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Author
Black, Cheryl A

Publication Date
2004

An Autosegmental Analysis of Me'phaa (Tlapanec) Noun Inflection

CHERYL A. BLACK
SIL International and University of North Dakota

1. Introduction

Noun inflection in Tlapanec consists of a noun root with a suffix marking the person and number of the possessor. Both segmental and tonal changes occur when the suffix is added and understanding the tonal patterns is crucial since tone is the only distinguishing factor between some forms. At first glance, there is huge variation in the Tlapanec noun paradigms. Both tones and segmental material seem to change without any logical reason, as partly exemplified in (1):[1]

(1)   Sample noun paradigms

Root	1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
aga 'hog'	age'	agiaa'	agee	agee	agialó'	agiaxo'	agiala'	agíín	agíin
chíde 'machete'	chídi'	chídiaa'	chídii	chídii	chídia'ló'	chídia'xo'	chídia'la'	chídiín	chídii_n
inu 'face'	inu'	inaa'	inuu	inuù	inaló'	inaxo'	inala'	inúú	inúu
ixe 'tree'	ixu'	ixaa'	ixuu	ixuu	ixa'ló'	ixa'xo'	ixa'la'	ixuún	ixuú_n
mágá 'onion'	mágó'	mágáa'	mágóo	mágóo	mágáló'	mágáxo'	mágála'	mágúún	mágúun
wipí 'butterfly'	wipí'	wipiáa'	wipíi	wipíi	wipiáló'	wipiáxo'	wipiála'	wipíín	wipíin

Once the data is reorganized based on several crucial insights from Weathers and Carrasco (1988), patterns emerge, leading to a coherent analysis within the framework of Autosegmental Phonology. These key insights will be covered in section 1.2, after the necessary background information is given and before presenting the analysis.

1.1. Background information

Me'phaa (Tlapanec) is spoken by over 75,000 people (perhaps as many as 95,000) in the state of Guerrero, Mexico. It is part of the Otomanguean family of languages. There are at least eight major variants, which can be identified by the larger towns in the area where they are spoken: Acatepec, Azoyú, Malinaltepec, Nancintla, Teocuitlapa, Tlacoapa, Zapotitlán Tablas (including

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[1] Abbreviations: s=singular; p=plural; d=dependent; e=exclusive; 1pi=plural inclusive, otherwise i=independent. The dependent form (third person only) is used when there is another noun present that it agrees with, whereas the independent form is used when the possessor is not otherwise overtly expressed.

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Huitzapula, which some regard as distinct), and Zilacayotitlán. Many speakers have learned more than one variant and the differences between variants can be smaller or larger, depending on which pair of variants is compared. It is therefore difficult to determine which and how many of the varieties are separate languages. SIL International has worked in the Acatepec, Malinaltepec, and Tlacoapa varieties and is beginning in several others now. (The now-extinct Subtiaba language of Nicaragua is also in this family.)[2]

The name *Me'phaa*, which speakers use for their own language, is preferred over the traditional name, *Tlapaneco*, which is derived from Nahuatl, because some consider it to have been a derogatory label. (The form *Me'phaa* is the one used by Malinaltepec speakers. The other varieties have slightly different forms of the name, such as *Me'pa* in Acatepec and *Mi'pha* in Tlacoapa.)

The data used in this paper are from Malinaltepec (except the Acatepec data presented in section 4). Unless noted otherwise, they are taken from a set of paradigms collected from various native speakers by Mark and Esther Weathers, who have worked on one or more varieties of Tlapanec since 1973 under the auspices of SIL. Other works on Malinaltepec Tlapanec include Suárez (1983), Marlett and Weathers (1985), Weathers and Carrasco (1988) and Carrasco Zúñiga (in progress), none of which present an autosegmental analysis.

