

The background of the slide is a photograph of ancient stone carvings, likely from the Totonac culture. It shows two horizontal registers of relief carvings. The top register features several figures, including one with a large, ornate headdress. The bottom register shows more figures in various poses, some holding objects. The stone is weathered and the carvings are in a reddish-brown hue.

Ideophones, Adverbs, and Predicate Qualification in Upper Necaxa Totonac

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Ideophones in UNT

- ideophones (Doke 1935): lexicalized sound-symbolic, onomatopoeic or synesthetic expressions, sometimes called “expressives” or “affect words”
- generally have distinctive syntactic, morphological, or phonological properties
- tend to have an emotive function
- in UNT, can have extremely specific meanings evocative of entire events

ʔoŋtuʔu li:makawán iščá:n kíwɨ



ʔoŋtuʔu

li:maka-wan

iš-čá:n

kíwɨ

wood-pecker.pecking

INST-hand-say

3PO-shin

tree

‘the woodpecker makes the tree trunk sound’ (RM)

- ideophones are quite common in the languages of the world, but are generally overlooked in theories of parts of speech

*Are ideophones their own part of speech
or do they belong to some other lexical class?*



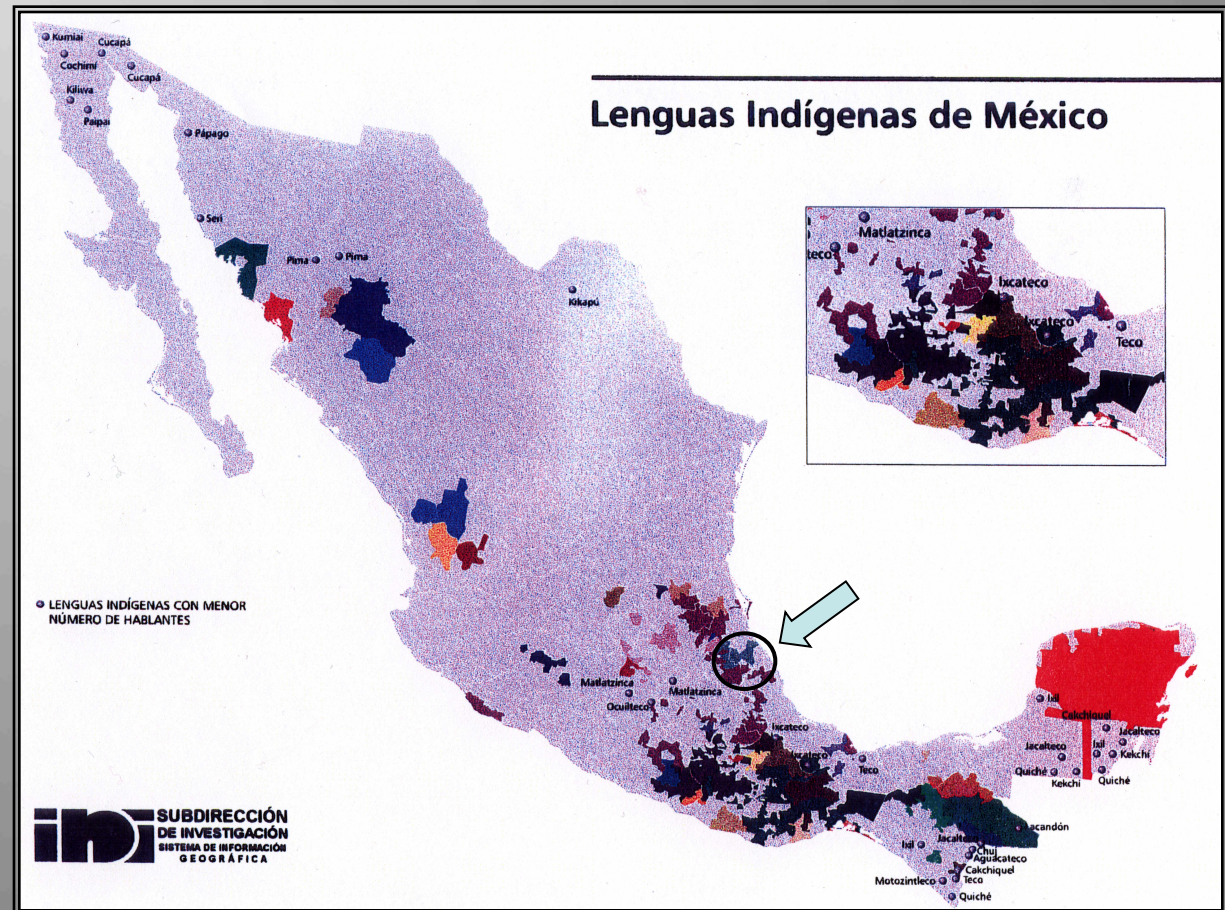
Outline of the talk

- background on the language and the UNT project
- phonological and morphological properties of ideophones
 - sound symbolism
 - word-level stress
 - reduplication
- adverbs in UNT
- syntax of ideophones and adverbs
- semantics of ideophones and adverbs
- ideophones and adverbs as parts of speech



