Nyeshangte

Nyeshangte (Ethnologue ISO 639-2: SIT; SIL Code NMM; endonyms: *Manange*, *Njangmi*, *Njeshang*; exonyms: *Manangbhot*, *Manangba*), is a member of the Tamangic (also referred to as "Gurungic" or "TGTM") sub-grouping of Sino-Tibetan. It is traditionally spoken in the villages of the upper Manang District of central-northern Nepal (28.40 N, 84.01 E), although a cohesive migrant community is also found in Kathmandu. The speaker population is between 3,000-5,000. There appears to be continued, but uneven, transmission of Nyeshangte to younger generations, with increased exposure to Nepali (Indo-European), and with some contact-induced changes affecting the phonology, lexicon and morpho-syntax of urban-based speakers (cf. Hildebrandt 2004; 2007; 2010 for discussions of contact-induced language change in Nyeshangte). This illustration uses data from Nyeshangte speakers who were born and raised in upper Manang, representing a more conservative version of the language.

Consonants

	Bilabial	Dental	Alveolar	Retroflex	Palatal	Velar	Glottal
Plosive	p pʰ	t tʰ		ʈ ʈʰ		k kʰ	(ʔ)
Labialized Plosive	pʷ pʰʷ					kʷ kʰʷ	
Affricate		ts tsʰ			tʃ tʃʰ		
Nasal	m	n			ɲ	ŋ	
Labialized Nasal	mʷ					ŋʷ	
Fricative			s	ʂ	ʃ		h
Tap			ɾ				
Approximant	(w)				j		
Lateral Approximant			l				

The above table shows the consonant phonemes in Nyeshangte in IPA transcription only, as Nyeshangte has no common orthography; educated Nyeshangte are bilingual, and they read and write in Tibetan or Devanagri (Nepali) scripts. As the below table illustrates, all of these consonants are found, and are contrastive in, word-initial position. A smaller sub-set is found in word-medial position, and a limited number of (plosive, nasal and approximant)

consonants occur in word-final position.[1] The labio-velar approximant [w] is extremely rare as a single segment in any position, with only one attested example: [jà#wà] ([jɑ] 'hand' [wà] 'clap') 'clap hands.' The glottal plosive [ʔ] is idiosyncratic in occurrence, pronounced variably before some (but not all) vowel-initial words: [ʔûʃu] 'apple,' word-finally in a couple of emphatic expressions: [péʔ] 'really/very' and, rarely, word-medially: [tsʰáʔrɑŋ] 'all, every.'[2]

	Initial	Medial	Final
p	pî 'say'	kʰjâpɜ 'king'	sûp ~ sûpɜ ~ sû 'body'
pʰ	pʰì 'wine'		
t	tí 'pluck, pull'	kòto 'walnut'	
tʰ	tʰî 'teapot'		
ʈ	ʈû 'cereal grain'	ʈòŋʈɑ 'thousand'	
ʈʰ	ʈʰû 'six'		
k	kì 'feces'	pʰjòko 'tree bark'	tûk 'poison'
kʰ	kʰì 's/he, it'		
pʷ	pʷì 'corn husk'		
kʷ	kʷé 'lift'		
kʰʷ	kʰʷê 'song'		
t͡s	t͡sâŋ 'bed'	pɜ́t͡si 'knee'	
t͡sʰ	t͡sʰɜ̀ 'shine/glare'		
t͡ʃ	t͡ʃê 'tea'	t͡ʃʰòt͡ʃe 'time'	
t͡ʃʰ	t͡ʃʰê 'book'		
m	mî 'person'	ŋ̀mɜŋ 'ear'	
n	nè 'knead dough'	kîni 'quickly'	
ɲ	ɲè 'obey'		
ŋ	ŋî 'two'	tɑ́ŋi 'flea'	t͡sʰòŋ 'business'
mʷ	mʷí 'money'		
ŋʷ	ŋʷó 'fry'		
ɾ	ɾɜ̀ 'goat'	tôre 'graveyard'	kʰjôɾ 'copper'
s	sɜ̀ 'ground'	nêse 'tomorrow'	
ʂ	ʂô 'wheat'		
ʃ	ʃɜ̀ 'flesh'	ʃóʃo 'paper'	

[1] Diacritics or tone letters indicate tonal pitch, which is discussed below. In cases where a nasalization diacritic is present, a tone letter at the start of the word indicates the tonal pitch.

[2] On disyllabic words, the tonal pitch diacritic on the first syllable nucleus represents the tone pattern for the word. The domain of tone is discussed below.

h	hûni ‘where’		
j	jù ‘hand’	mɟ̀ji ‘buffalo’	
l	lá ‘flee’	pʰôli ‘spider’	kʰól ‘boil’

Plosives

Nyeshangte has no voicing opposition for plosives, a pattern also found with other Tamangic languages. In word-medial position, those plosives in intervocalic position or that begin an unstressed syllable are frequently (but not always) phonetically weakly voiced

