Mapping Variation in Manang, Nepal

Kristine A. Hildebrandt
SIU Edwardsville
khildeb@siue.edu

Introduction

- This talk aims to:
- Provide some historical perspective on documentation activities & outputs, with a focus on Nepal
- Show how these activities, methods & outputs have changed with time
- Matisoff (1991: 498): "It is high time to "mainstream" S(ino-)T(ibetan) linguistics"
- It's also time to mainstream documentation methods & outputs within the context of 21st century digital & informatics scholarship
- Focus on areas of continued opportunity & need, including challenges & rewards

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Introduction

- Language Documentation in Nepal in a traditional perspective
- B.H. Hodgson & G. Grierson in late 19th/early 20th centuries
- Linguistic surveys of Nepal intensified ca. 1980's: Werner Winter, now LinSuN at Tribhuvan University (Regmi 2010)
- Ongoing documentation initiatives by Summer Institute of Linguistics
- Energies skewed particularly to eastern Nepal, but this is changing (e.g. Baram documentation project in Gorkha, Muwé-ke in Mugu and Jumla)
- In Manang and surrounds ('Tamangic'): Georg, Glover, Hildebrandt, Honda, Mazaudon, Noonan

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Introduction

- Documentation <u>outputs</u> in Nepal:
- Growing number of grammars published in mainstream venues: Brill, Mouton, sketches through Routledge edited volumes, Lincom Europa
- Even greater amount of information as unpublished mimeos, handouts or else as limited-release publications
- Many outputs were concerned largely with issues of genealogical affiliation and shared lexico-grammatical correspondences
- So, content more focused on paradigmatic patterns, comparative glossary-building and contrastive (-emic) analysis

Outbuts

- Newer initiatives have brought methods and outputs within this particular field into the 21st century:
- Archives: Digital Himalaya (University of Virginia, University of Cambridge), Tibetan Himalayan Library (U of Virginia), LACITO, STEDT
- Documentation blogs and web pages: CPDP, Nar-Phu, etc.
- A-V companions to grammars: van Driem and Tshering's 1998 Dzhongkha practical grammar
- The online journal *Himalayan Linguistics* now has a "field reports" component
- But there is still room for more work and development

Digital Himalaya

The DH Thangmi Archive

Thangmi songs (mp3 format) & films (mp4 format)

Also: LACITO
http://lacito.vjf.cnrs.fr/archivage/

Blogs & Web Pages

Puma-Chintang
Baṛam
Nar-Phu

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himalayan linguistics

a free peer-reviewed web journal and archive devoted to the study of the languages of the Himalayas

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Cumulative list of field reports

Field reports are descriptive studies which provide a brief introduction to a language on which little previous literature exists, or which present a coherent analysis of a single linguistic subsystem (e.g, relative clauses or tense-aspect marking). The primary goal of field reports is to increase the descriptive resources available on Himalayan languages. This contrasts with the primary goal of articles, which is to advance our understanding of theoretical, typological, or historical issues. Field reports are peer reviewed.

(Field reports are listed in reverse chronological order)

Kopp, Kevin A. 2011. 'Plural marking in Dolpo Tibetan: A preliminary investigation.' *Himalayan Linguistics Journal 10.1 [Special Issue in Memory of Michael Noonan and David Watters].* 291–298. [PDF] (241 kB)]

Top of the page.

Updated July 14, 2011

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- The linguistic diversity across the geographically changeable & compact/bounded inhabitable regions of Nepal, combined with within- & across-family contact, along with varying degrees of threat/maintenance to these languages should all shape the methods of documentation too

- Historically, this would be a tall order for any purely paper-bound output

- But existing grammars already hint at the possibilities of what a multi-variable approach to documentation on any given language/in any area might reveal
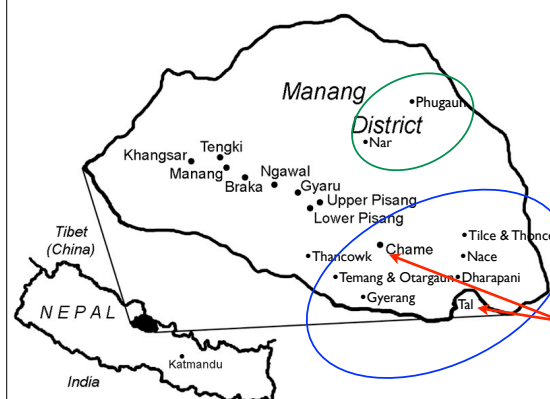
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- Details on variation are essential; not only do they contribute to/ challenge theories of natural human language...
  - E.g. phonemic vs. sub-phonemic, conditioned vs. free variation, structure-preserving vs. structure altering; lexical vs. post-lexical; lexically general vs. specified (Kiparsky 1982; Mohanan 1986; Blevins 2004 ; Nespor & Vogel 2007)
  - E.g. predicted outcomes to lg. contact; degrees & dimension of contact-induced change (Thomason 2001, Winford 2003, Matras & Sakel 2008)
- An added bonus is that the variation frequently appears to have spatial & sociolinguistic motivations or correlations
- These observations open up possibilities for revisiting and expanding methods & outputs of language documentation & description, enriching analysis by factoring in other variables

