Comaltepec Chinantec Clitic Phonology

- Cross-linguistically, affixes typically possess fewer contrasts than do roots. Moreover, affixes are typically the target of harmony processes, rather than the trigger.
 Steriade (1994): "Positional neutralization" (morphologically or prosodically 1.
 - constrainted)
 - In Comaltepec clitic phonology these patterns are explained when considering the contrastive load borne by these distinct morphological subgroupings.
 - 1) morphology, 2) phonetics, 3) phonotactics, 4) perception.

p	t	t∫	k	i	i
b	d	d3	g	e	Λ
	S			æ	
			Z _L		
m	n		ŋ		
	1				
		i	W		

h,?

3.	consonants:			<u>laryngeals</u>		
	{p.i?} H	[pih? ^H]	little (i)	${ m hi}^{ m L}$	$^{ ext{[hi}^{ ext{L}}]}$	
	book					
	_{bν} 3ΓΗ	$[(m)b \wedge 2^{LH}]$	ball	H _o	$[\text{?o:}^{\mathbf{M}}]$	papaya
	mi:H	$[\tilde{\text{mir}}^{M}]$	plain			
	tirL	[tir ^L]	thin (i)	vowels:		
	dorLH	$[(n)do:h^{HLH}]$	maguey	sapliH	$[lih^H]$	flower
	H	$[sox^M]$	ascent	he?HL	[he?LM]	frog
	nu ^L	$[n\tilde{\mathbf{u}}^{L}]$	grass	H _{!i}	[lih?H]	circle
	lor^L	$[lot^L]$	rabbit	Pv3 _{TH}	[bv3rH]	short
	t∫į̇́H	$[t \int ih^H]$	term of endearment	lu^L	$[lu^L]$	fly
	$_{ m d3i}^{ m L}$	$[(n)d3it^L]$	dog	ho?LH	[ho?LH]	maggot
	j^?	$[j_{\Lambda}]^{M}$	aboved	$_{3}$ eL	[d ₃ æ ^L]	person
	zo:L	$[zo^{L}]$	sweet	taLH	[taLH]	work
	kiHL	$[ki^{LM}]$	garbage			
	guːLH	$[(\mathfrak{y})gu:h^{\hbox{HLH}}]$	owl			
	ŋuHL	[ŋũhHL]	meat			

 $w_i \hspace{1cm} [w_i{}^M] \hspace{1cm} spider$

4. <u>tones</u>:

 hi^L $[hi^L]$ L book hlo?H [hlo?H] Η pretty $_{zi}L_{mo!}H$ [ziLmo:hHM] flea gin?HL $[gin]^{LM}]$ HLswing liLH $\Pi_{i}LH_{1}$ LH tepejilote palm shoot hi:LH [hi:hHLH] edible tuber $[d_3 e_1^M]$ earthen jar dʒjuː Ø

5. <u>maximal syllable</u>:

 $(L)_{C(G)}(L)_{V(:)}(T)_{(N)(?)}$

Long, glottally checked syllables are attested only in morphologically complex environments.

6. <u>plain vowels</u>: <u>breathy vowels</u>:

7. <u>codas</u>:

 $\begin{array}{llll} & & & & & & \\ & & & & & \\ & & & & & \\ ta?^{HL} & & & & \\ & & & & \\ gjun^{H} & & & & \\ & & & & \\ & & & & \\ hwin^{HL} & & & \\ & & & \\ gin?^{HL} & & & \\ & & & \\ & & & \\ gin?^{LM}] & & swing \end{array}$

8. <u>morphologically complex codas</u>:

?ja ^L z	[ʔjaş ^L]	her griddle
\tilde{si} ? $H_{Z_{L}}$	$\tilde{si}2z^{H}$	his clothing
$\mathrm{hi}^{L}\mathrm{p}$	$[hip^{ extsf{L}}]$	it's a book
ріූ? ^Н р	$[pih?p^{H}]$	it's little

9. <u>clitics</u>:

person/

$$\begin{array}{cccc} \underline{\text{number}} & \underline{\text{full form:}} & \underline{\text{reduced forms:}} \\ 1s & & \text{hnæ}LH & R \\ 1px & & \text{hnæ}?H & \text{na?, R?} \\ 1pi & & \text{hnæ:}LHR? \\ 2s & & ?njuL & ? \\ 2p & & ?niu;^L, na? \\ 3 & & ?^Lz & z \\ animal & ?i^Lz? & ne? \\ \end{array}$$

(R = "reduplicant", px = plural exclusive, pi = plural inclusive)

10. *R* copies the preceding supralaryngeal gesture, vowel or nasal. Laryngeal gestures are not copied, and intervening laryngeals are transparent.

$$\begin{array}{lll} \text{ni}^L?_{i:n}^LH_R & [\tilde{\text{ni}}^L?_{i:}^HLH_{\eta,\eta}H] & \text{I will sweat} \\ ka^Lkjan?R & [ka^Lkj\tilde{a}^M?_{\eta}^L]/[ka^Lkj\tilde{a}^nM?_{\eta}^L] & \text{I slept} \\ \text{hmi}^L\text{ni}?^{MH}R & [\tilde{\text{m}}\tilde{\text{mi}}^L\tilde{\text{nj}}\tilde{\text{i}}^MH?_{i}^H] & \text{I ask (him)} \\ ka^L\text{no}R & [ka^L\tilde{\text{no}}^M\tilde{\text{ho}}^L] & \text{I got it} \\ \end{array}$$

11. modal, open roots, *R* is incorporated into the stem syllable, lengthening short syllables, and having no effect on long syllables.