The orthography used in the data follows that of Weathers and Carrasco (1988). The IPA equivalents for the consonants are shown below the practical orthography form in (2):

(2) Orthographic symbols used

	labial	**dental**	**palatal**	**velar**
voiceless	p p	t t	ch tʃ	k k
aspirated	ph pʰ	th tʰ		kh kʰ
voiced	b b	d d	dx dʒ	g g
continuant	f φ	s s	x ʃ	j x
nasal	m m	n n	ñ ɲ	
sonorant	wˀ w	l l	y j	
		r r		

The five vowels are the usual ones (a, e, i, o, u) and they can also appear nasalized, lengthened, and glottalized, or any combination thereof.

[2] The background information on Me'phaa is taken from the SIL Mexico Branch website: http://www.sil.org/mexico/tlapaneca/familia-tlapaneca.htm.
[3] The [w] is probably labio-velar.

1.2   Key insights for reorganizing the data

The crucial insights obtained from Weathers and Carrasco (1988) involve noun classes, syllable structure, and tone.

1.2.1   Noun classes

Nouns are divided into two classes, based mainly upon animacy. Class 1 nouns are mostly inanimate and Class 2 nouns are mostly animate. The animate / inanimate distinction also plays a role in other parts of the grammar, such as the form of adjectives and numbers.

The first step in reorgainzing the data was to attempt to divide the nouns between Class 1 and Class 2, simply on the basis of the animacy implied by the gloss. This division had to be ammended later in some cases, as outlined below.

1.2.2   Syllable structure

The nucleus and coda of a syllable are especially important to the analysis of tone. As noted above, vowels may appear as simple vowels or lengthened, nasalized, or glottalized. The glottal stop symbol ' appearing after a vowel is therefore not a coda consonant but a vowel feature which is part of the nucleus of the syllable. Nasalization is a feature of the syllable, not just of the vowel. The current orthography (based on Weathers and Carrasco 1988: 29) writes an n at the end of the syllable to indicate nasalization, unless the syllable begins with a nasal onset, in which case the syllable is automatically nasalized. This means that all syllables are open, with only the nasal feature noted as n and the glottal stop ' appearing after the vowels.

Though there is vowel length, written as two like vowels, there are no true dipthongs. A series of unlike vowels beginning with a low vowel indicates two distinct syllable nuclei. However, a series of unlike vowels beginning with a high vowel forms a single syllable, with the high vowel acting either as a glide or as palatalization or labialization of the preceding consonant. This is evidenced by the fact that the high vowel in these sequences never bears a contrasting tone (Weathers and Carrasco 1988: 39).

Given these insights into the syllable structure, each class was further subdivided by the vowel of the final syllable of the uninflected root. Each of these divisions were then grouped by the vowel length, nasalization, and glottalization on the final syllable of the uninflected root.

In working through the organized data group by group, I listed the allomorphs for the person suffixes, ignoring tone. These are given below in section 2.1. It soon became clear that some of the odd allomorphs were due to that noun being a member of the other class. Also, a few adjectives were found in the noun data. These had to be moved to a separate file for analysis, since the adjectives have related but distinct forms for the person suffixes from those used by the nouns, as will be shown in section 3.3.

The data show no distinction in pattern between nouns with long vowels and nouns with short vowels in the final syllable of the uninflected form. Nasalization and usually glottalization in the final syllable of the uninflected form carry over to the inflected forms, meaning these features are autosegments like tone. (See Marlett 1992 for an autosegmental analysis of nasalization in Mixtec.)

1.2.3   Tone

There are three basic tones: high, mid, and low; mid is the unmarked, default tone. In addition, there can be a combination of two tones on a short vowel and up to four tones on a long vowel. The overwhelmingly general case is that there is only one tone per syllable in monomorphemic

forms. Contour tones are (almost always) formed in the morphology, either by compounding or affixation (Weathers and Carrasco 1988: 38). In the affixation process, segmental material is lost, such as the vowel(s) of the final syllable in the case of noun inflection, but the underlying tones remain (as does nasalization and usually glottalization) and are relinked to the new segmental material, forming contour tones as necessary.

Given the above insights, the class divisions separated by the final vowel of the uninflected noun were further subdivided by the tone on that final vowel to begin the analysis.

2.   The autosegmental analysis for nouns

Autosegmental Phonology (Goldsmith 1979, 1990), which allows tones and other features to act independently of segments, provides an ideal framework for analyzing Me'phaa (Tlapanec).