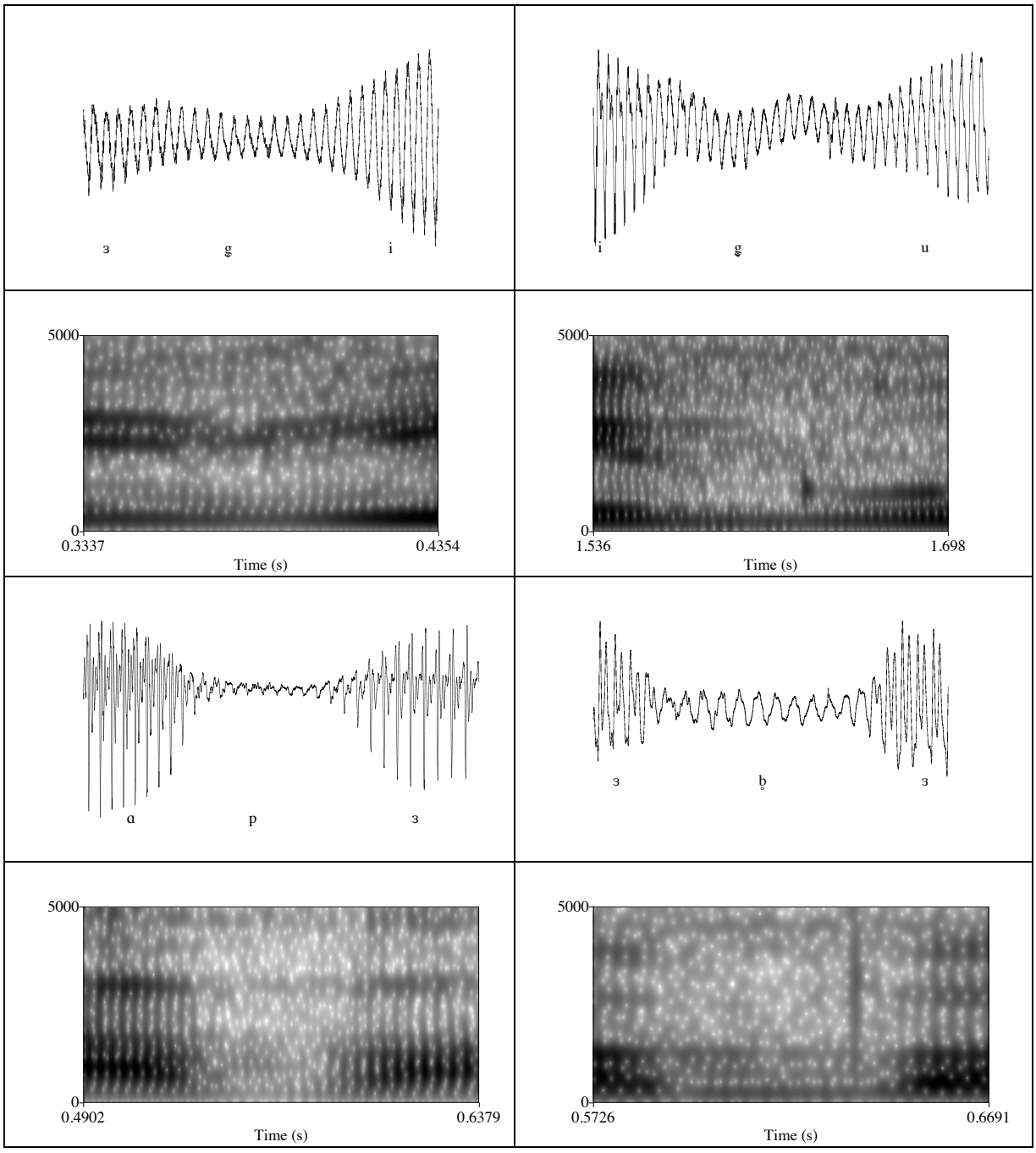


Figure 1: Waveforms and spectrograms of four words with medial /p/ and /k/ from left-to-right, top-to-bottom: [nɜ̀gi] ‘rice sifter’, which shows a weakly voiced medial velar plosive; [mìg̬u] ‘teardrop’, a compound which also shows weak voicing of the second syllable, the word [kjú] ‘water’, which lacks the glide in C2 onset position as the second element of this compound; [k^{h}jâpɜ] ‘king’, which shows very little voicing of the medial bilabial plosive; and the bi-morphemic word [k^{h}ɜ̀-b̥ɜ] ‘come-NOMINALIZER’, where the suffix *–pɜ* shows weak voicing.

Plosives do show contrastive aspiration, and the crosslinguistic observation that VOT is greatest with velar place is also true for Nyeshangte. When the aspirated bilabial plosive precedes a second onset, it tends to be fricated. This is shown with the words [p^{h}ɜ̀] ‘husband’ compared with [Φɾɜ̂] ‘hundred’ (represented phonemically as /^{42}p^{h}ɾɜ/). In the second waveform and spectrogram, the high-frequency energy before the tap indicates plosive frication.

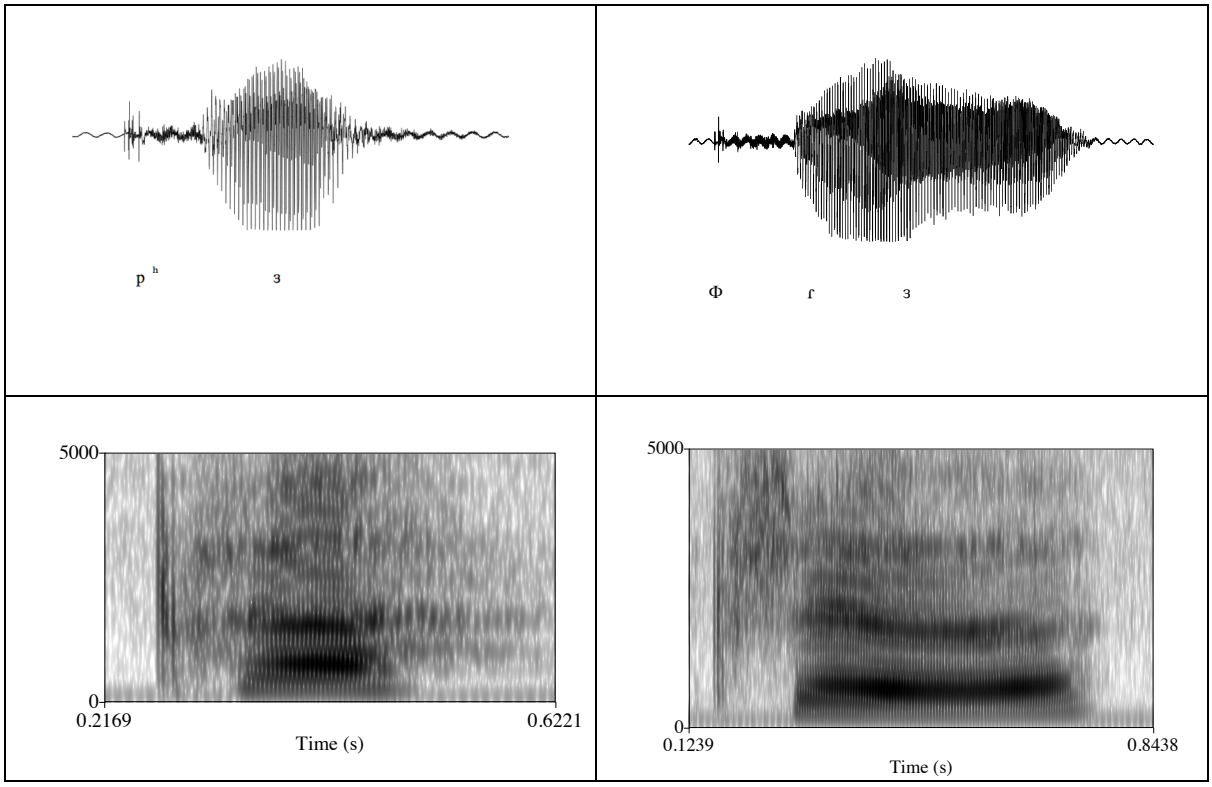


Figure 2: Waveforms and spectrograms of ‘husband’ [p^{h}ɜ̀] and ‘hundred’ [Φɾɜ̂], where the initial aspirated bilabial obstruent of ‘hundred’ is noticeably fricated when it is the first unit in a consonant cluster.

Obstruent consonant aspiration is also linked to the tonal patterns in Nyeshangte, and is commented upon further in the below section.

Retroflex

The retroflex consonant is common in the segmental phonology of South Asian languages, regardless of geneaological affiliation and in fact, the retroflex place of articulation is a phonological identifier of South Asia as a *Sprachbund* (Masica 2001). Indic languages are said to have a true retroflex, which may be contrasted with dental place, while Bodish Tibeto-Burman languages are said to have a dental place of articulation which contrasts with an affricated alveolar that has a rhotacized off-glide, akin to a [tɹ] cluster (Michailovsky 1988; Noonan 2003). In Nyeshangte, there does not seem to be evidence of a [tɹ] cluster; rather, the retroflex occurs as a single articulation, although it is somewhat affricated in initial position in comparison to stops in other places of articulation.