Upper Necaxa Totonac

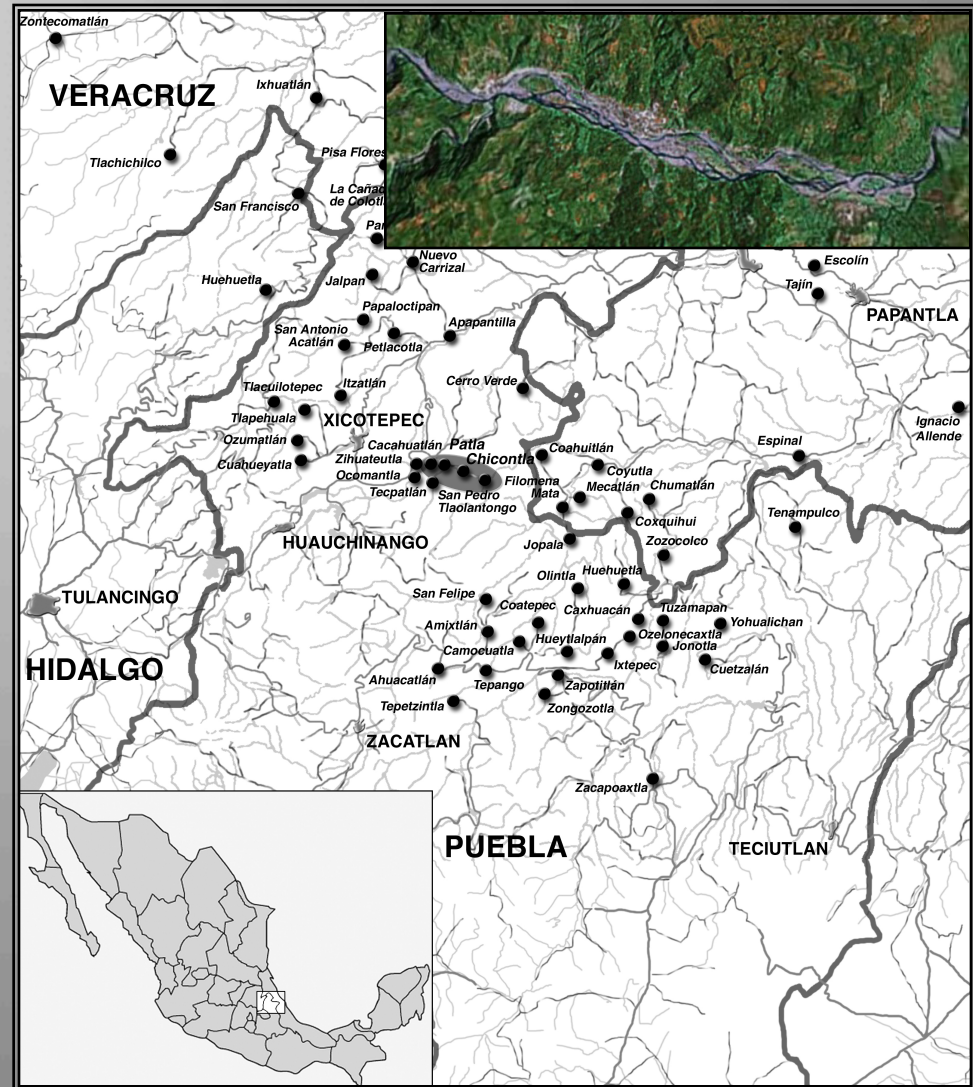
- around 150 Mexican indigenous languages belonging to 9 phylogenetic groups
- UNT is a member of the isolate Totonac-Tepehua family
- government census lists ~200,000 speakers of Totonacan languages
- unknown number of languages in family
- best guess, 10 – 20
- time-depth ca. 2000 yrs (???)