Before determining the underlying tones on the inflectional suffixes which mark the person of the possessor for nouns, their basic shape and allomorphy conditions are given.

2.1   The segmental allomorphy of the person suffixes

Class 1 nouns have the following basic forms for the person suffixes, where only the exceptions to the general case are noted. The changes for the roots ending in non-nasal [a] are the equivalent of adding the feature [+low] to the general allomorph for the singular forms.

(3)   Class 1 suffixes

Root ending	1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
general	-u'	-aa'	-uu	-uu	-aló'	-ax̱o'	-ala'	-uun	-uun
L tone					-a'ló'	-a'x̱o'	-a'la'		
most a[-nas]	-o'		-oo	-oo					

The suffixes for the Class 2 nouns have similar forms. In the case of the 2s, 1pi, 1pe, and 2p forms, it would be possible to split off –i from the Class 1 forms as a separate morpheme, such as the theme vowel suggested in Marlett and Weathers (1985) or a marker of animacy. This analysis is not as clear in the other forms, so I have chosen to simply include the /i/ in the Class 2 person suffix allomorphs.[4] Note that the same changes for roots ending in low tone (the addition of ') and non-nasal [a] (the addition of the feature [+low]) occur.

(4)   Class 2 suffixes

Root ending	1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
general	-i'	-iaa'	-ii	-ii	-ialó'	-iax̱o'	-iala'	-iin	-iin
L tone					-ia'ló'	-ia'x̱o'	-ia'la'		
most a[-nas]	-e'		-ee	-ee					

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[4] Alternatively, the animacy marker could be the feature of palatalization ([+pal]) which surfaces as an [i] before [a] but u[+pal] → i. The loss of rounding is still unexplained.

2.2   Tones on the person suffixes

To decipher the tone patterns, it is crucial to look at the nouns which have a mid tone on the final syllable of the uninflected root. This group of nouns shows clearly the tones which come with the person suffixes, as no marked tones are carried over from the lost final nucleus of the root. The noun roots which had high or low tones in the final nucleus of the uninflected form relink those tones to the suffix vowels in addition to the tones which come with the suffix, forming contour tones in many cases, as shown in the derivations below.

Based on the tones found on the uninflected noun roots ending in mid tone, it is evident that the independent third person forms (3si and 3pi) have a low tone and the third person plural forms (3pd and 3pi) have a high tone (so 3pi has both a high tone and a low tone). These tones contrast with the high tone which always shows up on *ló'* in the 1pi suffix and the low tone which always shows up on *xọ'* in the 1pe suffix, which do not interact with the other root or suffix tones and thus are treated as fixed for the autosegmental analysis. The same is true for the root tones which are linked to any non-final syllables.

The person affixes with the underlying tones included are shown in (5) for each class, where the tones marked below the segments are not linked underlyingly. Their linking will be shown in the derivations in section 2.3.

(5)   Underlying tones on the person suffixes

Root ending	1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
Class 1									
general	-u'	-aa'	-uu	-uu L	-aló'	-axọ'	-ala'	-uun H	-uun HL
L tone					-a'ló'	-a'xọ'	-a'la'		
most a[-nas]	-o'		-oo	-oo L					
Class 2									
general	-i'	-iaa'	-ii	-ii L	-ialó'	-iaxọ'	-iala'	-iin H	-iin HL
L tone					-ia'ló'	-ia'xọ'	-ia'la'		
most a[-nas]	-e'		-ee	-ee L					

2.3   Derivations
2.3.1   Roots with a final mid tone

In the case of noun roots which have a final mid tone in their uninflected form, the inflected forms are generated by deleting the vowel(s) of the final syllable and attaching the suffix in its place. The only tones are those of the suffixes. These tones attach one-to-one, right-to-left, with the high tone on 3pd also spreading left within its long syllable to the empty vowel (or tone-bearing unit=TBU). The HL tones on the 3pi suffix create a falling tone. These steps are illustrated for representative forms in (6):