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My own focus since 1998

Manang District

Phugaun
Nar
Khangsar Tengki
Manang Braka Ngawal
Gyaru
Upper Pisang
Lower Pisang
Tilce & Thonce
Thancowk Chame Nace
Temang & Otargaun Dharapani
Gyerang Tal

Tibet (China)
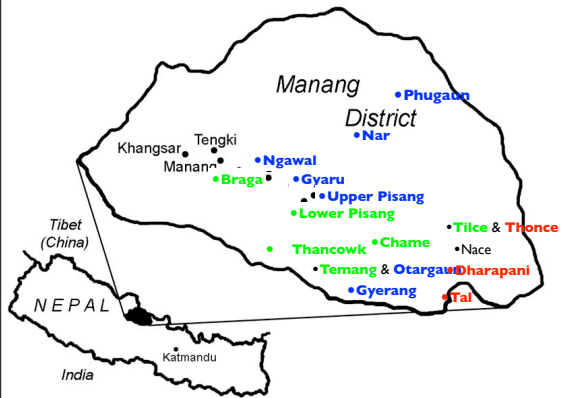
N E P A L

Katmandu

India

- **Nar & Phu** spoken to north-east
- **Nyeshangte/Manange** spoken in northern & central VDC's
- **Manang-Gurung** in southern & central VDC's
- **Gyalsumdo** around Tal & Chame

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Effects of the Road Initiative

Manang District

Phugaun
Nar
Khangsar Tengki
Manang Ngawal
Braga Gyaru
Upper Pisang
Lower Pisang
Tilce & Thonce
Chame
Nace
Thancowk
Temang & Otargau Dharapani
Gyerang Tal
Tibet (China)
N E P A L
Katmandu
India

- Expectation of a displacement/ destructive effect

- Expectation of a beneficial effect

- No expectations of major benefits or displacement

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- Because of the history of language (and dialect) diversity in Manang…
- Combined with the rapid changes taking place to the socio-economic & linguistic landscape:
  - I want to obtain a comprehensive, representative data-set of lexico-, phono-semantic & discourse strategies found in these languages, along with data on dialect variation
  - I want to better understand how development initiatives interrupt or preserve lg. attitudes, usage & patterns of transmission
- Actually, this type of study is attractive to a geo-spatial perspective

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- GIS is a system for storing and displaying geo-spatial information on the web or in other digital formats
- It integrates software, hardware & programming to answer questions involving geographically referenced data

GIS

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GIS and Documentation

- GIS-documentation link-ups are increasingly employed (at least at a global scale), with some interesting and compelling exemplars
- DELAMAN network (spatial representation of metadata from endangered language archives)

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GIS & Documentation

• Berkeley Linguistics Mapping Project (BeLMaP): Studies the role of space in the spread of linguistic features via diffusion/borrowing in areas of intense contact (Michael 2010)
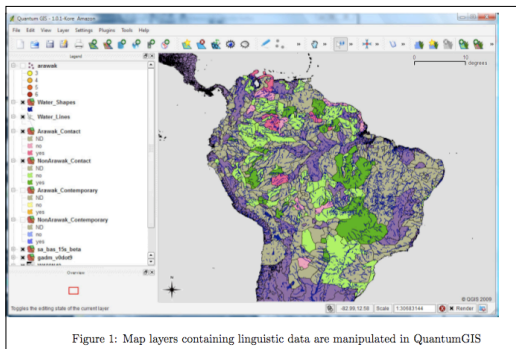

Figure 1: Map layers containing linguistic data are manipulated in QuantumGIS

• Anju Saxena & collaborators: "Digital Areal Linguistics: A Lexical View of the Himalayan Micro-Area" (Swedish Research Council)

This Project

• NSF CAREER: "Documenting the Languages of Manang, Nepal for Local and International Impact"

Three large-scale research questions:

1. How can data on these languages contribute to advancements in the core methods & outputs of language documentation & description?