Upper Necaxa Totonac

- spoken in four villages in the Necaxa River valley in the Sierra Norte of Puebla
- around 3,000 speakers, most in their 40s or older
- still spoken by school aged children in Patla and Cacahuatlán
- probably the L1 of no more than half a dozen infants



more information on the state of the language at
<http://www.arts.ualberta.ca/~totonaco/SOL.html>



The UNT Project

- field visits beginning in 1998
- SSHRC funding since 2001
- students involved in fieldwork since 2003
- consultants in Edmonton for short visits: '01, '02, '05, '06
- project has been working on
 - dictionary (currently ca 8,900 entries, 13,000 example sentences, 19,676 recordings, standalone DVD version)
 - grammar (sketch 2004, more to come)
 - texts (about 12 hours transcribed)
 - acquisition (12 hours of naturalistic video [ages 1;8 to 2;10], 10 hours of taped task-based elicitation [2;10 to 12])

Chicontla



more information on the UNT project at <http://www.arts.ualberta.ca/~totonaco/>



The language

- flexible word order, unmarked VOS (?)
- nom/acc alignment, no nominal case
- agglutinative and highly polysynthetic

jškinkar:tate:šq?onikutumq:ʔo:nampalán

jš-kin-ka:-ta-te:-šq?o-ni-kutun-mq:-ʔo:-nan-pala-n
 PAST-1OBJ-PL.OBJ-3PL.SUB-path-[pay-BEN]-DSD-PRG-TOT-ST.PL-RPT-2OBJ

‘they would want to be coming by to pay us all again’

- four aspects, three tenses, four moods
- agreement with subject and 2 objects
- two causatives, four applicatives
- classifiers, no number inflection in NPs
- no prepositions, bodypart terms used as locatives
- use of bodypart prefixes with verbs and adjectives

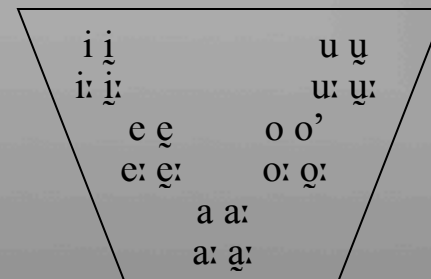




Phonology

	bilabial	alveolar	lateral-alveolar	post-alveolar	velar	glottal
stop	p	t			k	ʔ
affricate		ts		č		
fricative		s	ɬ	š	x	
		s'	ɬ'	š'		
approximate	w ɰ		l	y		
nasal	m	n			ŋ	

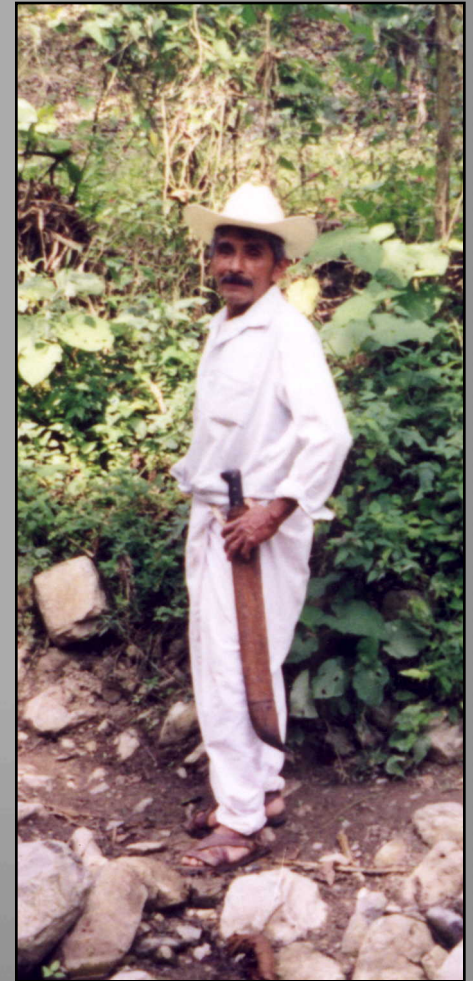
- ejective fricatives, no ejective stops
- vowels distinguish five qualities, length, and laryngealization





Properties of ideophones

- phonological and morphological properties
 - sound symbolism
 - (lack of) word-level stress
 - reduplication





Sound symbolism


- Sound symbolism: a direct linkage between sound and meaning such that their relation is, albeit non-predictable, nevertheless non-arbitrary
- ideophones across languages, including UNT, tend to rely most heavily on three types (Hinton, Nichols, & Ohala 1994)
 - onomatopoeia
 - synesthesia
 - conventionalized sound symbolism