(6)   Sample derivations for roots ending in mid tone

Root	1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
Class 1									
idu 'eye, bamboo'	id-u'	id-aa'	id-uu	id-uu | L	id-aló'	id-axò'	id-ala'	id-uun \\\| H	id-uun || HL
ada 'shoe'	ad-o'	ad-aa'	ad-oo	ad-oo | L	ad-aló'	ad-axò'	ad-ala'	ad-uun \\\| H	ad-uun || HL
Class 2									
tsĭbu 'grass-hopper'	tsĭb-i'	tsĭb-iaa'	tsĭb-ii	tsĭb-ii | L	tsĭb-ialó'	tsĭb-iaxò'	tsĭb-iala'	tsĭb-iin \\\| H	tsĭb-iin || HL
aga 'hog'	ag-e'	ag-iaa'	ag-ee	ag-ee | L	ag-ialó'	ag-iaxò'	ag-iala'	ag-iin \\\| H	ag-iin || HL

2.3.2   Roots with a final high tone

Final high-toned noun roots are inflected in the same way as mid-toned roots, except that the final high tone from the root attaches to the left-most vowel (TBU) of the suffix before the suffix tones are linked. There is now no free TBU for the high tone of 3pd to spread onto. Further, the high tone of the 3pi suffix does not have any place to link, so it simply merges with the high tone from the root. These steps are illustrated for representative forms in (7), with the root high tone shown above the form and the suffix tones below the form:

(7)   Sample derivations for roots ending in high tone

Root	1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
Class 1									
rubú 'pear'	H | rub-u'	H | rub-aa'	H | rub-uu	H | rub-uu | L	H | rub-aló'	H | rub-axo	H | rub-ala'	H | rub-uun | H	H | rub-uun || HL
mágá 'onion'	H | mág-o'	H | mág-aa'	H | mág-oo	H | mág-oo | L	H | mág-aló'	H | mág-axo	H | mág-ala'	H | mág-uun | H	H | mág-uun || HL
Class 2									
wipí 'butterfly'	H | wip-i'	H | wip-iaa'	H | wip-ii	H | wip-ii | L	H | wip-ialó'	H | wip-iaxo	H | wip-iala'	H | wip-iin | H	H | wip-iin || HL
kŭ'wá 'thief'	H | kŭ'w-e'	H | kŭ'w-iaa'	H | kŭ'w-ee	H | kŭ'w-ee | L	H | kŭ'w-ialó'	H | kŭ'w-iaxo	H | kŭ'w-iala'	H | kŭ'w-iin | H	H | kŭ'w-iin || HL

2.3.3 Roots with a final low tone

Final low-toned noun roots are inflected in much the same way as final high-toned roots (except for the choice of the glottalized allomorph for 1pi, 1pe and 2p), where the final low tone from the root attaches to the left-most vowel (TBU) of the suffix prior to linking of the suffix tones. There is again no free TBU for the high tone of 3pd to spread onto. The difference shows up with the 3pi suffix, where again the high tone from the suffix does not have any place to link. In this case it cannot merge with the low tone from the root, so a further contour (LHL) is created. Note also that for some reason the majority of the Class 1 forms have the root low tone spread to the right for the singular forms, making it impossible to distinguish the 3sd and 3si forms. Class 2 forms do not spread this tone, yielding the expected result in line with the behavior seen in the final mid-toned and final high-toned roots. This is illustrated for representative forms in (8):

(8)   Sample derivations for roots ending in low tone

Root	1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
Class 1									
ixe 'tree, wood'	L | ix-u'	L |\ ix-aa'	L |\ ix-uu	L |\ ix-uu | L	L | ix-a'ló'	L | ix-a'xo̲'	L | ix-a'la'	L | ix-uun | H	L | ix-uun ∧ HL
láxa 'orange, lime, grape-fruit'	L | láx-o'	L |\ láx-aa'	L |\ láx-oo	L |\ láx-oo | L	L | láx-a'ló'	L | láx-a'xo̲'	L | láx-a'la'	L | láx-uun | H	L | láx-uun ∧ HL
Class 2									
chíde 'machete'	L | chíd-i'	L | chíd-iaa'	L | chíd-ii	L | chíd-ii | L	L | chíd-ia'ló'	L | chíd-ia'xo̲'	L | chíd-ia'la'	L | chíd-iin | H	L | chíd-iin ∧ HL
dríxa 'cousin'	L | dríx-e'	L | dríx-iaa'	L | dríx-ii	L | dríx-ii | L	L | dríx-ia'ló'	L | dríx-ia'xo̲'	L | dríx-ia'la'	L | dríx-iin | H	L | dríx-iin ∧ HL