2. How can these data contribute to advancements in geo-spatial representation of languages & dialects in an area of diversity in structure & practices?

3. How can documentation methods in Manang contribute to advancements in undergraduate education & towards meaningful involvement of students as research assistants & agents of language promotion & preservation?

• Our Project team:
• KAH (P.I.)
• SH, ORB, DND, JK (Collaborators @ home institution & abroad)
• SIUE GA's & UGA's
• LCC's (Local community contacts & assistants)
• VR's (village residents)

Methods (2012)

Prep. & Data Capture

Two languages: Gurung, Gyalsumdo X 15 Villages

With Selected Village Residents
1. Sociolinguistic Interviews
2. Discourse Exemplars
3. Wordlists for phonetic analysis

Each collection site selected video with Sony Handycam HDR-XR550 & Red Hen geo-referencing system
("video-mapping")

P.I. & Collaborators

Collaborator Hu & G.A.'s

Organized & mediated by local primary & secondary schools or local welfare communities

Methods (2012-Ongoing)

Processing & Analysis

1. Discourse transcription: rough phonetic & word boundaries, English & Nepali free translations

2. Further annotation & interlinearization in dictionary-generating software

3. Further audio-video processing to link to the atlas

4. Repeat Designs in upper Manang in 2013 (and 2014 if necessary)

Ongoing in Nepal & @ SIUE

Ongoing @ SIUE

The Future....

Methods (2012-Ongoing)

Processing & Analysis

Ongoing (Active) Projects

1. Sociolinguistic Study (KAH, DND, SIUE UGA)

2. Analysis of Tonal Phonetics (KAH)

3. Contact Effects in Lexicon & Morphosyntax (KAH, DND, ORB)

4. Pragmatic & Structural Conditions for Optional Expression of Case (KAH, ORB)

5. Kin & Clan Terminology (ORB, ORB)

6. Multimedia Mapping & Documentation (KAH, SH)

6. Buddhist Gompa Landscape Imagery (student project)

7. GIS & Water Access/Use in Upper Manang (M.A. thesis)

The Atlas: A First Look

Three exemplars:

1. Mr. Komal Bahadur Ghale (Gurung, Tilce)

2. Ms. Tar Doma Bista (Gyalsumdo, Bagarchhap)

3. Mr. Norbu Lama (Gyalsumdo, Chaame)
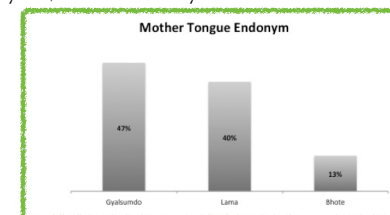
Sociolinguistic Surveys

- Although we have undertaken surveys with 34 Gurung speakers and 15 Gyalsumdo speakers, coding and analysis with Gurung still underway

- The lower Gyalsumdo numbers simply reflect the difficulty in accessing speakers who are active users of their language and who are available to be interviewed (in Manang)
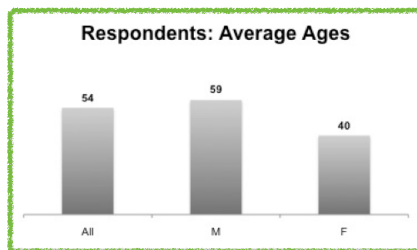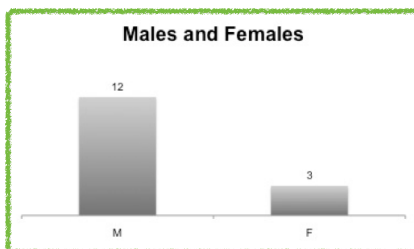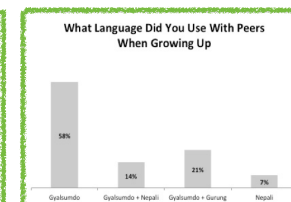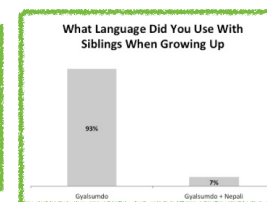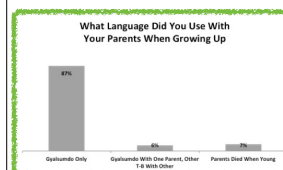
Sociolinguistic Surveys