Onomatopoeia

- use of words that imitate or are reminiscent of their referents
- most universally-noted feature of ideophones (Childs 1994)

čululu ‘water trickling’

ʔo:sʔo:s ‘object making clicking, rapping, or tapping noises’ 

kalanʔkalanʔ ‘person biting through hard food’ 

ʔapʔʔapʔʔ ‘object being struck and making a hollow sound’ 

lu:p ‘object dropping into water’

pač ‘small stone falling’

tsanana ‘insects buzzing’

wɔ:tawɔ:ta ‘person sharpening a machete’ 

šnoŋšnoŋ ‘a cord or elastic being stretched’



Synesthesia


- synesthesia: the notion that the physiological properties of perceptions are designed to view different perceptual stimuli as the same (Nuckolls 1999)
- the phonetic properties of the word are considered to be iconic of some sensory quality of its signified

lam ‘bright light flashing, a fire flaring up’ 

liplip ‘object sparkling like a diamond or piece of glass’ 

nuxtunutu ‘stick waving back and forth’ 

nuxtutunuxtutu ‘stick waving back and forth as it is climbed’ 

tenene ‘bright light or flame flickering or shimmering’ 



Conventionalized symbolism

- UNT has several frequent sound-symbolic conventions

vowel length = duration

luxp ‘object dropping into water’

lup ‘sharp object striking and sticking into something’

CVCC vs CVCCV syllable structure (punctual vs cyclical/distributed)

tonɬtonɬ ‘end of a stick striking the ground’

tonɬutoŋlu ‘person going along planting corn with a stick’

fricative alternation (most commonly /s/ < /š/ < /ɬ/ = increasing force)

lanɣs ‘hand striking hard’

lanɣš ‘blow striking with force’

lanɬ ‘blow striking with great force’

- this pattern is also seen in verbs, adverbs, and adjectives



Word-level stress

- in UNT, stress is regularly assigned to the final syllable of verbs and to heavy-final or penult syllables in other word classes
- UNT ideophones in text are given either
 - without differential stress marking on any syllable, or
 - particular syllables are stressed for rhythmic effect or dramatic or imitative purposes
- in isolation
 - ideophones may follow the default pattern for non-verbs
 - -CV reduplications may have stress on the initial syllable
 - the ideophone may not have differential stress

loʔoʔo piš-łi:-wíł tzaamá: ʔtnj
IDPH throat-dance-sit that drunk
'the drunk is sitting there singing raucously'



loʔoʔo 'person singing badly'





Reduplication

- with the exception of ideophones (and one sub-class of adverb) UNT does not make use of reduplication
- ideophones in UNT are almost always reduplicated in context
- they follow one of two patterns
 - full reduplication
 - final -CV reduplication
- reduplication reflects such things as iteration, intensity, and duration

***pač** makawán*

pač maka–wan

idph hand–say

‘the pebble falls’ (LB)

***pačpač** tamakawán*

pačpač ta–maka–wan

idph 3PL.SUBJ–hand–say

‘the pebbles fall’ (CF)



Full reduplication

- fully reduplicated ideophones are more punctual or cyclical in meaning

č̣iuxč̣iux ‘water dripping slowly onto the floor’

pɔʔpɔʔ ‘clapping sound’

kalanʔkalanʔ ‘person biting through hard food’

laksl̥iwilaksl̥iwi ‘a four-legged animal limping on three legs’

pa:nʔupa:nʔtu ‘someone toothless chewing food’

- some examples show multiple applications:

kun̥ikun̥i ‘caterpillar crawling’

kun̥ikun̥ikun̥i aníÔ:

kun̥ikun̥ikun̥i an-níÔ:

idph go-PF

‘the caterpillar had crawled off’ (LC)



Final -CV reduplication

- this type of reduplication seems more frequently to mark intensity, locative distributivity, and/or duration

ʔošušu ‘hollow object being tapped’

lapšaša ‘fish out of water wriggling’

milili ‘wind blowing’

mululu ‘water welling up out of the ground’

spatata ‘viscous substance oozing (mud, pus)’

yenene ‘water boiling in a pot’

- this reduplication may also have multiple applications

xalala ‘stones crackling with heat’

xalalala *makawán čiwíš*

xalalala maka–wan čiwíš

IDPH hand–say stone

‘the stones crackle with heat’ (LB)