2.4 Coverage of the analysis

The described analysis covers the vast majority of the noun forms in the data set. The data for the few exceptional uninflected forms with contour tones are not consistent. There are also cases where a final [i] in the uninflected form remains as a glide (or palatalization) in Class 1. All of the uninflected forms in this set which have a single long syllable inflect as if they consist of two short syllables. In a few cases, the uninflected form bears little resemblance to the inflected forms, so a distinct underlying root for the uninflected forms must be posited (suppletion).

About 25% of the nouns have a locative form. Almost all are Class 1 nouns, perhaps due to semantic or pragmatic issues related to the animacy distinction. There does not seem to be a distinction in form for the few Class 2 nouns. Instead, the distinction is by the quality of the final vowel of the uninflected noun. Forms ending in any type of [a] have *-aa* as the locative allomorph. Forms ending in [e], [i], or [o] have *-ii* as the locative allomorph. Forms ending in [u]

have either *-ii* or *-uu* as the locative suffix. Nasalization and tone from the uninflected noun are again kept, but not glottalization. The tone data show that the locative suffix carries a high tone, which spreads left if there is no tone from the root. This results in a HH pattern for all final mid- and high-toned roots, and a LH pattern for all final low-toned roots. A few examples illustrating the analysis are given in (9):

(9)   **Sample locative derivations**

Final root tone	Uninflected root	Locative	Final root tone	Uninflected root	Locative
Mid	aga 'throat'	ag-aa | H	Mid	inu 'face, point'	in-uu | H
High	gu'wá 'house'	H | gu'w-aa | H	High	itsí 'stone'	H | itsii | H
Low	ajuan' 'weapon, bell'	L | aju-aan | H	Low	ixe 'tree, wood'	L | ix-ii | H

3.   Extension of the analysis to other categories

The nouns are the only category for which extensive data are available and for which analysis has been completed so far. Hypotheses are given for extending the autosegmental analysis to the following categories, however, based on the data available at this time. Such evidence lends further viability to the analysis for nouns, since similar patterns are seen throughout the language.

3.1   Body part nouns used as prepositions

Almost all prepositions are body part nouns which are inflected for a third person singular possessor. Weathers and Carrasco (1988: 84) show that it is also possible to conjugate the 'prepositions' for other persons, given below. This is simply the addition of the possessor suffix used in the nouns for the appropriate person and number.

(10)   Inflection of body part nouns used as prepositions

Me'phaa	Literal translation	Free translation
manújngo' in-aa'	I will pass your face	I will pass before you / with your permission
anújngaa' in-u'	You (imperative) pass my face	You pass before me!
anújngaa' in-uu	You (imperative) pass before his face	You pass before him!

3.2 Manner adverbs

When an adverb expressing manner is used in a sentence where the subject is animate, there is agreement marking on the adverb to match the person of the subject. From the very limited adverb data given in Weathers and Carrasco (1988: 81), it appears that they take the same person suffixes as Class 1 nouns do, as illustrated in (11).

(11) Animate agreement marking on manner adverbs

Root	1s subject	2s subject	3si subject
máján 'well'	**múj-ún'**	**máj-áan'**	**múj-úun**
gúkú 'firmly'	**gúk-ú'**	**gúku-áa'**	**gúk-úu**
nginá 'poorly'	**ngín-u'**	**ngín-áa'**	**ngín-úu'**
guéño 'a lot'		**guéñ-aa'**	

3.3 Qualitative adjectives

Adjectives expressing a quality may have person suffixes marking the subject when the adjective is used as a stative predicate. If the subject is inanimate, the uninflected form of the adjective is used, but for animate subjects, person suffixes quite similar to those for nouns are used. Based on the paradigms for adjectives included in the noun data plus a few more from Weathers and Carrasco (1988: 62), it looks like a very similar analysis will work for adjectives, though the tone pattern and segments of the suffixes are different than those for nouns. These forms are shown in (12). Adjectives ending in [a] have distinct forms from those ending in the other vowels.

