥u] Webster (1992: 45), but is transcribed from our recordings as [k̲u] ~ [g̲u]. In Webster’s account, this could be the result of the perception of a semi-voiced vowel as aspiration on the onset. Given the similarities between the Central Tibetan series and the modern reflexes in Nubri, and the attested lexical connections between Nubri and Gyalsumdo, it would not be surprising to observe acoustic cues that align with these reflexes in recorded Gyalsumdo data.

In our transcription of Gyalsumdo, we have frequently heard and transcribed, a degree of murmur in words from Central Tibetan series 3, including [t̪ɦo̲pa] ‘belly’, [kɦa̲ŋri] ‘mountain’ and [tɦu̲pa] ‘smoke’ (*grod-pa*, *gangs-ri* and *dud-pa* in Written Tibetan,

respectively), or else we have perceived the initial stop to be voiced. This murmur/onset voicing is less regular, and more variably present in words corresponding to series 4, e.g. [kɦe ~ kjɦe̲] 'eight' and [kɦo̲] 'head' (Written Tibetan *brgyad*, *mgo*). Additionally, Duanmu (1992) notes in his survey of tone in four Tibetan dialects that words in low tones have voicing on initial stops. As such, it is worth investigating trends across obstruent-initial words in Gyalsumdo to draw a preliminary picture of how the Central Tibetan series patterns in this variety.

This study is based on an acoustic analysis of 50 obstruent-initial words in our overall sample: eleven words corresponding to series 1, thirteen words corresponding to series 2, eleven words corresponding to series 3 and fifteen words corresponding to series 4, all with obstruent (plosive, affricate) onsets.[4] As all words that we recorded were produced in isolation (in a list format), any pitch patterns will be unreliable, at least in terms of whether or not a contour is present (i.e. all words display either a rising or falling contour), but an examination of the average pitch height properties and other suprasegmental values across the vowel of the first syllable can at least provide an early picture of relative registers and other characteristics. In this study, due to a small number of data, all mono- and disyllabic words are examined together. Only the initial syllable has been included for all measurements, under the assumption that more patterns and contrasts are located on the initial syllable of disyllabics. This is the case, for example, with Kyirong Tibetan, as described in Huber (2002). However, a more comprehensive study should treat mono- and disyllabic words separately to see if this assumption holds up.

The first trend that we present is the overall pitch pattern for each series. Chart 1 displays the average fundamental frequency values (F_0, measured in Hz.) for the starting, mid-point and end-point of the vowels (either the only vowel in a monosyllabic or the initial syllable vowel in a disyllabic word).

[4] All words were recorded with a Marantz PMD60 solid-state recorder and using an Audio-Technica headset microphone. Words were recorded in mono with a 22 kHz. sampling rate and digitized to a .wav format for analysis with Praat acoustic analysis software.

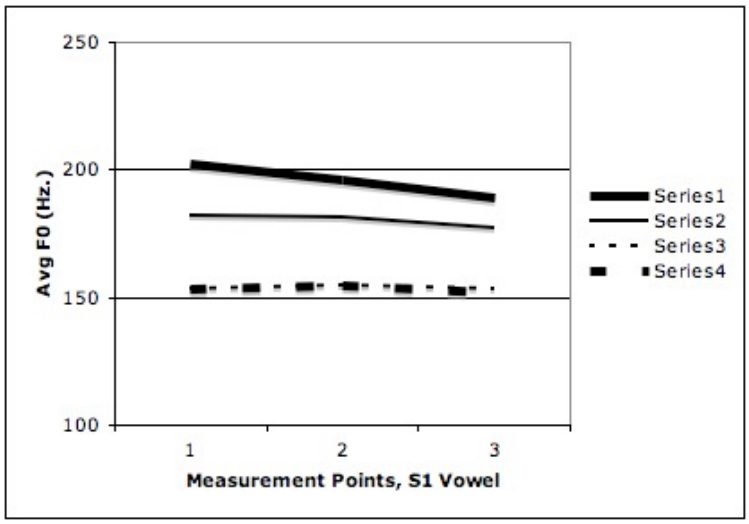

Chart 1: Average F_0 values Across Three S1 Vowel Points

The patterns suggest a two-way (possibly a three-way) differentiation, such that the Central Tibetan series 3 and 4 are merged into a 'lower' clustering, while series 1 and 2 are (marginally) separated at a higher register. At this point, due to a small sample number, the standard deviations are large for words in series 1 and 3 (51/51/45 Hz., and 30/31/29 Hz., respectively at start, mid-point and end-point), so these trends are not statistically significant.