Adverbs in UNT

- UNT also has a large class of adverbs

kikɬ li:katsán tu: laʔtsín tu:k maʔalá:

kikɬ li:-katsán tu: laʔtsín tu: ik-maʔalá:

enviously INST-feel.pain REL see REL 1SG.SUBJ-harvest

‘he is jealous because he sees what I harvest’ (RM)

- adverbs can’t be reduplicated
- they participate in derivational processes (ideophones don’t)
- they form a semantically heterogeneous class
 - time, manner, and place expressions
 - configurational adverbs
 - descriptive adverbs
 - dynamic adverbs



TMP adverbs

- consist of the familiar time, manner, and place type expressions
- are uniformly pre-verbal, with the exception of some locative and temporal adverbs, which can be clause-final
- make up a surprisingly small proportion of the adverb class in UNT

qkčá:n ‘honestly, fully-measured (of wares)’

qkčípš ‘many’

a:kús ‘just a while ago’

a:mištsayán ‘in a week’

kas ‘fast; strongly’

kikł ‘enviously’

xiks ‘annoyingly, problematically’

xatáx ‘deeply, sadly (sigh, breath)’

snu:n ‘gravely (ill, wounded)’

talása ‘frequently’

te:lá: ‘sometimes’

tintakú:x ‘all day’

tonʔéłtu ‘on the other side of the river’

tsax ‘only, just’

tsenú ‘over there’



Configurational adverbs

- describe configurations, orientations, and postures

qklakatáx ‘inside out’

čikáx ‘open, apart (limbs); loosely folded’

ʔe:pqʔqʔ ‘piled up (sand, dirt)’

kinkatáx ‘with head bent forward, with head bowed’

kupúks ‘bent over’

lqʔapuľḡš ‘face down, flat on one’ s face’

lqʔkalákš ‘having one’ s leg bent backwards’

lantáʔ ‘lying flat with one’ s belly pressed to the ground’

mqʔateʔáx ‘arms open and rounded’

mqʔslapúx ‘covered, covered over (body of something)’

pilqʔ ‘turned up at the edge’

purtsáx ‘lined up with long axis towards the speaker’

tsqʔostáx ‘kneeling’

špi:t ‘in a straight line (larger objects)’



Descriptive adverbs

- have meanings more akin to English adjectives

čaláx ‘brittle, fragile’

čipš ‘dense’

čičš ‘blurry’

ʔo:nłoxł ‘curly, twisted, tangled’

lampúxł ‘wet’

łamán ‘rounded, full’

ł'anán ‘red or yellow of ripe fruit’

łtoxoxł ‘baggy, sack-like’

mox ‘round and bulky, spherical’

poŋʔoxł ‘bubbly, foamy’

stiléʔ ‘star-shaped’

s'oxłoxł ‘salty’

tsutsoʔ ‘red’

škútq ‘sour’

- many colour terms have both adverbial and adjectival forms:

stanlán *qmáxł* *ška:n*

stanlán *an-máxł* *ška:n*

white go-PRG water

‘the water is flowing clean’ (PS)

šastanláŋa ška:n

ša-stanlán-a *ška:n*

DTV-white-ADJ water

‘clean water’ (PS)



Descriptive adverbs vs. adjectives

***mox** wakáʔ išma:sé? ?o:šúm*

mox	wakáʔ	iš-ma:sé?	?o:šúm
round	be.high	3PO-nest	wasp

‘the wasp nest is up there all big and round’ (SC)

***?áʔa** wakáʔ išma:sé? ?o:šúm*

?áʔa	wakáʔ	iš-ma:sé?	?o:šúm
big	be.high	3PO-nest	wasp

‘the big wasp nest is up there’ (SC)

<i>?áʔa išma:sé?</i>	<i>ša?áʔa išma:sé?</i>
‘its big nest’	‘its big nest’

<i>*mox išma:sé?</i>	<i>*šamox išma:sé?</i>
*‘its big round nest’	*‘its big round nest’

***ša?áʔa** wakáʔ išma:sé? ?o:šúm*

ša-?áʔa	wakáʔ	iš-ma:sé?	?o:šúm
DTV-big	be.high	3PO-nest	wasp

‘the big wasp nest is up there’ (SC)