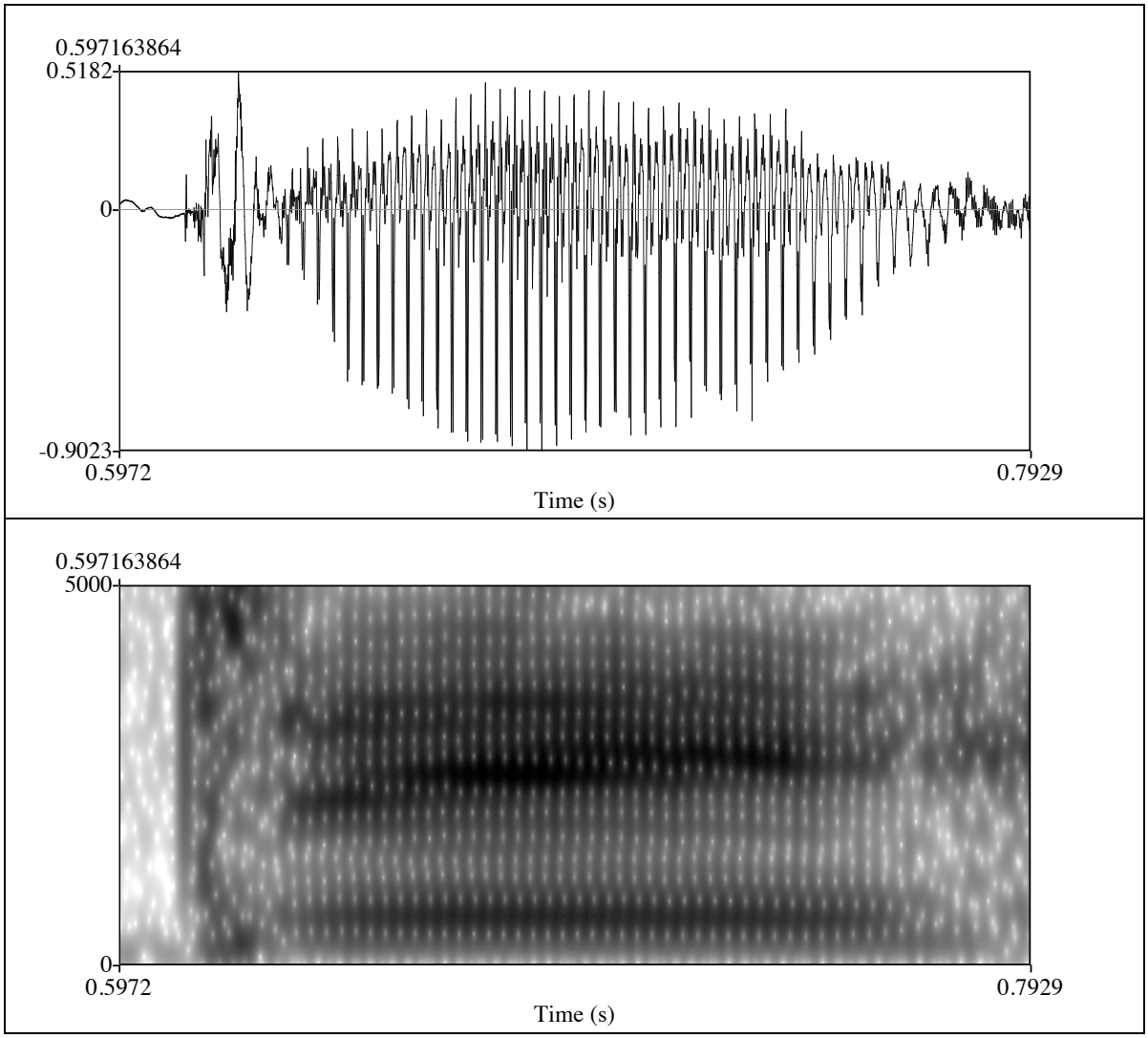


Figure 3: The above waveform and spectrogram are for [ʈê] ‘spinach’, showing vocal fold vibration closure followed by the stop burst with a small amount of affrication before transitioning into the following vowel, with no evidence of a rhotic off-glide. In word-

medial, single onset position, the retroflex plosive frequently (but not always) lenites to a tap manner.

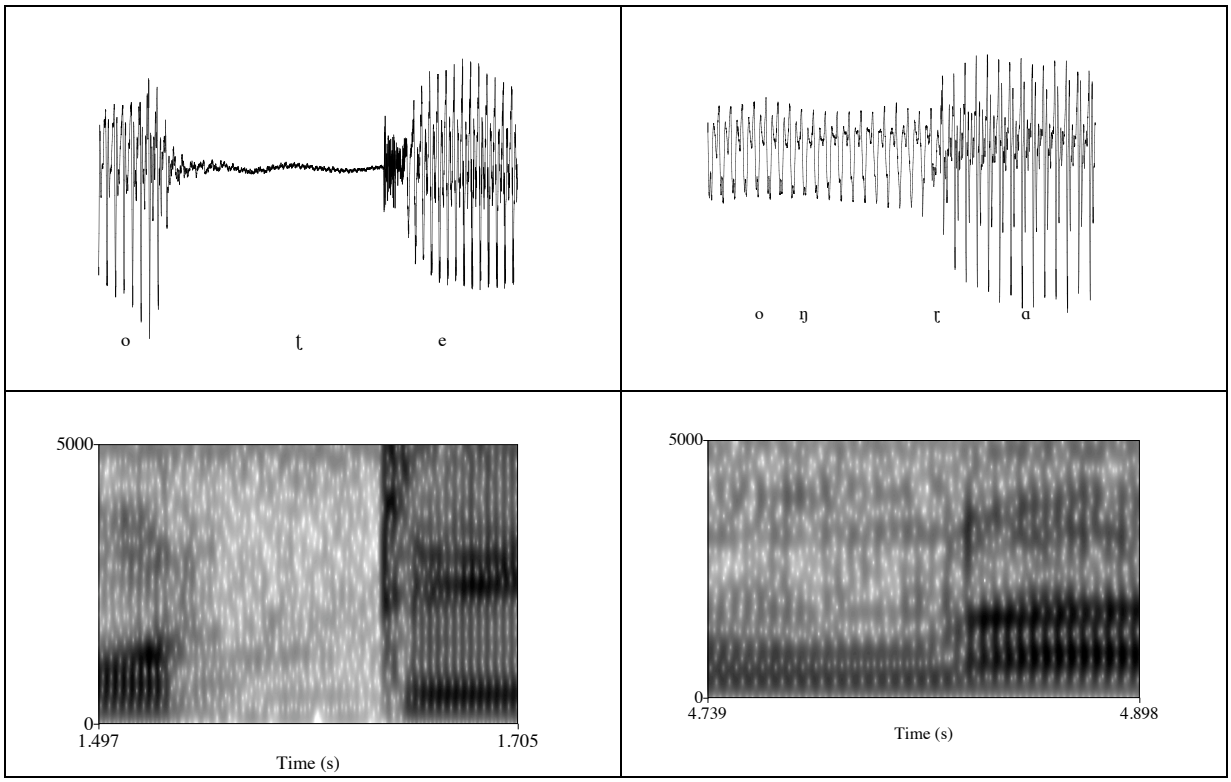
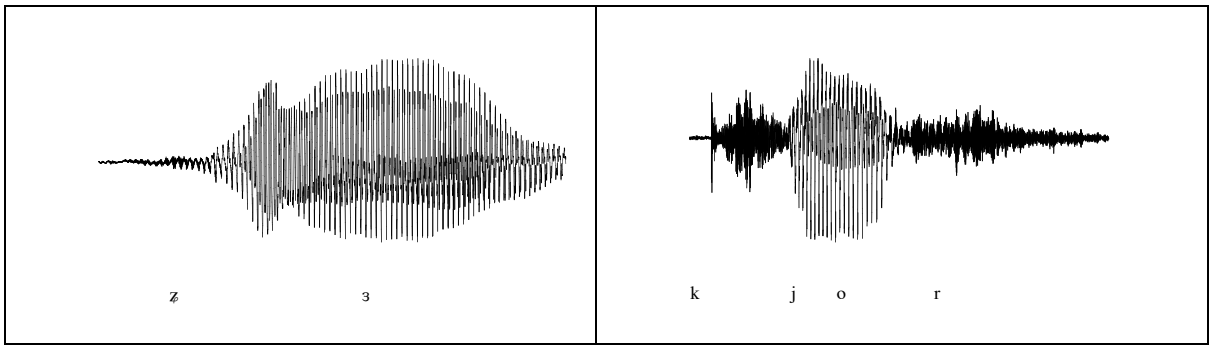


Figure 4: The retroflex is articulated as an unvoiced plosive in the medial position of [kô.ʈe] ‘button’ (left) but is articulated as a tap (indicated by a cross-hair line) in the medial position of [tòŋ.ɽɑ] ‘thousand’ (right).