A look at initial-syllable vowel duration (Chart 2) indicates only that Gyalsumdo vowels found in Central Tibetan series 4 are longer (in milliseconds) than vowels in other series, although words in series 2 are marginally longer overall as well:

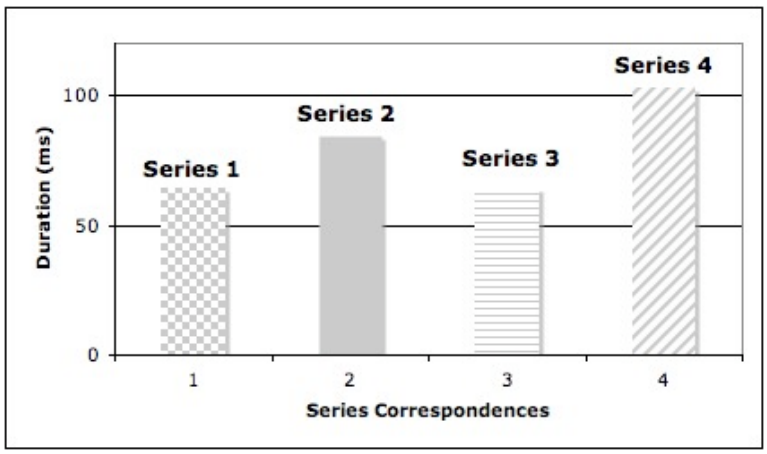

Chart 2: Average Initial-Syllable Vowel Durations

The words in this study were all recorded in isolation utterances, and that there is therefore a risk that the duration measurements are exaggerated; however, these findings might serve as useful in a comparative context, and a more comprehensive investigation might reveal

that vowel duration differences are a reliable acoustic cue to words originating from Central Tibetan series 4.

Not surprisingly, as most Gyalsumdo words corresponding to Central Tibetan series 2 are aspirated, the average Voice Onset Time (VOT) for onsets in this series is much greater than for words in the other series, shown in Chart 3:

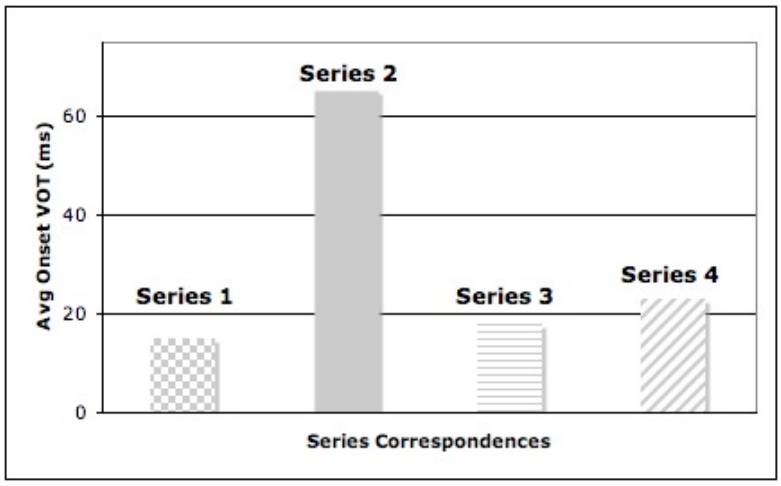

Chart 3: Average VOT, Obstruent Onset Consonants

Interestingly, despite our perception of voicing on obstruent onset consonants in words from series 3 and 4, the average VOT values are almost identical to words from series 1, suggesting that to the extent that there is a phonologized tone system in Gyalsumdo, it does not manifest itself primarily through relative onset VOT for obstruent consonants.