(12) Person suffixes marking animate subjects on adjectives[5]

Root ending	1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
except a	-uun' H	-iin' H	-ii	-ii L	aan'ló' HL	aan'xo' HL	aan'la' HL	-uun or -iin	-uun L or -iin L
a	-uun' H	-aan' H	-aa	-aa L	aan'ló' HL	aan'xo' HL	aan'la' HL	-iin	-iin L

Paradigms showing adjectives ending in [a] and non-[a] with all three tone patterns are exemplified in (13).

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[5] Weathers and Carrasco (1988: 62) and some of the paradigms have a mid tone after the HL contour for 1pi, 1pe, and 2s. This tone is not included here, since it is not always written. This tone could be added to the analysis, but it would require a marked M, which has been used in the analyses of many other languages but was not needed in the nouns for Me'phaa.

(13)   Paradigms for person suffixes marking animate subjects on adjectives

	Root	1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
M	jmbu 'straight'	jmbúún'	jmbíín'	jmbii	-ịi̲	jmb-áan'ló'	jmb-áan'xo̲'	jmb-áan'la'	jmbiin	-ịi̲n
	tsú'khaan 'delicate'	tsú'khúún'	tsú'kháán'	tsú'khaan	-aan	tsú'kh-áan'ló'	tsú'kh-áan'xo̲'	tsú'kh-áan'la'	tsú'khiin	-ịi̲n
H	gúkú 'strong/hard'	gúkúún'	gúkíín'	gúkíi	-íi̲	gúk-áan'ló'	gúk-áan'xo̲'	gúk-áan'la'	gúkúun	-úu̲n
	máján 'good'	mújúún'	májáán'	májáan	-áa̲n	máj-áan'ló'	máj-áan'xo̲'	máj-áan'la'	májíin	-íi̲n
L	mojmo̲' 'yellow'	mojmuún'	mujmii̲'	mujmii̲	-ii̲'	mujmi-a'a'ló'	mujmi-a'a'xo̲'	mujmi-a'a'la'	mujmii̲'	-ii̲_'
	tsída̲' 'tall'	tsídu̲ún'	tsída̲án'	tsídaa̲'	-aa̲'	tsíd-a'an'ló'	tsíd-a'an'xo̲'	tsíd-a'an'la'	tsídii̲n'	-ii̲_n'

Though details of the analysis for adjectives still need to be worked out, such as the conditions on the allomorphy and the LML tone pattern on the 3pi forms for low-toned roots, it is clear that a very similar analysis to that proposed for the nouns should be workable. Note that one reason for the two distinct tone patterns in the language is to allow for distinctions like that between adverbs and adjectives: as shown in the table above for adjectives and the one in section 3.2 for adverbs, the same root *gúkú* may be 'strong/hard' if the adjectival suffixes are added or 'firmly' if the nominal suffixes are added; similarly, *máján* may mean either 'good' or 'well' depending on the conjugation used.

3.4   Independent pronouns
The independent pronouns are given in Weathers and Carrasco (1988: 50) as shown in (14):[6]

(14)   Independent pronouns

1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
ikhúún'	ikháán'	ikhaan	ikhaa̲n	ikháan'ló'	ikháan'xo̲'	ikháan'la'	ikhiin	ikhii̲n

These forms are exactly what would be predicted if they are formed from a base word *ikha* to which the [a]-final suffixes given above for adjectives are added.