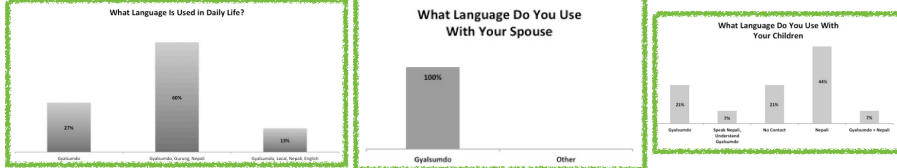- Gyalsumdo have a range of endonyms, and it's not yet clear which ones are favored or used more frequently

- As children, Gyalsumdo was the dominant language used with family & peers, but outside of the home Gurung and Nepali begin to make an appearance
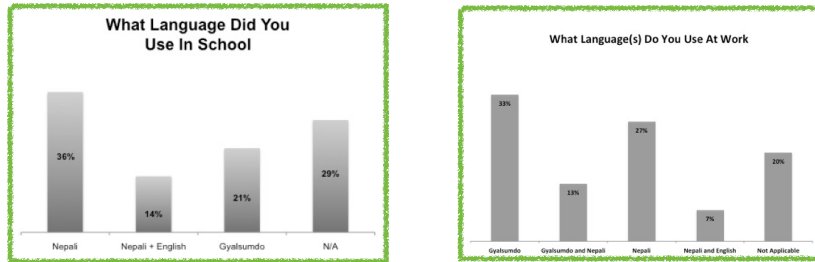
Sociolinguistic Surveys

- Contemporary language use is decidedly more mixed

What Language Is Used in Daily Life?

What Language Do You Use With Your Spouse

What Language Do You Use With Your Children

- Gyalsumdo use in schools only happens in the first years, when monolingual children are being transitioned to Nepali

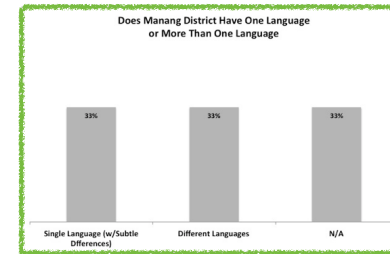What Language Did You Use In School

What Language(s) Do You Use At Work

Sociolinguistic Surveys

- Other than Nepali, the only other frequently encountered Manang FL is Gurung

How Well Do You Speak Gurung

How Well Do You Speak Manange
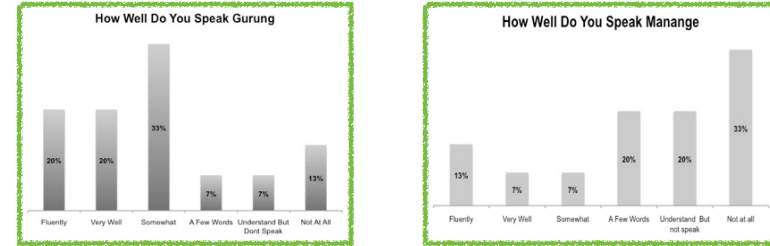
- This is further reflected in mixed opinions about language diversity in Manang

Does Manang District Have One Language or More Than One Language

Sociolinguistic Surveys

- But despite the limited contexts in which Gyalsumdo is used, the dire prospects for children, and the dominant status of Nepali and Gurung, attitudes towards Gyalsumdo preservation are overwhelmingly positive

Should Your Mother Tongue Be a Required Subject

Is Your Mother Tongue Important To Your Culture

What Can Be Done To Keep Gyalsumdo Alive/Spoken
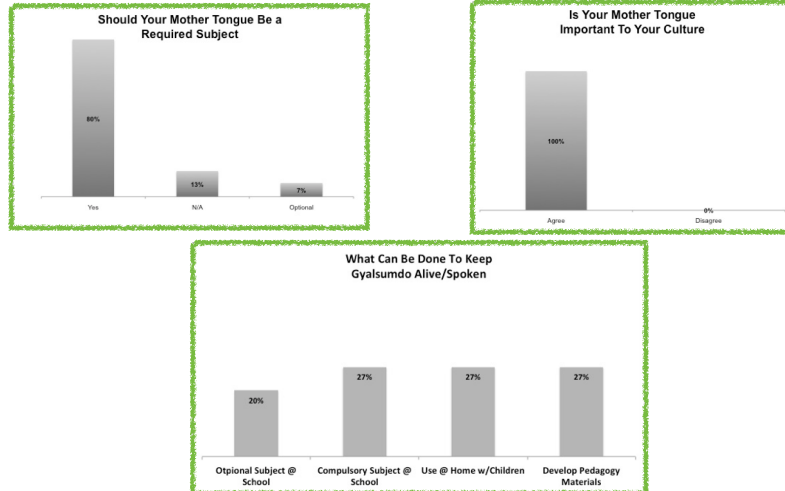
Tonal Profiles