****šamox** wakáʔ išma:sé? ?o:šúm*



Dynamic adverbs

- derived through final -(V)CV reduplication from configurational adverbs

akłtsáx yaɬ

akłtsáx yaɬ

head.up stand

‘he’ s standing with his head held high’ (PS)


akłtsaxaxa qmáɬ tsumaxát mu:štumáɬ nakʔaɬašká:n 

akłtsax-axa qn-maɬ tsumaxát muštu-maɬ nak=ʔaɬašká:n

head.up-DYN go-PRG girl swept.away-PRG LOC=river

‘the girl is swept away by the river with her head held up [out of the water]’ (PS)

- like ideophones

- dynamic adverbs have no fixed word-level stress (cf. *akłtsaxaxa*) 

- they can be reduplicated multiple times



Syntax of ideophones and adverbs

- both ideophones and adverbs precede the verb they qualify

Ideophone

sutsut kiłtu:ma:yuxu:má:ł šalakpi:tsún kapsnáp

sutsut kiłtu:–ma:–yux–u:–ma:ł ša–lakpi:tsún kapsnáp

IDPH edge–CS–go.down–CS–PRG DTV–pieces paper

‘he is tearing off little bits of paper’ (LB)

Adverb

łtan?áx ma:pi:kán iš?q:š’a: xú:kj

łtan?áx ma:pi:–kan iš–?q:š’a: xú:kj

stretched.out spread.out–IDF 3PO–skin deer

‘they stake out the deerskin’ (LB)



Syntax of ideophones and adverbs

- both can either precede or follow predicate particles

Ideophone

lanʃ mat lakpa:lásli

lanʃ mat lakpa:lásli

IDPH QTV temple-slap-PFV

‘he slapped him hard in the temple’ (MR)

mat pɔʔpɔʔ makawamá:t štaʔanán

mat pɔʔpɔʔ maka-wan-ma:t štaʔa-nán

QTV IDPH hand-say-PRG make.tortilla-IDO

‘there was the sound of someone making tortillas’ (MR)

Adverb

lantáx mat čipapát tsamá: li:tám

lantáxmat čipa-pa-ť tsamá: li:tám

glued.down QTV grab-RPT-PFV that glue

‘he hit it and the glue trapped him again’ (MR)

mat ʔɔť či:wakát mat ta:támá:n

mat ʔɔť či:wakát mat ta:támá:n

QTV roped tie-be.high-PFV QTV CLS-long

‘he tied it up there with rope’ (MR)



Syntax of ideophones and adverbs

- either can attract the optative prefix *ka-*

Ideophone

luṇš kayúxti, yúxli tsamá: escalera

luṇš **ka**-yux-ti yux-li tsamá: escalera
IDPH **OPT**-go.down-2SG.SUBJ:PFV go.down-PFV that ladder
'jump down! [she said and] the ladder came down'

kaluṇš yúxti, yúxli tsamá: escalera

ka-luṇš yux-ti yux-li tsamá: escalera
OPT-IDPH go.down-2SG.SUBJ:PFV go.down-PFV that ladder
'jump down! [she said and] the ladder came down' (BC)

Adverb

laʔstónʔ katápɔ:

laʔstónʔ **ka**-tápɔ:
stretched **OPT**-lie.down:2SG.SUBJ
'lie down stretched out!' (LB)

kaləʔstónʔ tápɔ:

ka-ləʔstónʔ tápɔ:
OPT-stretched lie.down:2SG.SUBJ
'lie down stretched out!' (LB)



Syntax of ideophones and adverbs

- adverbs but not ideophones combine with the intensifying clitic =*tunka* 'a lot'

mat lq?maxtsatunká mat ti: tačíl texełq:wa:nín

mat lq?maxtsa=tunká mat ti: ta-čin-ł texełq:wa:n-nin

QTV long.ago=**lots** QTV REL 3PL.SUBJ-arrive.here-PFV outsider-PL

'many years ago, they say, the outsiders were those who arrived here' (PS)

- but this morpheme also cliticizes to adjectives and verbs

nak?etwá tsamá: kapéx nakta:sá porque tsuma:tunká

na-ik-?et-wa tsamá: kapéx nak=ta:sá porque tsuma:=tunká

FUT-1SG.SUBJ-mouth-eat this coffee LOC=cup because full=**lots**

'I'll sip a bit off the top of the coffee in the cup because it is very full' (RM)

iksmani:tunká wartsá

ik-smaní:=tunká wartsá

1SG.SUBJ-feel.at.home=**lots** here

'I really feel at home here' (RM)



Semantics of ideophones and adverbs

- one of the notable features of ideophones is their semantic specificity
- they often evoke a scene involving specified types of actors participating in a certain manner in a particular type of event