 $\mathsf{hmi}^L \mathsf{k} \tilde{\mathsf{o}} ?^{MH} \mathsf{na} ? \qquad [\mathsf{m} \tilde{\mathsf{m}} \tilde{\mathsf{i}}^L \mathsf{k} \tilde{\mathsf{o}}^{MH} ? \mathsf{n} \tilde{\mathsf{a}} ?^L] \quad \text{we help}$

12. After controlled open syllables, *R*? is incorporated into root syllable resulting in a long closed controlled syllable.

kãR? $\begin{array}{ccc} \text{kã:?}^M \text{]} & \text{we charge} \\ \text{hi:R?} & \text{[hi:?}^M \text{]} & \text{we plow} \\ \text{neMHR?} & \text{[nẽ:?}^{HM} \text{]} & \text{we see} \\ \end{array}$

13. tone

inputs and surface outputs to clitic sandhi

inputs and surface outputs to entire sunam						
<u>Rime</u>	V	V.	Vː	Ŋ:	V?	Ä3
_						
<u>Tone</u> ↓						
L	X	$CV^{L}hV^{L}$	X	$CV^{L}hV^{L}$	$V_{\Gamma}^{J}V_{\Gamma}$	CV ^L h?V ^L
M		$CV^{M}hV^{L}$		$CV^{I}M_{hV}L$	$VM^{3}VL$	CVMh?VL
Н	CV:M	$CV^{H}hV^{L}$	CV:M	$CV_{i}H_{h}V^{L}$		CVH _{h?V} H
LM	X	CVLMhVL			VLM5AT	CVLMh?VM
LH	CV:LH	CVLHhVL			VLH3VH	
HLH				CVHLH hV H		
MH	CV:HM				VMH3VH	
HM			CV:HM			
НМН				CV: HMH hV H		
HL	CV:HL	CVHLhVL	CV:HL	CV:HLhVL	VHL ³ VL	CVHLh?VL

14.

Underived root inputs and clitic outputs

Rime	V	Ÿ.	Vː	Ϋ́Ι	V?	Λ̈́.
_						
<u>Tone</u> ↓						
L	X	CÄ _L A _L	X	CÄʻrLAT	$V_{\Gamma^{J}V}$	CÄ _L 3A _L
Ø		CÄA _T		CÄïAT	$^{\Lambda !\Lambda \Gamma }$	CÄ3A _T
Н	CV:H	CÄHAT	CV:H	CÄ'HAT		СЙН3ЛН
HL	CV:HL	CÄHLAL	CV:HL	CÄ'HLAT	VHL ³ VL	CÄHT ^J A
LH	CV:LH	CÄ _{LH} A _L		CÄ'rHAH	Ä _{TH} ⁵ Λ _H	

15. <u>examples with LH</u>:

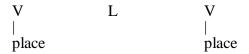
ni ^L hwi?LH R	$\tilde{\mathbf{n}_i^{\mathrm{L}}}$ \mathbf{L}_{fi} \mathbf{L}_{7i} \mathbf{H}_{1}	I will whistle (to him)
examples with H:		
ni ^L be਼? ^H R	$[\tilde{ni}L_{beh}H_{e}H]$	I will roll it up
si:H R	[si:H]	my name is
ni ^L d3a?H R?	$[\tilde{ni}L_{d3ah}H_{a}H_{a}H]$	we will go home
?wa!H R?	$[W_{\Lambda'}]$	we go out

16.. <u>Explanation for clitic patterning</u>:

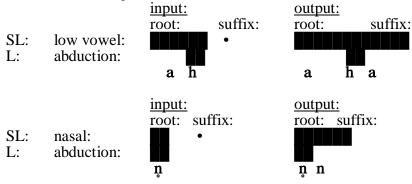
1) Morphology: Comaltepec root syllables possess a richer inventory of contrastive elements than do non-root syllables (prefixal and suffixal syllables).

A given affixal element is more likely to be determined by assimilatory processes harmony.

2) <u>Phonetics</u>: Translaryngeal harmony; full copy of the preceding supralaryngeal gesture:



The presence of intervocalic laryngeals has no influence on the supralaryngeal configuration: as no rightward contrastive element blocks its propagation, tongue position may persist through an intervening laryngeal, and is consequently maintained as a suffixal vocalic gesture.



- 3) <u>Phonotactics</u>: Pronoun clitics are always vowel-initial; roots never possess obstruent codas; the preceding vocalic or nasal value may freely spread into the suffixal nuclear position unimpeded by any intervening suparlaryngeal value, and across potentially intervening (placeless) laryngeals.
- 4) <u>Perception</u>: Since no contrastive information is neutralized upon spreading into the suffixal domain, exposure to root vowel quality is optimized, hence increasing the likelihood of acoustically encoding the contrastive value.

Increased temporal exposure *per se* may not be the main motivation for spreading. (long vowels are often diachronically subject to diphthongization (Andersen 1971, Hayes

1989). Diphthongization obviously does not increase exposure to a single value, but instead cues the contrast by its transition into another gesture.

Formant transitions are where optimal encoding takes place (cf. Bladon 1986). Consequently, the more often formant transitions for a given contrast are encoded, the more likely that this contrast is recoverable. Therefore, spreading is optimal when this spreading crosses other contrastive values. Ideally, these intervening values are supralaryngeally articulated.

17. <u>formalism</u>:

morphological constraint: align right

Comaltepec clitic perceptual constraint:

© optimal: right-spread stem-final supralaryngeal value

18. conclusion:

Cross-linguistically, affixes typically possess fewer contrasts than do roots. Moreover, affixes are typically the target of harmony processes, rather than the trigger.

Steriade (1994): "Positional neutralization" (morphologically or prosodically constrained).

These patterns are explained when considering the contrastive load borne by these distinct morphological subgroupings.

1) morphology, 2) phonetics, 3) phonotactics, 4) perception.