Other potentially useful acoustic cues to tone (particularly phonation-prominent tone systems) include the overall intensity of the vowel (measured in decibels, dB), "spectral tilt" (measured also in decibels, dB), and jitter (measured in relative percentages). Blankenship (2002) demonstrated the reliability of a Fast-Fourier Transform (FFT) spectrum analysis in quantifying differences between modal and non-modal phonations in several languages which have contrastive phonation types. Known also as "spectral tilt", the difference in energy between the first two harmonics (H_1 - H_2/F_0) is greater for breathy phonations than it is for modal/fully voiced sounds. Chart 4 shows average spectral tilt differences for vowels in Gyalsumdo words corresponding to the four Central Tibetan series:

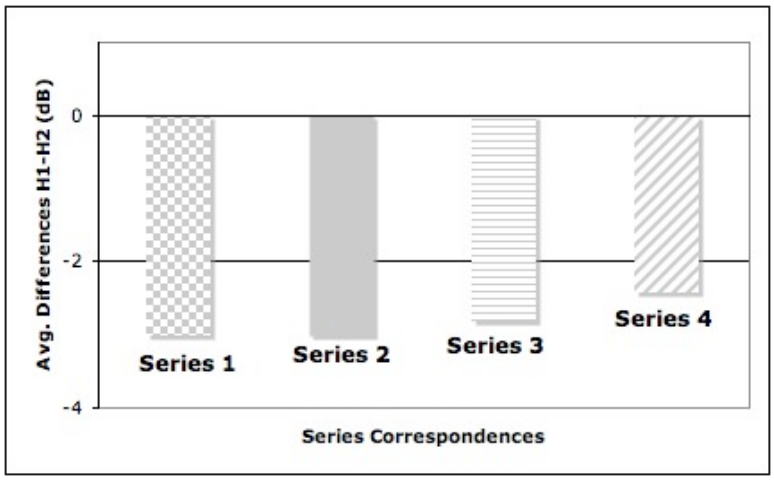

Chart 4: Initial-Syllable Averages for Vowel H1-H2 Differences

Here we notice an overall very slight rise in energy differences between H_1 and H_2, resulting in a negative difference for vowels from all series. Words from series 1 and 2 have slightly greater negative (i.e. rising slope) values on average than do words from series 3 and 4. This could be a tantalizing hint of a phonation difference between words from the higher vs. lower series (i.e. perhaps vowels in series 1 and 2 are more modal, and vowels in series 3 and 4 are more breathy), but this needs more study with a larger lexeme sample.

Gordon and Ladefoged (2001) have noted that another possible indicator of phonation differences may be found in the overall amplitude of the vowel, known as "acoustic intensity". Breathy phonation is associated with a relatively reduced or lowered intensity in comparison to modal phonation. The average intensity values for vowels in Gyalsumdo words from the four Central Tibetan series is presented in Chart 5:

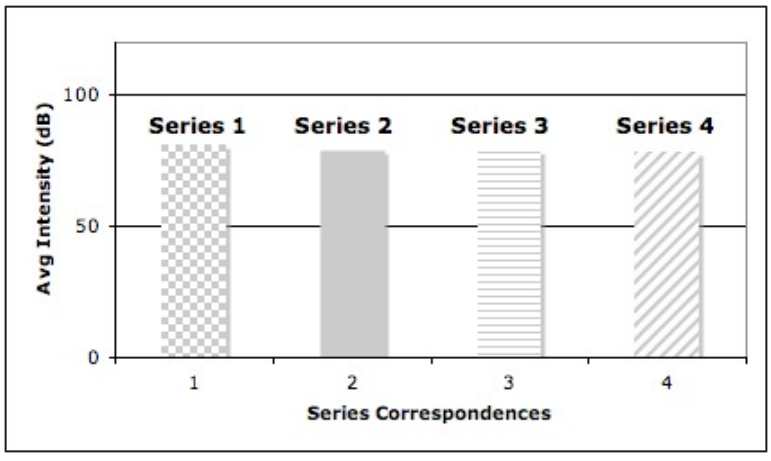

Chart 5: Average Vowel Intensity (dB), Initial Syllables

As Chart 5 indicates, vowel intensity is virtually identical across the four series, suggesting that while F_0 and possibly VOT and spectral tilt might be indicators of phonation differences, vowel intensity might not be a reliable indicator.