ʔalaŋʔalaŋʔ ‘person chewing or biting down on a pebble’ *lamama* ‘coals glowing red’

xalala ‘red-hot rocks crackling from heat’

ʔalqʔalq ‘person crawling along on all fours’

ʔaŋtiʔaŋti ‘person making a face and showing their teeth’ *ʔepʔepʔ* ‘a rabbit or deer hopping’

ʔoŋtuʔu ‘woodpecker pecking on a tree’

kalala ‘running at a low level (water)’

čeŋʔečeŋʔe ‘large bottle filled with liquid being shaken’

toŋtoŋ ‘heart beating’

pa:nʔupa:nʔu ‘toothless person chewing food’

peŋšpeŋš ‘pustules growing’

šumšum ‘a large bird swooping’

wayaya ‘person leaving abruptly or without explanation’

salala ‘*saláx lukút* spirit passing by dragging bones’

šaxšax ‘dirt, sand, or dust striking a surface’

šmačmat ‘person cutting cane or long grass with machete’ *yo:nʔyo:nʔ* ‘person staring greedily/lustfully/aggressively’

ʔanaʔana ‘person running around in a panic because they are late’

- meanings are consistent across speakers and can be elicited without context
- they do not rely on the meaning of a particular verb or on discourse
- they are often the only means of expressing concepts such as insects buzzing, hearts beating, water dripping, etc.



Semantics of ideophones and adverbs

- thus, many ideophones have nearly the semantic content of entire clauses ...
- ... but not all ideophones are that specific

čaščaš ‘person moving quickly, person making an energetic motion’

laŋʔšlaŋʔš ‘blow striking with force’

ʔoʔʔoʔ ‘object falling, object being felled’

luxʔluxʔ ‘object bouncing up and down’

pilipili ‘object rolling’

tukʔtukʔ ‘object snapping off, breaking after the application of force’

swilaswila ‘person or animal running about quickly’

ʔ’entiʔ’enti ‘dumb person doing something’



Semantics of ideophones and adverbs

- this makes them hard to distinguish on semantic grounds from morphologically and phonologically ordinary descriptive adverbs

qʔaputáx ‘drooping, bent downwards (branches)’

ʔqʔ ‘tied with rope’

xulúx ‘hanging in bunches (small objects)’

ka:liʔowaxníʔ ‘disgusting (place)’

kanʔit ‘with teeth showing’

lqʔmonʔʔ ‘liquified inside (egg)’

lqʔáʔa ‘looking greasy, shiny with grease’

liks ‘throwing a tantrum, acting spoiled, whining (children)’

ʔamán ‘rounded, full’

ʔmuk ‘bent over by the weight of its fruit (tree)’

ʔat ‘close together, tight’

ʔé:ʔe: ‘having the smell of burnt hair, fingernails, horn, meat, or beans’

stiʔ ‘spread out (small objects), distributed evenly’

wiʔʔeʔ ‘having long, messy hair; being jumbled up (clothes)’



Are ideophones a part of speech?

- phonologically, ideophones are somewhat distinctive
 - make use of sound symbolism
 - lack fixed word-level stress
 - in the last of these properties, they overlap with dynamic adverbs
- morphologically, they undergo reduplication, overlapping with dynamic adverbs
- syntactically, they are like most adverbs
- semantically, they overlap with descriptive adverbs

*so, is there any way to define ideophones
as their own part of speech?*



Are ideophones a part of speech?

- the most characteristic features of ideophones are phonological, but a phonologically-defined part of speech seems like a non-starter
- reduplication can't be taken as definitive because of the overlap with dynamic adverbs
- the most promising criteria seemed to be semantic — ideophones are not plain semantic predicates but evoke entire scenes complete with schematic event-participants
 - but that's not true of all ideophones
 - there is also a good deal of overlap with descriptive adverbs

kanłít kiłwan?óɾł čičí

kanłít	kił-wan-?oɾ-ł	čičí
showing.teeth	mouth-say-all-PFV	dog
'the dog bared all of its teeth' (LC)		

- *kanłít* is much more specific than ideophones like *pačšpačš* 'something popping or rapping'



Defining lexical classes

- this is a familiar problem in the typology of lexical class systems
- the meanings of major parts of speech
 - tend to cluster around central or prototypical semantic categories
 - overlap with respect to the inclusion other types of meanings (Dixon 1982; Schachter 1985; Beck 2003)
- many researchers thus advocate either
 - the use of only syntactic criteria in the definition of lexical classes (Hengeveld 1992; Baker 2003), or
 - syntactic criteria in combination with semantic criteria (Croft 1991; Beck 2002; Aikhenvald & Dixon 2004)
 - parts of speech are essentially labels applied to sets of words to define their distributional properties in syntactic structure
 - these sets may be motivated iconically by aspects of their semantics

what does syntax have to say about ideophones in UNT?