Tap

The tap consonant lenites in absolute initial position, and in final position it is produced more as a trill. In word-medial positions (second onset position and intervocalically), it is produced more as a true tap.



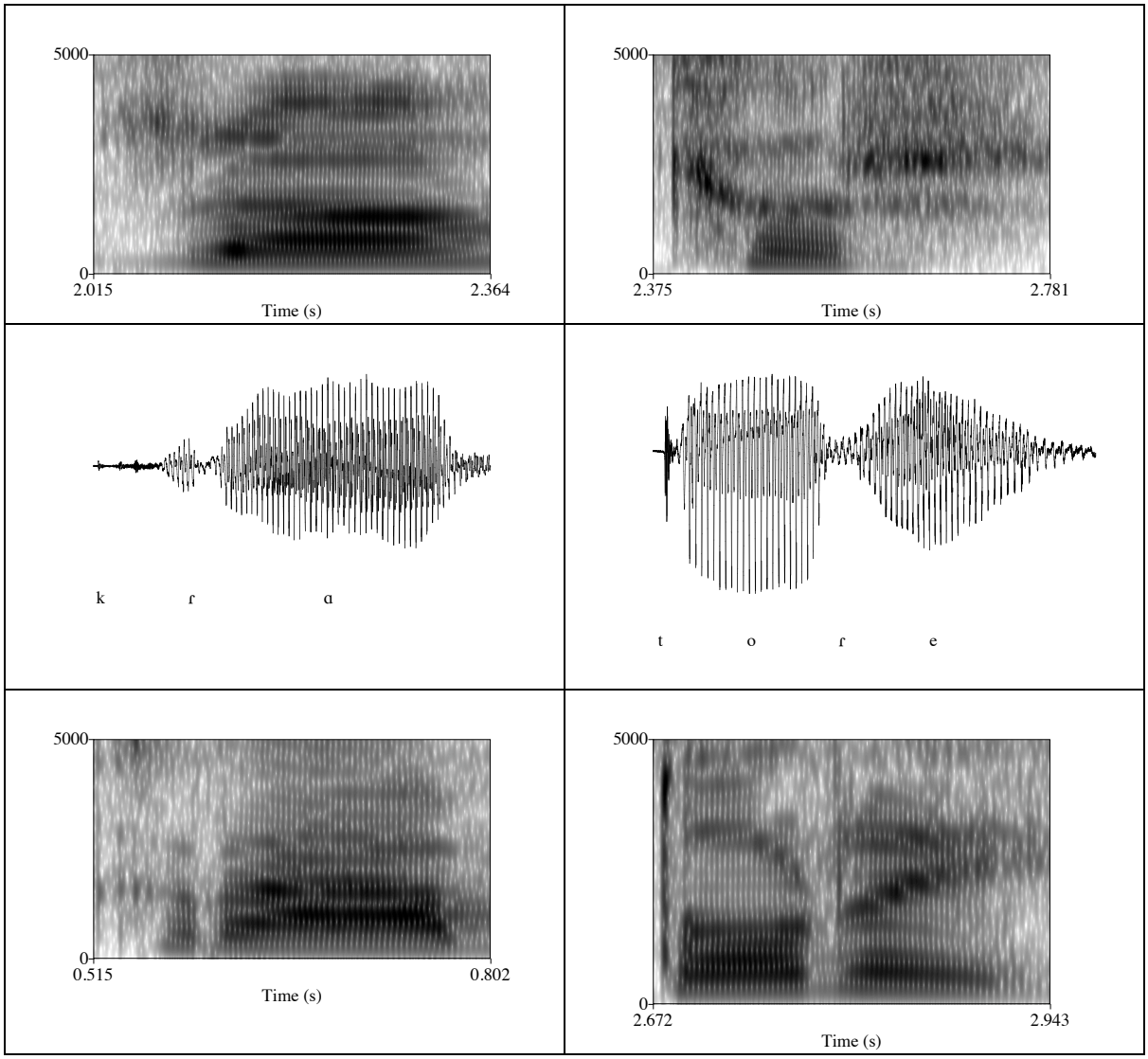


Figure 5: Waveforms and spectrograms of the tap in initial position, with the word [ʑɜ̀] ‘goat’ (top left); in final position, with the word [k^{h}jôr] ‘copper’ (top right); in C2 onset position, with the word [kɾɑ̀] ‘cry’ (bottom left) and in word-medial, intervocalic position, with the word [tôɾe] ‘grave’ (bottom right).

Retroflex Fricative

Given that the tap shows frication in initial position, it sometimes approximates the retroflex fricative in pronunciation. However, the word ‘friend’ [ɾô] may be contrasted with the word ‘wheat’ [ʂô], and their acoustics are quite different.

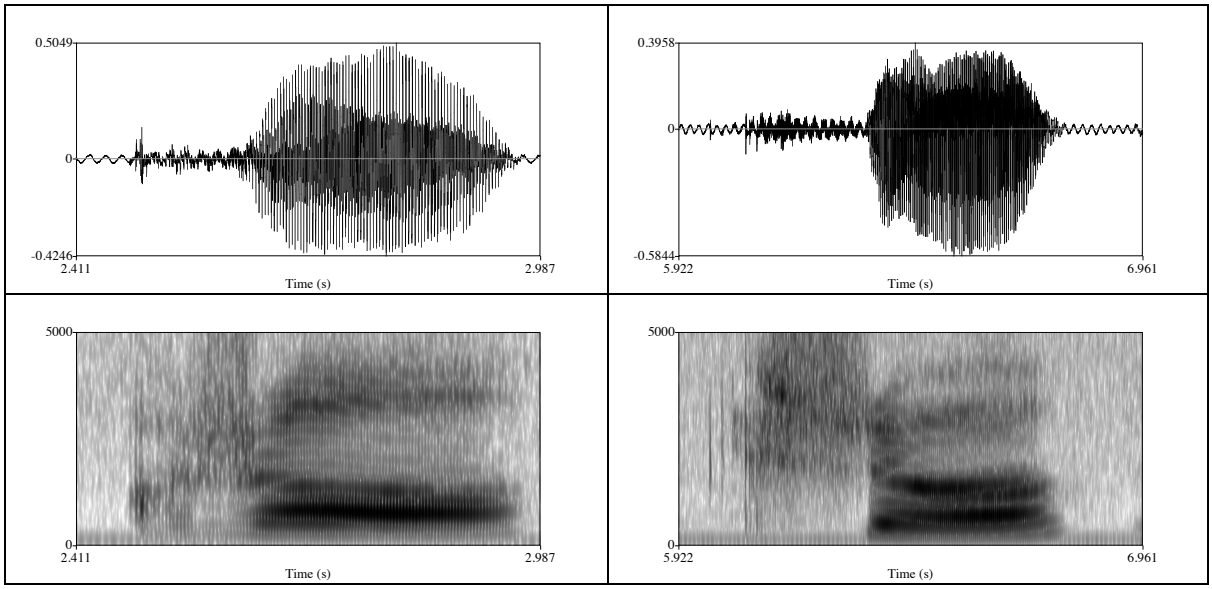
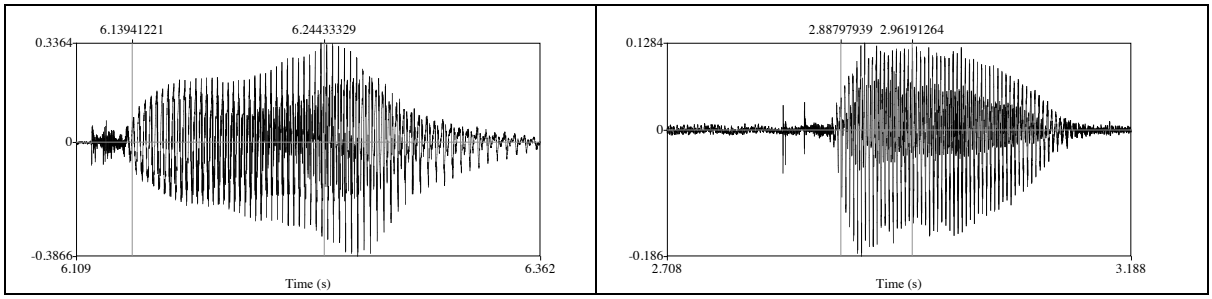