- Mazaudon (2005, 2012), Mazaudon & Michaud (2006, 2008): fieldwork, including instrumental-based methods, can shed light on often difficult-to-describe tonal characteristics and possibly reveal evolutionary paths in languages of different genealogical distances

- (And, an overlaying of instrumental investigations alongside the sociolinguistic dimensions can also uncover possible extra-linguistic factors as relevant to unexpected observations)

- Today represents in some ways both an initial attempt employ these complementary methods within Manang, but also part of an ongoing (15-year!) effort to answer the deceptively simple question: "What is tone?" in these languages

Tamangic Tonogenesis

		Tamang	Gurung	Thakali	Manange
*HI	/1/	54 ± asp	33 ± asp	54	22 ± asp
	/2/	55 ± asp	54 ± asp	44	44 ± asp
*LOW	/3/	33/22 ɦ, + asp	11 ɦ, -asp	11 ɦ, -asp	52 –asp (only obs)
	/4/	211 ɦ, + asp, [b]?	12 ɦ, -asp, [b]?	121 ɦ, -asp, [b]	42 + asp (only obs)

(ɦ = breathy/murmur phonation; [b] = possible phonetic voicing effect of onset;

Chao numbering system where 5 = high, 1 = low)

- However: Mazaudon & Michaud (2008, 2006), Hildebrandt (2007), Mazaudon (2005)-- high degrees of idiolectal & dialectal variation, phonetic correlates differently weighted across languages, varied role of F0 in defining the systems

Tamang: Mazaudon 1973, 1977, 2008, 2005, 2012; Gurung: Glover 1970, 1974; Thakali Georg 1996; Manange Mazaudon 1977, Hildebrandt 2003, 2004, 2005

Evolution of Tibetan Tones

WT Initials	Modern Reflexes	e.g. in Kyirong Tib.	e.g. in Nubri
voiced	LOW, voiceless (± asp)	"Mid", unvoiced	low voiced or voiced breathy
pfx + voiced	LOW, voiced/unasp	"Low", ± voiced, breathy	voiced modal or voiced breathy, or voiceless breathy
voiceless (asp)	(MID-)HIGH, voiceless asp	"High", aspirated	high voiceless asp
pfx + voiceless	HIGH, voiceless unasp	"High"	high voiceless unasp

(adapted from Mazaudon 1977, Huber 2002 for Kyirong, Webster 1992 for Nubri)

- Additionally, WT finals -g, -d, -s, -/ns >modern-system contour tones (with corresponding long vowels in e.g. Kyirong)

Tonal Profiles

- Words were recorded in isolation (three repetitions) & frame-medial or final context (three repetitions)
- Gurung *kwe* 'bee' & *la-pʌ* 'drive.away-NOM'
  - For nouns: toso ŋʌ-e <u>kwe</u> mro-e-po [now 1SG-ERG bee see-ASP-NOM] 'Now I see a <u>bee</u>.'
  - For verbs: toso ŋʌ-e <u>la-pʌ</u> tsʌ-ti-po [now 1SG-ERG drive.away-DEONT want-ASP-NOM] 'Now I want to <u>drive away</u>.'
- Gyalsumdo *ʈo* 'stone' & *ʈo* 'walk/go'
  - For nouns: ŋʌ <u>to</u> tʰoŋ-sõ [1SG stone see-TAM/EVID] 'I saw the <u>stone</u>.'
  - For verbs: ŋʌ tʌntʌ <u>to-ke</u> (re) [1SG now walk/go-TAM/EVID (EVID)] 'I am <u>walking</u> now/I <u>walk</u> now.'

