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Coarticulation and Acoustic Transparency in Comaltepec Pronominal Phonology

person/ number	full form:	reduced forms:
1s	hna^{LH}	R
1px	hna?^{H}	na?, R?
1pi	hna:^{LH}R?	
2s	?niu^{L}	?
2p	?niu?^{L}, na?	
3	?i^{L}r	r
animal	?i^{L}ri?	ne?

(49) The ls reduced form consists solely of unspecified nuclear element.

It consists of a syllabic alveolar nasal whem immediately preceded by a post-nuclear nasal.

ni^{L}?í:n^{LH}R	[ni^{L}?i:h^{LH}n^{L}]	I will sweat
ka^{L}kian?^{M}R	[ka^{L}kyan?^{M}n^{L}]	I slept

(50) Elsewhere, in open syllables, either controlled or ballistic, or in glottally checked syllables, the suffix is realized as a full copy of the stem vowel.

hmi^{L}ngi?^{HM}R	[Mmi^{L}ngi?^{HM}i^{H}]	I ask (him)
ka^{L}nó^{M}R	[ka^{L}no^{M}ho^{L}]	I got it

(51) Open ballistic syllables which undergo this suffixiation are characterized by a particularly prominent breathiness in the transition from root to suffix.

/ka^{L} nó^{M}R/-> [ka^{L} nó^{M}Oo^{L}] ([ka^{L} no^{M}ho^{L}])

(52) Reduced forms of the 1p include *na?*, which may occur after any syllable, and *R?* which may only follow a syllable that does not possss a nasal coda.

ni^{L}la^{H}R?	[ni^{L}la^{H}ha?]	we will buy it
ni^{L}la^{H}na?	[ni^{L}la^{H}hna?]	we will buy it
hmi^{L}ko?^{HM}R?	[hmi^{L}ko?^{HM}o?^{H}]	we help
hmi^{L}ko?^{HM}na?^{H}	[hmi^{L}ko?^{HM}na?^{H}]	we help

(53) The *R* suffix takes on all the features of the preceding suparalaryngeal gesture. If this

preceding gesture is a nasal stop, then the suffix is a nasal stop as well. If this preceding gesture is a vowel, then the suffix is the same vowel. Note in particular that intervening laryngeal gestures--either constriction, abduction, or both--do not influence the realization of the suffix--they are invisible.

(54) Articulatory and Acoustic Phonetic Explanation

Laryngeals lack place features at the phonetic level. Keating shows that in English V_1hV_2 sequences, formant transitions between V_1 and V_2 are identical to those in simple V_1V_2 sequences. That is, the presence of intervocalic [h] has no influence on the supralaryngeal configuration.

(55) SL: vowel 1:
vowel 2:
consonant:

(56) SL: vowel 1:
vowel 2:
L:

(57) The audible presence of these transitions may potentially lead to their instability: Progressive assimilation--which, recall, is fully audible in this context--may ultimately lead to a phonological restructuring in which the historical prelaryngeal vocalic gesture both precedes and follows the intervening laryngeal.

SL: vowel 1:
L:

(59) Alternatively, regressive assimilation may ultimately lead to a phonological restructuring in which the historic postlaryngeal vocalic gesture both precedes and follows the intevening laryngeal.

SL: vowel 2:
L:

(60) Without any supralaryngeal instructions associated with a post-vocalic laryngeal, a vowel may potentially persist through the laryngeal segment, and re-emerge on the other side: The lack of an intervening supralaryngeally articulated consonant allows for this potential perseverence of the preceding vocalic gesture.

(61) Why is trans-laryngeal harmony here progressive, and not regressive?

Morphological Explanation: root syllables are picked from the open, or lexical class of morphemes, and in addition, are a common site for subsyllabic inflection; a greater number of contrasts is required here so that undue homophony does not result.

Non-root syllables are picked from a small, closed set of non-lexical morphemes.

As fewer contrasts are necessary here, it is natural that Chinantec should draw on a limited set of its contrasts in its phonological encoding of this morphological material.

Therefore, a given affixal element is more likely to succomb to assimilatory processes such as trans-laryngeal harmony.

(62) The harmonically determined nuclei of Comaltepec reduced pronouns are a consequence of their closed-class status. This class of harmony is a consequence of coarticulation similar to that found in Comaltepec level H-tone spread.

		input:	output:
SL:	vowel:	_____	
L:	abduction:	_	

In addition, Comaltepec allows for the spread of a coda nasal segment into the empty suffix nuclear position.

SL:	nasal:	_____	
L:	abduction:	_	

(63) The chameleon suffix consists of a nuclear position lacking any further lexical specification. In 1s, the suffix consists of a bare vowel position. In 1px, the suffix additionally posseses a post-nuclear glottal check.

1s: N
1px: V?

(where N = nuclear, V = vowel)

The quality of this suffix is determined by the preceding surpralaryngeal articulation. Note that similar patterns exist in, for example Mazahua (Spotts), and Rengao (Gregerson 1976).