Figure 6: [ɾô] ‘friend’, with a (lenited) initial tap (left column) and [ʂô] ‘wheat’, with an initial retroflex fricative

In related languages, ‘wheat’ is actually pronounced with an aspirated velar-plus-approximant cluster: *kʰɹo*. In Nyeshangte, there are no *kʰɹ-* clusters, and so this fricative is likely historically related to the cluster in the other sister languages.

Labialized Consonants

The labio-velar is distributionally very restricted; it is attested as its own single onset in only a single word: [wà] ‘clap’ (although it is found in some Nepali loanwords like *hawa* ‘wind’). In non-initial, pre-vocalic position [w] follows only a limited number of initial consonants, namely a sub-set of bilabial and velar plosives ([p, k, kʰ]) and the bilabial and velar nasals ([m, ŋ]). While it is possible that [w] may simply have a restricted occurrence as the second member of an onset cluster, an acoustic comparison of [w] in this position with the palatal approximant [j], which also has a robust distribution as a single onset in word-initial position, suggests that [w] is not a separate segment, but exists rather a secondary articulation. Durational measurements of [w] and [j] in non-initial position show that [j] is always much longer in duration in comparison to [w].



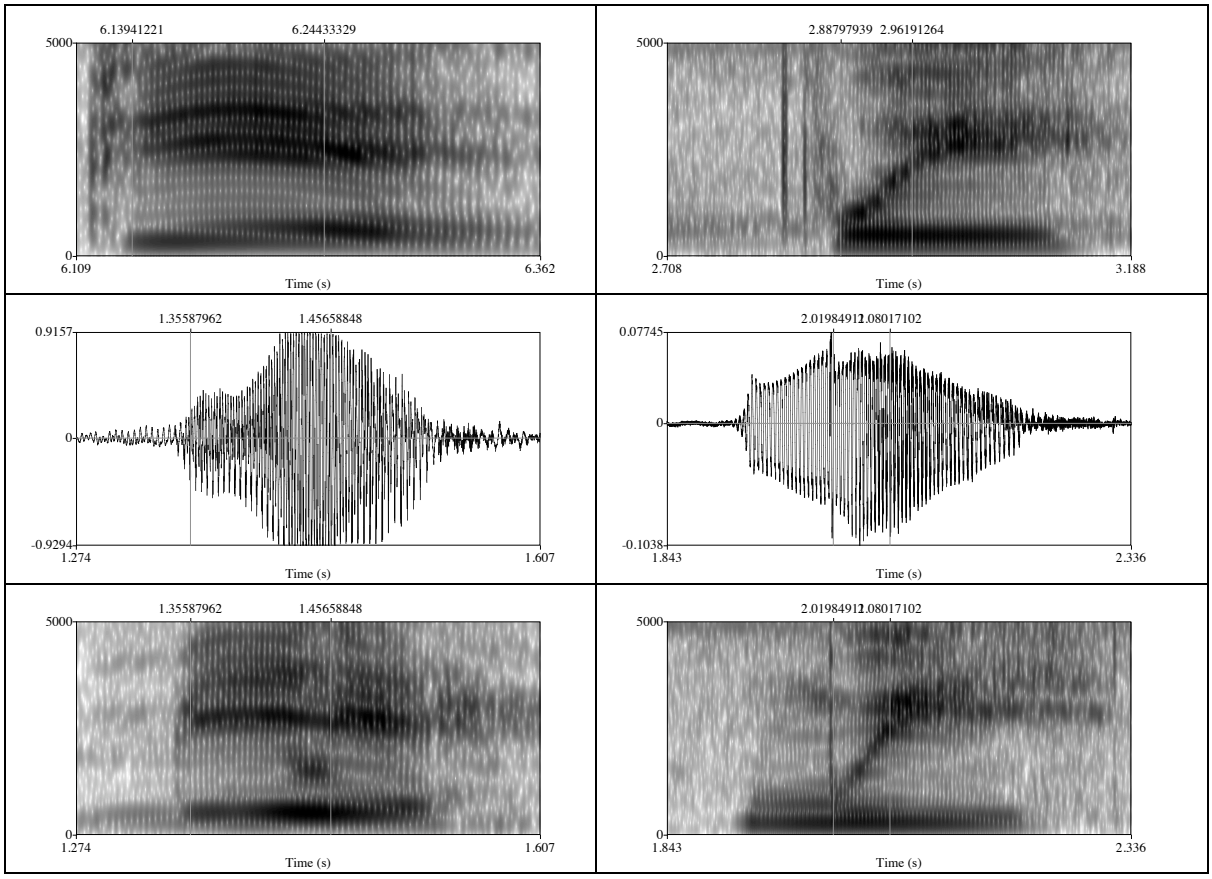


Figure 7: The crosshairs in the above waveforms and corresponding spectrograms show the starting and ending duration of the non-initial approximants [j] and [w] in words [pjê] 'wife' and [p^{w}è] 'incense' (top two rows, from left) and the words [mjê] 'cow' and [m^{w}î] 'money/silver' (bottom two rows, from left). The palatal approximant is regularly approximately twice the duration of the labio-velar approximant.

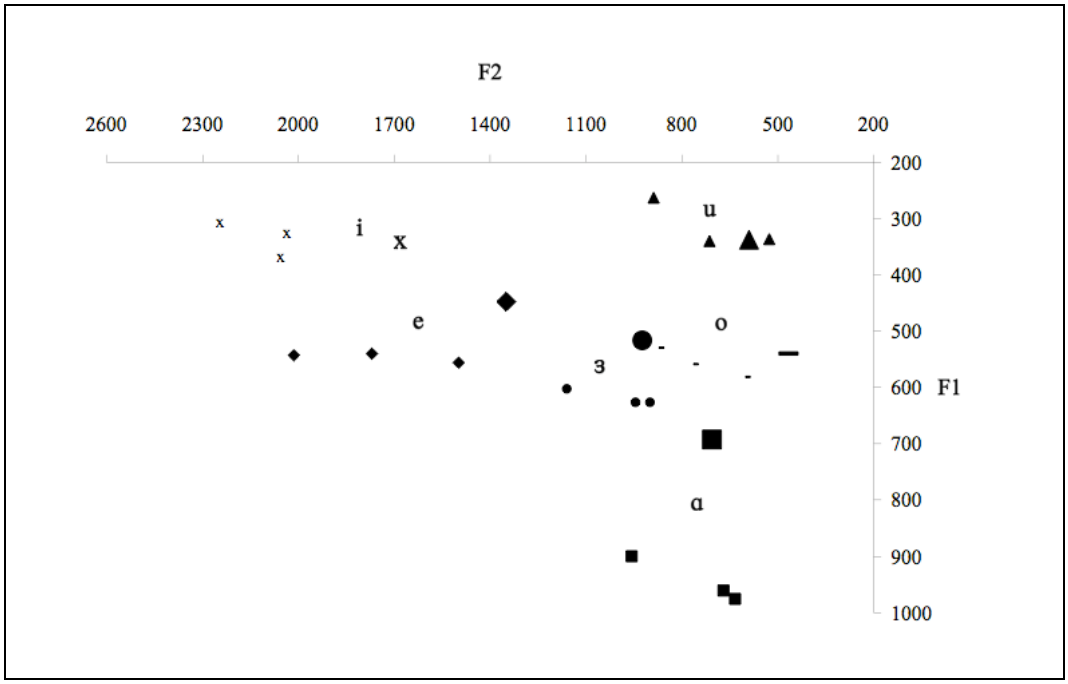
As such, the restricted distribution and the acoustic properties of [w] suggest that it is not a separate consonant segment in Nyeshangte (with the exception of loanwords). Rather, there is a series of labialized bilabial and velar plosive and nasal consonants in the language.