Tonal Profiles

Gurung Data Plotted Against 3 Models

|	Kaski Gurung (Glover 1974)	Manange (Hildebrandt 2004)	Tamu (TSS 2004)
Tone 1	"clear, relaxed"	"low, level"	modal (low)
Tone 2	"clear, intense"	"high, level"	modal (high)
Tone 3	"breathy, low"	"very high, falling"	breathy
Tone 4	"breathy, rising"	"mid, falling"	breathy (high)
Justification	authoritative, long-standing reference for Gurung tone	a sister language with which MG people have had long-term, intense contact	a newer account of multiple Gurung dialects w/ large lexicon, but not MG

- What can we look to as modern reflexes, or as features to the tonogenetic developments in these languages?
- Just what kind of variation is possible amongst any generalizations?
  - Pitch-melody (within/across the two registers)
  - Behavior of initial obstruents (VOT)
  - Voicing of vowels with respect to Electroglottographic measurements

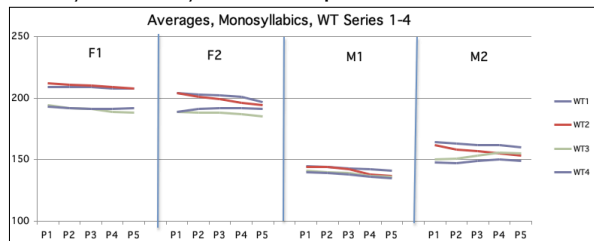- Pitch-melody: Four Manang-Gurung speakers (5 measurement points)
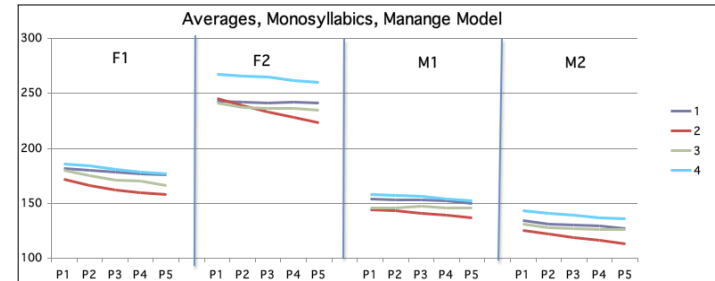
A high-low separation only emerges when plotted against <u>Manange</u> model for 3 of 4 speakers so far, which seems to be an interesting development for communities in this region
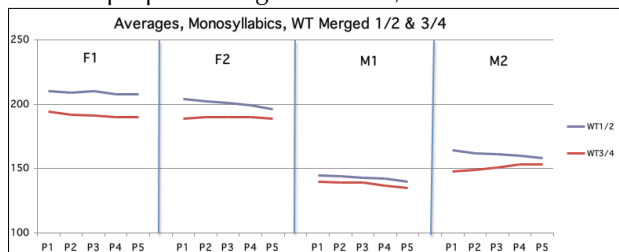
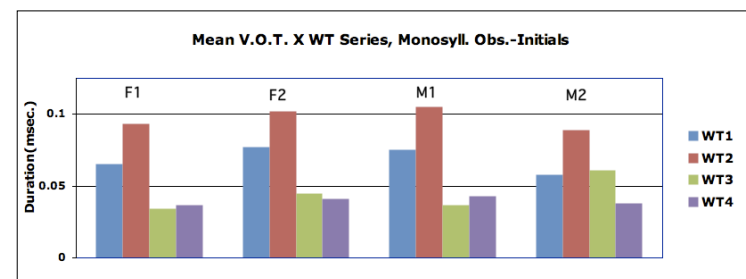- Pitch-melody: Four Gyalsumdo speakers (5 measurement points)

- The four categories are not obvious, but when WT 1/2 and WT 3/4 are merged into a proposed "high" v. "low", the differences are significant

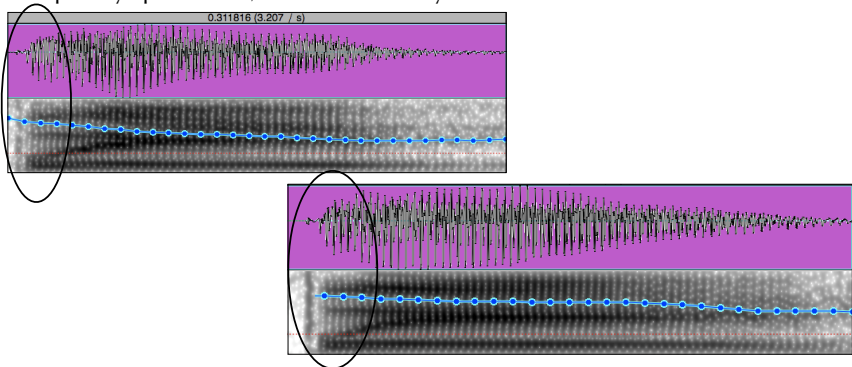- VOT differences on initials, Gyalsumdo (4 speakers)

- The male speakers show a strong tendency towards pre-voicing or else breathy onsets with words in WT 3 & WT 4 (those cases are not reflected in these bar-graphs)