Another possible cue to phonation differences can be found in a measurement of relative vowel "jitter", which is the variation in the duration of successive F_0 cycles. A high degree of duration variation, indicating aperiodic voicing of the vowel, is marked by a high degree of jitter (resulting in higher comparative percentages). Chart 6 shows the average jitter percentage values for vowels of words in the four series:

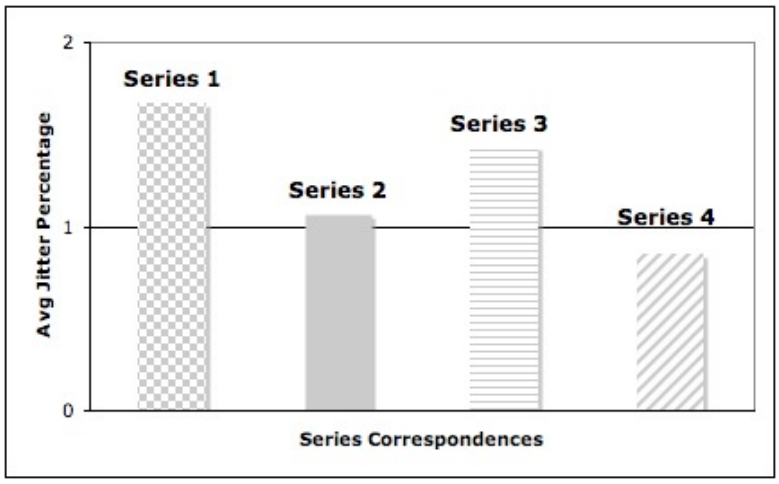

Chart 6: Average Initial-Syllable Vowel Jitter Percentages

Interestingly, jitter percentages are highest for words from Central Tibetan series 1, a series which otherwise corresponds with cues for modal vowel phonation. Words from series 3 also show a relatively higher degree of jitter, which is in line with a hypothesis that the reflex of this series is manifested in non-modal phonation of the initial vowel. But the mixed results for jitter for these two series suggests either that jitter is not a reliable cue, or else that a bigger lexeme sample is needed.

Overall, then, the reflexes of the four series of initial stops in Central Tibetan are possibly manifested in Gyalsumdo as an amalgam of differences in relative pitch (two high series and a possibly non-contrastive low series), differences in onset VOT (with initial obstruents in series two being aspirated), and perhaps differences in spectral tilt and vowel duration. However, these cues do not systematically distinguish between all words from all series; they are relevant to different degrees in different series, with a high degree of variation. Again, at this point these observations are preliminary, being based on a small sample, and require further and more systematic examination.

5. CONCLUDING COMMENTS

Gyalsumdo is a probable Central Tibetan variety that has been located amongst Tamangic languages for a long period of time, and has presumably become more separated from the Tibetan varieties to which it is most closely affiliated genealogically. We note that

at least at the lexical level, Gyalsumdo retains close affiliation with Central Tibetan, but that there may be evidence of some contact-induced change in the phonology outside of the Central Tibetan sub-grouping.

Our observations in this account are based only on data from a single Gyalsumdo speaker. Nevertheless, these observations open an important door to future studies from a more comprehensive sample across a larger representation of the speech community. Based on the current population estimate of 200 or so speakers, and by the observation from Mr. Norbu Lama himself that younger Gyalsumdo are only passive users of the language, there is an urgent need to gather this information while there is still access to regular speakers.

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