Vowels

Nyeshangte has six oral vowels and five nasalized vowels, which are contrastive with the oral vowels:

i	t^{h}î 'teapot'	ĩ	˥˩t^{h}ĩ 'house'
u	kù 'chest'	ũ	˥kũ 'expensive'
e	lè 'warm'	ẽ	˥lẽ 'tongue'
o	ko 'definite article'	õ	˧kõ 'get dressed'
ɑ	tʃà 'search'	ɑ̃	˧tʃɑ̃ 'small'
ɜ	lɜ̀ 'do'		

A Nyeshangte vowel chart (for oral vowels only) is illustrated in the following chart, with data from thirty monosyllabic words elicited from three female and one male speaker.[3] The values plotted to the chart represent average F1 and F2 values for each speaker. In general, with the exception of the close-mid and close back vowels, the male speaker's F1 and F2 values are more centralized than with the females.



Nasalization in Nyeshangte is diacrhonically emergent. In this and in sister languages, older vowel-plus-nasal sequences are becoming reanalyzed as open syllables with a nasalized vowel. This appears to be part of an overall historical trend towards coda consonant loss in final position in the Tamangic sub-group, as most other Tamangic languages do not even permit approximant consonants in coda position. In Nyeshangte, with the close front vowel in particular, the phonetic realization nasalized vowels may vary across speakers (and even across repetitions from a single speaker) from a nasalized vowel [ĩ] to a plain vowel plus final nasal consonant: variably [in] or [iŋ]. This is illustrated here with data from two words elicited from three female speakers, one word has a nasalized vowel and one has an oral vowel: [-ɬtĩ] 'heart' and [ʈî] 'skin'[4]:

[3] The male speaker's values are always represented by comparatively larger symbols of the same shape for each vowel quality: [i] x; [u] ▲; [e] ♦; [o] --; [ɜ] ●; [ɑ] ■)

[4] This pattern was first noted for Nyeshangte and described in Hildebrandt 2005: 19-22.

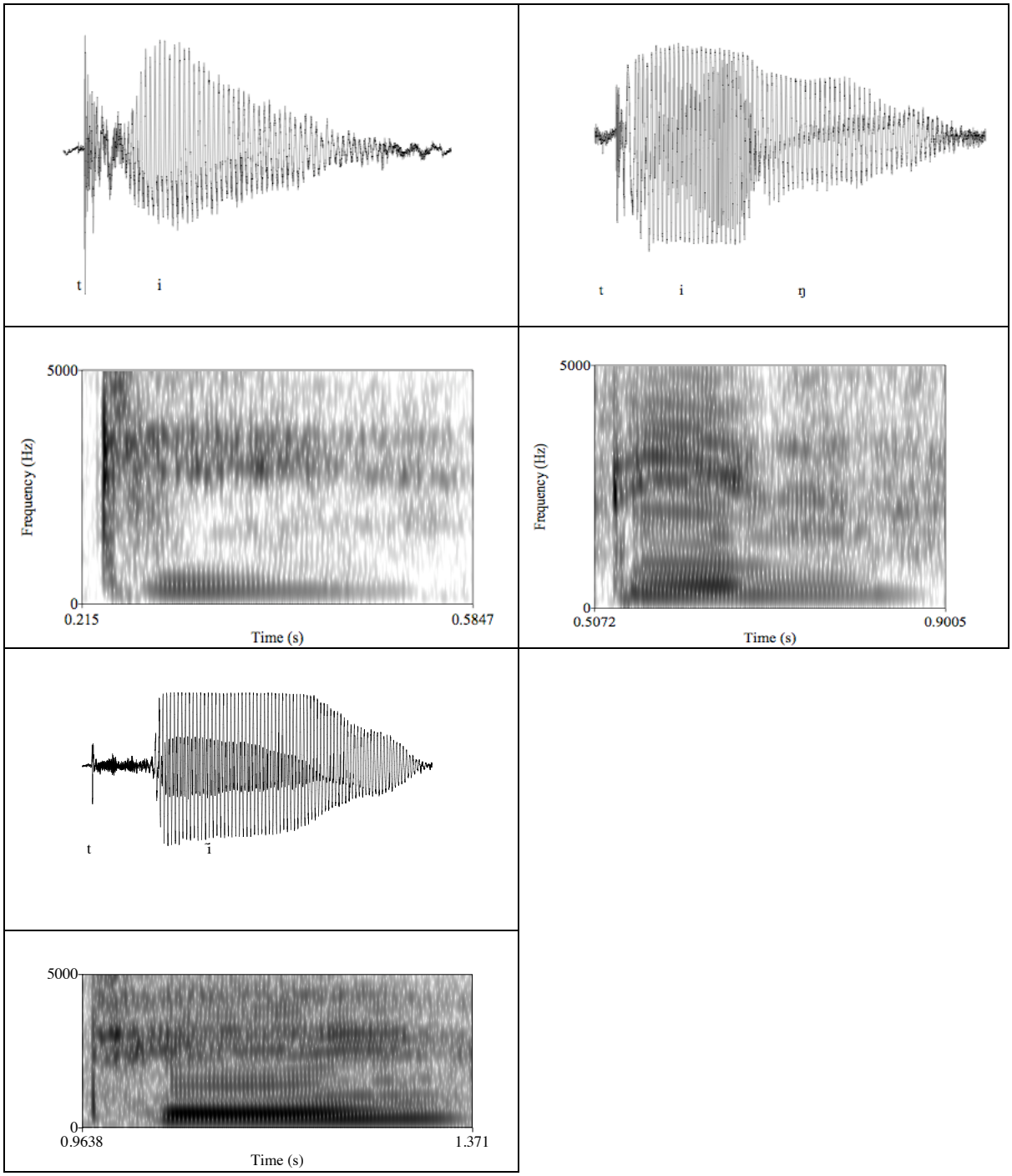


Figure 8: Waveforms and Spectrograms of the words [ʈî] ‘skin and [tìŋ] ‘heart’ for Speaker 1 (top left and right), and [ɬtĩ] ‘heart’ for Speaker 2 (bottom left), both females, with a (lightly) nasalized vowel. For Speaker 1, the formant structure following the vowel indicates the presence of a nasal coda consonant. For Speaker two, the somewhat weaker F1 structure indicates a nasalized vowel (in comparison to ‘skin’), but with no indication of a following consonant.

Tone

Nyeshangte has a system of four contrastive tones that align mainly along the parameter of contrastive vowel fundamental frequency (F_0). There are two level tones: a low-level and a high-level, as with the words [mjè] 'fire' and [mí] 'eye', and there are two falling contour tones: a very high falling and a mid-low falling, as with the words [mî] 'person' and [mjê] 'cow'.