3.5   Verbs
Unsurprisingly, verbs have the most complex morphology and tone patterns of all categories and their analysis is made even more difficult due to the fact that there are no infinitives in Tlapanec, so there is no uninflected form to use in determining the underlying tones. The analysis of verbal inflection will be the subject of a future paper when more data is available. It appears so far for intransitive verbs that some of the intransitive verbs mark the subject agreement with the same set of suffixes used for Class 1 nouns (except that a L tone is added to 1s), while others use the

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[6] Except that I have removed the mid tone after the HL contour for 1pi, 1pe, and 2s, as mentioned in the previous footnote.

set used by the adjectives (except that the glottal in the 1pi, 1pe, and 2p forms does not always appear).[7] Derivations are given in (15) for two intransitive verbs that I analyze as underlyingly mid-toned to illustrate these patterns:

(15) Derivations for intransitive verbs

Verb	1s	2s	3sd	3si	1pi	1pe	2p	3pd	3pi
'to dawn' (Noun pattern)	nats-u' | L	nats-aa'	nats-uu	nats-uu | L	nats-aló'	nats-axo̱'	nats-ala'	nats-uun \\\| H	nats-uun || HL
'to get fat' (Adjective pattern)	nang-uun |/ H	nang-aan |/ H	nang-aa	nang-aa | L	...-aanló' || HL	....-aanxo̱' || HL	....-aanla' || HL	nang-iin	nang-iin | L

For transitive verbs, these same two sets of suffixes and tone patterns seem to be used to mark the object agreement, with other morphology and tone distinctions to indicate the subject.

4.   Extension of the analysis for nouns to Acatepec Tlapanec

If the autosegmental analysis proposed here for noun inflection in Malinaltepec Tlapanec (Me'phaa) is on the right track, we would expect a similar analysis, with only systematic changes and the usual lexical exceptions, to work for the other varieties of the language. This expectation is met in the noun paradigms available for Acatepec Tlapanec (Me'pa).

The first systematic difference is that Acatepec Tlapanec does not have any distinction between dependent and independent forms for third person, either singular or plural; instead, the comparative dependent forms are used for both cases so there is no addition of a low tone to indicate the independent forms. The second difference is that there is no marked addition of a glottal in 1pi, 1pe, and 2p forms for low-toned roots. Third, the addition of the [+low] feature to change the allomorphs for 1s and 3s applies to non-nasal [o] as well as [a] in Acatepec. Finally, there are segmental (but not tonal) differences between the two varieties, as shown in (16).

(16) Person affixes used on nouns for Acatepec Tlapanec[8]

Root ending	1s	2s	3s	1pi	1pe	2p	3p
Class 1							
general	-u'	-aa'	-uu	-ulú'	-uxu̱'	-ala'	-uun H
[-nas] a and o	-o'		-oo				
Class 2							
general	-iu'	-iaa'	-iuu	-iulú'	-iuxu̱'	-iala'	-iuun H
[-nas] a and o	-io'		-ioo				

The same processes of linking and spreading apply in the Tlapanec spoken in Acatepec as in Malinaltepec to obtain the results shown in (17) for illustrative forms:

(17)   Sample Acatepec Tlapanec noun paradigms

Class	Tone	Root	1s	2s	3s	1pi	1pe	2p	3p
1	M	idu 'eye'	idu'	idaa'	iduu	idulú	iduxu	idala	idúún
		ska 'wound'	sko'	skaa'	skoo	skulú	skuxu	skala	skúún
2	M	sé'bu 'grasshopper'	sé'biu'	sé'biaa'	sé'biuu	sé'biulú	sé'biuxu	sé'biala	sé'biúún
		goboo 'frog'	gobio'	gubiaa'	gobioo	gubiulú	gubiuxu	gubiala	gubiúún
1	H	rubú 'pear'	rubú'	rubáa'	rubúu	rubúlú	rubúxù	rubála	rubúún
		raká 'nose'	rakó'	rakáa'	rakóo	rakúlú	rakúxu	rakála	rakúún
2	H	pipí 'butterfly'	pipiú'	pipiáa'	pipiúu	pipiúlú	pipiúxù	pipiála	pipiúún
		ada⁹ 'boy'	a'dió'	adiáa'	a'dióo	a'diúlú	a'diúxu	a'diála	a'diúún
1	L	ixi 'tree'	ixu'	ixaa'	ixuu	ixulú	ixuxu	ixala	ixuún
		bújkaa 'money'	bójko'	bújkaa'	bójkoo	bújkulú	bújkuxu	bújkala	bújkuún
2	L	a'gu 'woman'	a'giu'	a'giaa'	a'giuu	a'giulú	a'giuxu	a'giala	a'giuún
		i'ka 'skunk'	i'kio'	i'kiaa'	i'kioo	i'kiùlú	i'kiuxu	i'kiala	i'kiuún