Ideophones vs. adverbs

	ideophones	dynamic	configurational	descriptive	manner	time	place
pre-V	✓	✓	✓	✓	✓	✓	✓
pre-particle	✓	✓	✓	✓	✓	✓	✓
<i>ka</i> -climbing	✓	✓	✓	✓	✓	✓	?
= <i>tunká</i>		✓	✓	✓	✓	✓	✓
post-posable						✓	✓

? = not attested in the available data

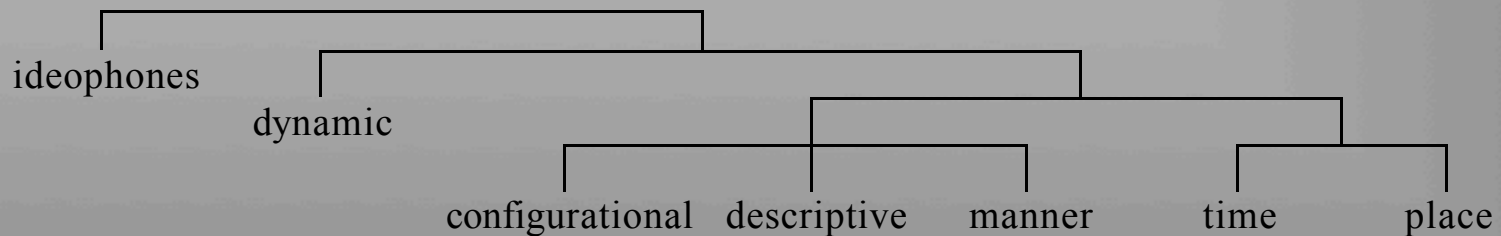
Syntactic properties of adverbs and ideophones

- syntactically, ideophones look a lot like adverbs except for properties four and five
 - the fifth property applies only to certain temporal and locative expressions, which can also be pre-verbal
 - the fourth property — ability to host the intensifying clitic =*tunká* — applies to words belonging to other parts of speech
- pre-verbal position and *ka*-climbing seem to be the most relevant properties in terms of making distributional statements about particular word classes
- these group ideophones together with adverbs



The class of predicate qualifiers

- *this study indicates that ideophones should not be classified separately from adverbs at the highest-level of the lexical-class taxonomy (i.e., part of speech)*
- because of their identical syntactic distribution, it seems more promising to group ideophones together with adverbs into a larger class of *predicate qualifiers*
- using the syntactic, morphological, and phonological properties discussed above, we can create sub-classes within this part of speech





Predicate qualifiers: a new part of speech?

- a super-ordinate class of predicate-qualifiers subsumes ideophones and adverbs
- whether we refer to this class as “adverbs” depends on how determined we are to cling to the familiar Indo-European sense of the word
 - ideophones may seem semantically bizarre — but so are UNT descriptive adverbs, which are otherwise well-behaved adverbs
 - even in English, the semantic uniformity of adverbs is an illusion
 - English adverbs express a range of meaning types (Schachter 1985)
 - English adverbs have much more heterogeneous distributional properties than the conflated ideophone-adverb class in UNT
- it might be worthwhile maintaining the term “adverb” but re-adjusting our expectations for it (particularly on the semantic level) based on data like this from a non-Indo-European language



Ideophones as a part of speech

- the term “ideophone” is certainly worth maintaining for its descriptive value in discussions of UNT word classes
- it is of little use in syntactic modeling or sentence-level grammatical description
- the term “adverb,” on the other hand, serves just as well and allows for the correct level of descriptive and theoretical generalization
- this casts doubt on the utility of the ideophone as a cross-linguistically valid part of speech with syntactic properties that are predictable from language to language
 - the semantic category of expressive, onomatopoeic or synesthetic words does seem to manifest itself in a large number of languages
 - over all the syntactic properties of words belonging to this semantic class seem to be cross-linguistically heterogeneous
 - it may be possible that in some languages they merit their own part of speech
- ideophones in any particular language are amenable to a wide-variety of language-specific treatments in terms of their parts-of-speech classification



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