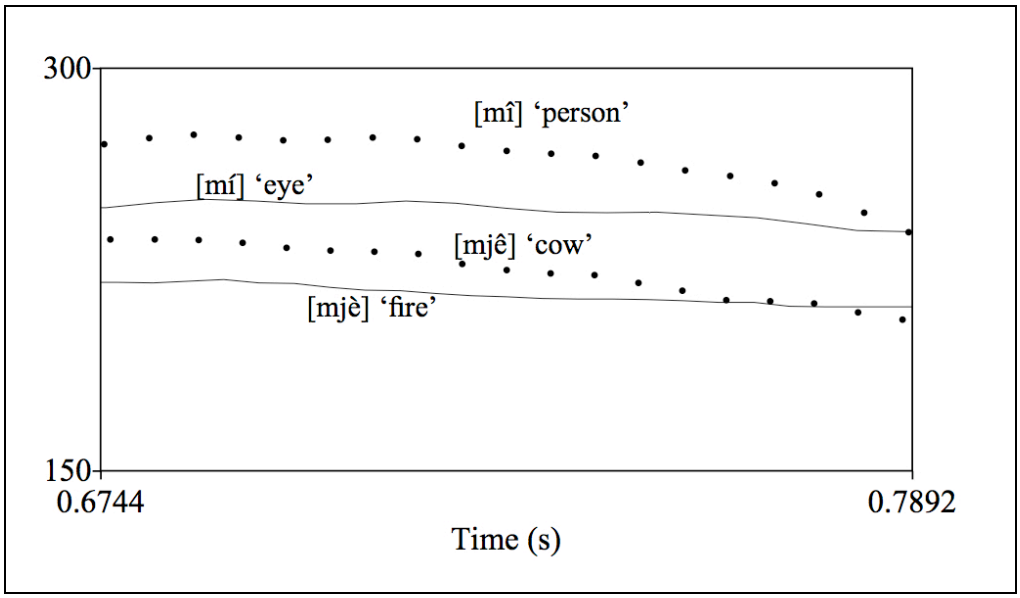


Figure 9: F_0-plots for the starting, mid-point and ending fundamental frequency values for the near-minimal set of nasal-initial words. The words belonging to the two contour (falling) tones are speckled. All words were uttered in a frame-medial sentence context of 'I saw the X', where X is the target word illustrated in this figure, and the sentence is verb-final, the default clause word-order for Nyeshangte.

A secondary tone parameter of onset aspiration is revealed with words that are obstruent-initial (i.e. plosives and affricates). Specifically, when the onset consonant is an obstruent, tones /3/ and /4/ show a split; tone /3/ words begin with only unaspirated obstruents, and tone /4/ words begin with only aspirated obstruents. This split is not present for words belonging to tones /1/ or /2/, where the initial obstruent may be aspirated or unaspirated. This aspiration split is not relevant for words with initial nasal, fricative or approximant consonants. In other Tamangic languages, this split in two of the tones is realized phonetically as murmur or breathy phonation, but in Nyeshangte tone has phonologized further such that this phonation difference is found only as an aspiration feature on onset obstruents (Mazaudon and Michaud 2008: 254).

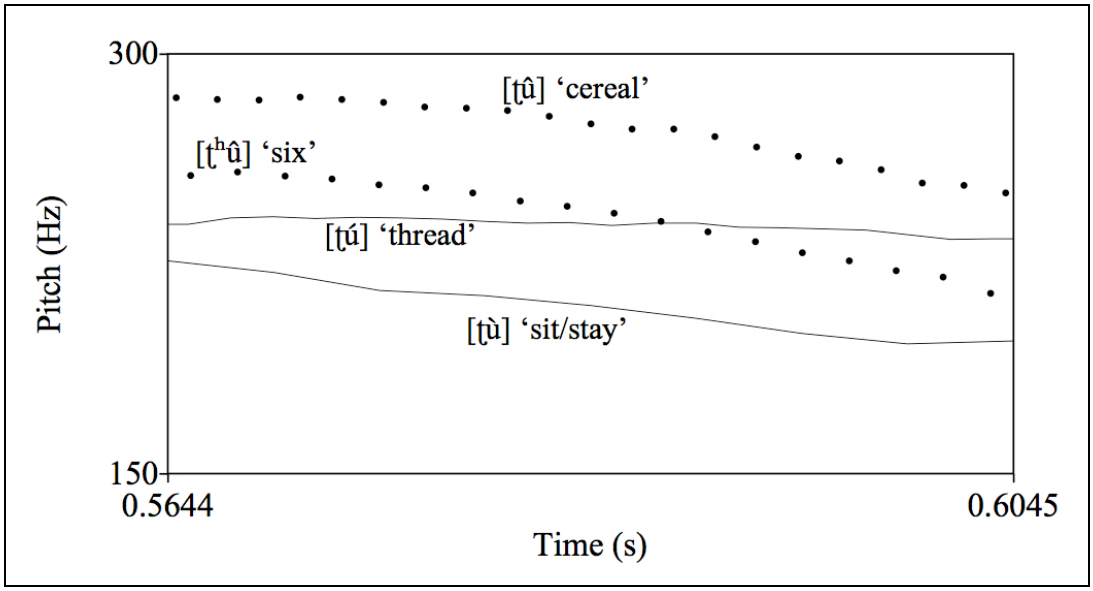


Figure 10: F_0-plots for the starting, mid-point and ending fundamental frequency values for the minimal set of obstruent-initial words. The words belonging to the two contour (falling) tones are speckled.

In sister languages, two of the four tones have associated non-modal phonations (typically breathy phonation variably realized on either the onset or the vowel). In Nyeshangte this phonation difference is instead realized only as a split in aspiration in the two contour tones: tone three obstruent-initial words are only ever unaspirated and tone four obstruent-initial words are only ever aspirated. This phonation difference is not present for words that begin with nasals and other sonorant consonants; in these cases, it is only the pitch height and contour differences which differentiate these words phonetically.