5.   Conclusion

The autosegmental analysis for noun inflection has been shown to account systematically for the various patterns of both segments and tone. Further, the same basic analysis will extend to other categories within Malinaltepec Tlapanec and was shown to be easily adapted to cover Acatepec Tlapanec noun inflection as well. All of these patterns were very difficult to account for when attempting to analyze the morphology and tone separately or when assuming tones are fixed. The ability within the framework of Autosegmental Phonology to treat tone and nasalization and glottalization as autosegments, which can remain after segmental material is lost and subsequently relink, allows a coherent analysis for the language with a simple underlying representation for each morpheme.

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⁹ This form has a final low tone in the unpossessed form but patterns as a high-toned root for the possessed forms.

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16131 N Vernon Drive
Tucson, AZ 85739

cheri_black@sil.org

REPORT 13

SURVEY OF CALIFORNIA AND OTHER INDIAN LANGUAGES
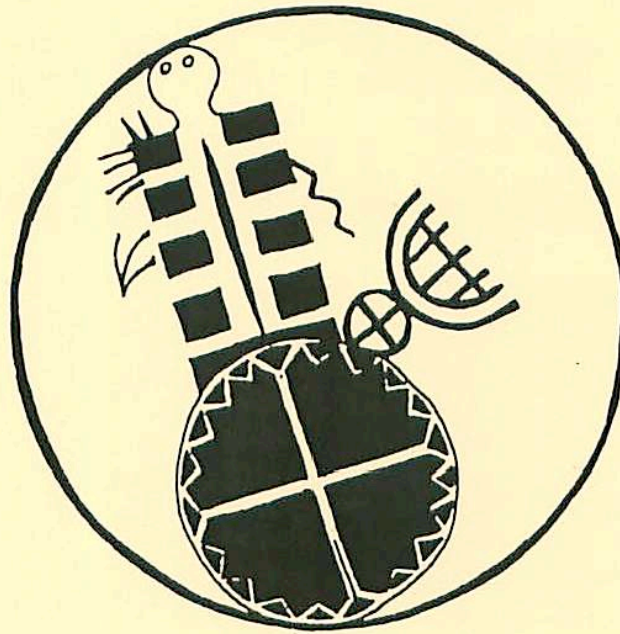
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INTRODUCTION

This volume of Survey reports is a sample of the papers heard at the Conference on Otomanguean and Oaxacan Languages (COOL), which took place at UC Berkeley March 19-21, 2004. There is more scholarly investigation being done on Otomanguean languages and other languages of Oaxaca today than ever before, yet unlike other groups such as Uto-Aztecanists and Mayanists, Otomangueanist and Oaxacanist scholars have not had a regular forum in which to meet and share their ideas. In 2000 a one-time conference took place at UCLA called *La Voz Indigena de Oaxaca*, organized by Pamela Munro, G. Aaron Broadwell, and Kevin Terraciano. As a result of this conference many of the participant linguists were able to make new and fruitful contacts with each other and several proposed that the conference should become a recurring event. With the help of the UC Berkeley Graduate Assembly, Graduate Division, Center for Latin American Studies, and the departments of Linguistics, Anthropology, and Ethnic Studies, four years after the original UCLA conference COOL was finally able to follow in its footsteps. Now there are plans for a third conference to be held very appropriately in the city of Oaxaca at the Centro Cultural Santo Domingo in 2006, organized by Alejandro de Ávila. We all hope that this will become an on-going event and it appears that COOL is on its way to becoming a regular, biannual and international conference.

Rosemary Beam de Azcona
COOL 2004 Organizer

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