Slide 37

- Another possible cue: Voice Onset Time (VOT) differences on initials in different registers (or tone groupings within the H-L division) may emerge as a reflex of older (obstruent) voicing contrasts (Manange, 2 speakers)
- NO measureable VOT differences for Gurung initials
- F2 (from Nace village) has 2 words with marginal/weak pre-voicing: /pʷe/ 'iron' (upper image), /pʷe/ 'wool' (lower image)
- Caveat: very small word-set, 'true' aspiration rare overall; bilabial initials frequently spirantized, otherwise solidly voiceless
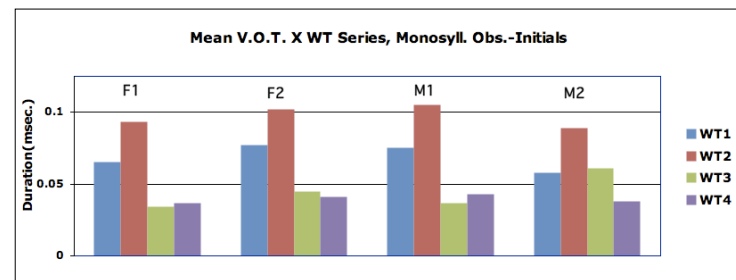
Slide 38

- VOT differences on initials, Gyalsumdo (4 speakers)

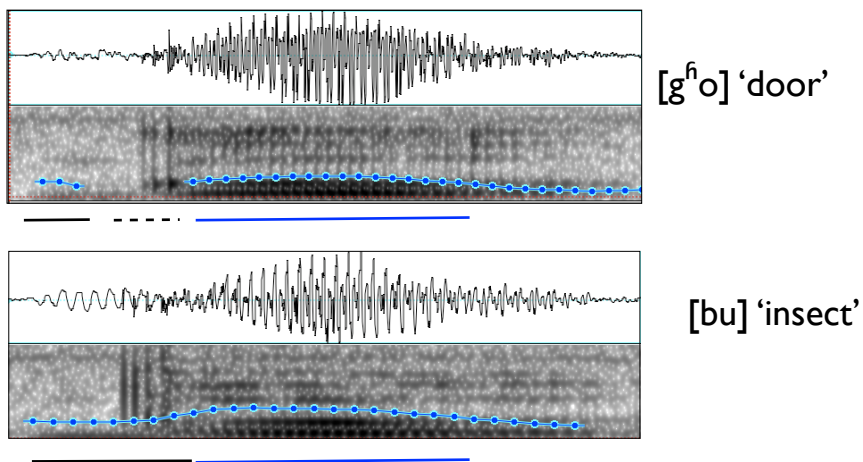Mean V.O.T. X WT Series, Monosyll. Obs.-Initials

- The male speakers show a strong tendency towards pre-voicing or else breathy onsets with words in WT 3 & WT 4 (those cases are not reflected in these bar-graphs)

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- Pre-voicing/Breathy initials, Gyalsumdo:

[gʰo] 'door'

[bu] 'insect'

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- Electroglottographic cues: Mazaudon & Michaud (2008) observed for Tamang that the open-quotient (Oq) values were significantly higher, with a dipping then rising pattern through time for the LOW tones vs. HI.
  - i.e. for the LOW tones, they observed an overall rise in airflow rate in the nucleus
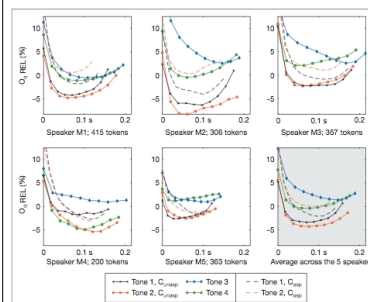

Fig. 4. Averaged curves of O_q (relative to the mean O_q value of each speaker), plotted against average duration. *p. 240*

- My study: all words recorded through a EG2-PCX2 two-channel EGG assembly (see slide #1)
- I measured Closed Quotient (CQ): difference between time of v.f. closure in relation to total time of voicing cycle; Non-modal predicted to carry lower CQ values than modal, as v.f. closure is shorter in time & opening portion lags for longer
- I took only one measurement point