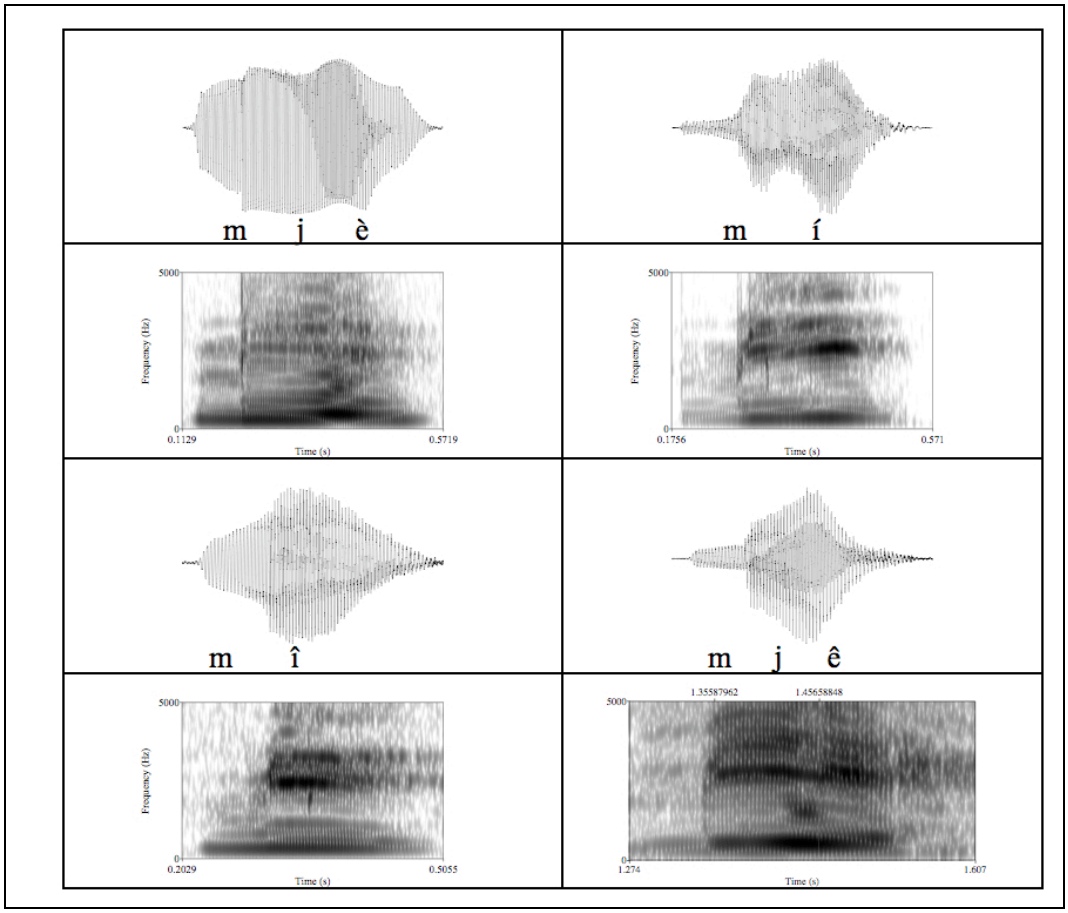


Figure 11: Waveforms and spectrograms of the nasal-initial words shown in the pitch traces in Figure 9, with strong formant structure for onsets and vowels, i.e. a lack in phonation differences on either onsets or vowels, in all cases.

The Domain of Tone

The tone-bearing unit in Nyeshangte is the phonological word (or 'prosodic word'). Those F_0 contrasts that are found on monosyllabic, monomorphemic words are also found, and expand across disyllabic words, whether they are mono- or polymorphemic (e.g. a stem plus an inflectional or derivational suffix).

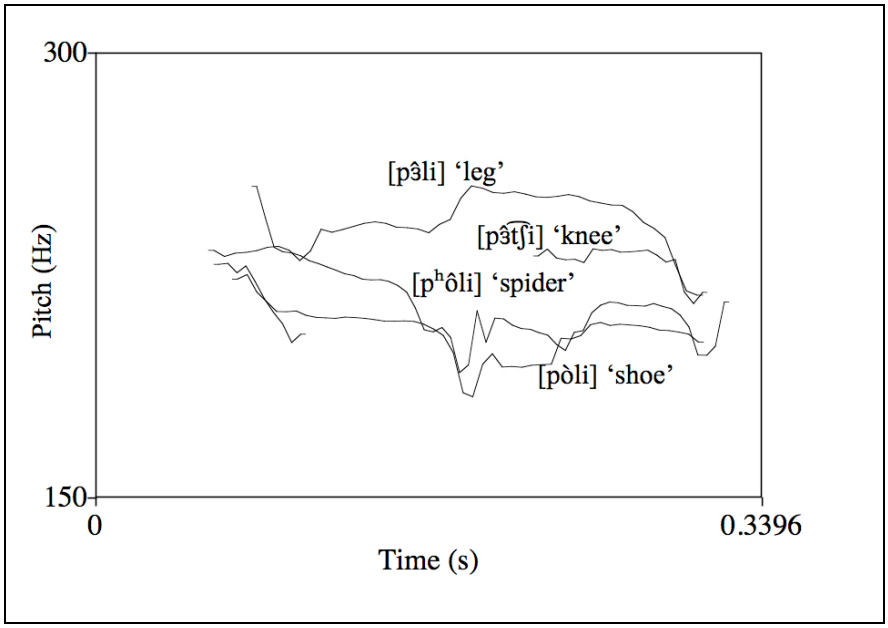


Figure 12: Four disyllabic monomorphemic words ([pòli] 'shoe', [pə̀t͡ʃi] 'knee', [pə̂li] 'leg', [pʰôli] 'spider') showing the same F_0 pattern and trajectory through time as is found with monosyllabic words

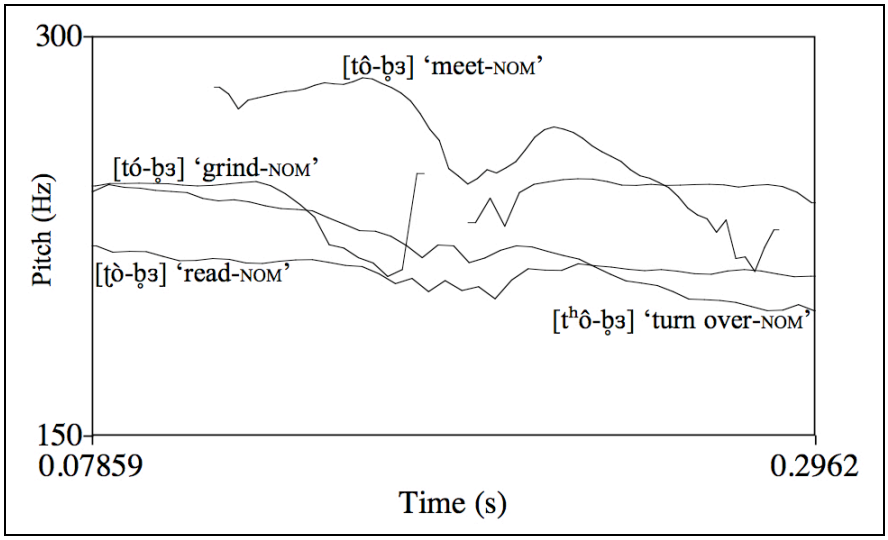


Figure 13: Four bi-morphemic words (verb stems plus the a-tonal nominalizer/citation suffix *–pɜ* [ḅɜ]) showing the same F_0 pattern and trajectory through time as is found with monosyllabic words: [tò-ḅɜ] 'read-NOM', [tó-ḅɜ] 'grind-NOM', [tô-ḅɜ] 'meet-NOM', [tʰô-ḅɜ] 'turn over-NOM'

The North Wind and the Sun

This version of the North Wind and the Sun was recorded in July 2010. As Nyeshangte has no standard orthography, a fairly narrow phonetic transcription is used, reflecting the pronunciation (but not tone-intonation interactions, which require further study). Two

lexical morphemes in the text are loans from Nepali (*kot* probably being borrowed from English through Nepali), and they are indicated as such in italics.

tiŋi ɾɜ *hawa*ko pje
terɑko tiŋi ɾɜ *hawa*ko su ʃu tʰjɜpɜ pi pɾe͡tse mo mopɜko ni ne͡tʃɜl͡tse jɜpɜ mi ʂi to mi ne͡tʃɜl͡tse jɜpɜ mi ʂi to mi su͡tse u milɜ *kot*ko nɑɾɑŋ pʰilɜ kʰẽ uko t͡sʰɑʔɾɑŋ pile ʃu tʰjɜpɜ pi u t͡ʃut͡ʃu *hawa*kot͡se kɜti ʃu lɜ pʰu lɜle u milɜ *kot*ko pilɜ ækʰẽ mi ɜni kɜti lɜle mi *hawa*kot͡se pʰu lɜle pi mi u t͡ʃut͡ʃu tiŋi t͡sʰɜt͡se u miko͡tse kot pʰi mi u t͡ʃut͡ʃu *hawa*kot͡se tiŋiko ʃu tʰjɜpɜ pi nje mi

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