- When either the Kaski or the Manange tone models are considered, a weak correlation between /4/ vowels & lower CQ, but it is <u>not consistent across speakers</u>
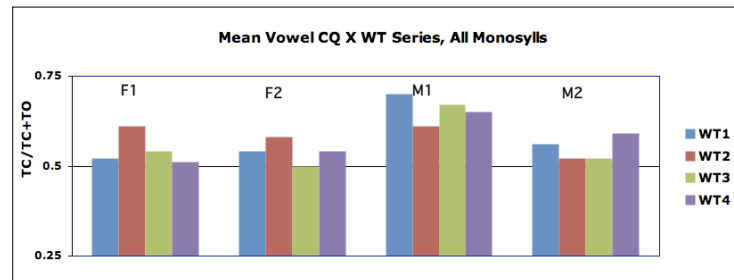
Mean Vowel CQ X Kaski Model, All Monosylls
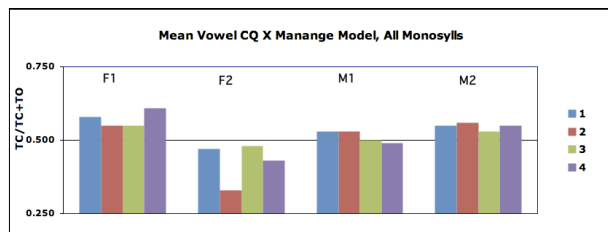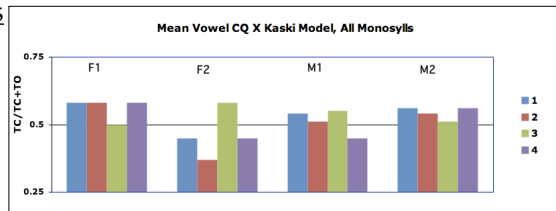
Mean Vowel CQ X Manange Model, All Monosylls

- EGG CQ for Gyalsumdo:

- Three of four speakers: initial vowels of WT 3 and/or 4 show lowered CQ values, but this is not always significant

Mean Vowel CQ X WT Series, All Monosylls

Gyalsumdo

Two Registers	Characterized by
"High" (WT 1/2)	Higher F0 (no evidence for contour diffs. yet), ±asp obs.
"Low" (WT 3/4)	Lower F0, tendency towards obstruent voicing, particularly by males, weak evidence for shorter vocal fold closure for vowels, obstruent aspiration rare

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Tamangic Languages

Characteristics	Manange	Manang Gurung	Nar(-Phu)
Pitch-melody	High-low & level-falling/contour	H-L emerges only when compared to Manange model	High-Low
Onset voicing	No voicing; aspiration split in tones /3/ & /4/	No voicing; phonetic aspiration rare	Lower VOT in low register
Other cues			Possibly jitter

Final Considerations

- While still tentative (parallel data collections planned for upper Manang in 2013), this is a first view to a systematic comparative examination of the phonetic manifestation of tone in these languages
- The situation observed for Manang-Gurung so far is particularly interesting when compared with other varieties elsewhere in Nepal
- What are the consequences of language contact in such close proximity on these systems (& emergent cues), especially in light of their relative diachronic youth?
- Gyalsumdo is surrounded by Manang-Gurung, but its system may be appreciated by quite different cues
- I'm particularly interested in the picture that will be painted by additional measurements from other speakers, alongside those of Nar-Phu, as these are the two languages of Manang that that show the greatest sudden drop in fluent speakers below the age of 50

Final Considerations

- A spatial perspective is not a substitute for intensive, comprehensive documentation of systems as they are used in everyday settings, across genres; the methods of investigation must remain rigorous
- There is also the non-trivial matter of community permission, input & collaboration in an endeavor resulting in linguistic mapping at a micro-level (cf. Penfield et al 2008, Rice 2011)
- Such initiatives also rely on intense cross-disciplinary (and cross-institutional) collaboration with experts on hardware, software and programming, on larger budgets, & on longer timelines (e.g. NSF CAREER, ELDP Large Grants, U.S./U.K./EU cross-council collaborations, etc.)

Final Considerations

- Following guidelines advocated by ELAR, by DoBeS and by Bird and Simons (2003), all of this collaboration & expertise must all ultimately be open-source (to the extent possible), transportable, cross-platform (non-proprietary), available to/learnable by a wide range of users, must find a long-term home for storage/access/archive, and must use mark-up languages available for long-term access

Final Considerations

- However, spatial representations of structure and usage in such multi-lingual, heavy-contact, endangerment-prone areas provide an additional, more intuitive visual perspective of 'what's going on'
- Such representations are particularly illuminating in areas where multiple features are considered simultaneously, or where structural variables are paired with socio-cultural/attitude/usage-scenario ones
- They also open up linguistic documentation & analysis to wider audience numbers and types (van Uytvanck et al's 'curiosity factor')