

The role of phonation and tone in TAM in Yateé Zapotec

Yateé Zapotec (yate1242; zty) is a variety of Northern Core Zapotec belonging to the Otomanguean language family (Hammarström et al., 2023). It is spoken by around 150 speakers in San Francisco Yateé, Oaxaca, Mexico, and by the diaspora speakers in Los Angeles, CA, US. The existing scarce documentation on Yateé Zapotec mainly focuses on the fortis-lenis consonant system of Yateé Zapotec (Jaeger, 198). The phonology and morphology of vowels in Yateé Zapotec were left largely undiscussed. The current study gives an overview of the suprasegmental system in Yateé Zapotec in terms of its phonological structure, and its role in the TAM system. All the data are collected from primary fieldwork.

Yateé Zapotec has four tones: High (V̂), Low (V̄), Rising (V̌), and Falling (V̋); and three phonations: Modal (V), Checked (Vʔ), and Rearticulated (VʔV). Each phonation can bear any of the four tones (Example 1). Not every pair of words in Example (1) form a minimal pair. However, we managed to find words whose nucleus is /a/ for every tone-phonation combination.

(1)	Modal	Rearticulated	Checked
	Low ʂnà “red”	ʂnàʔà “my mother”	tʂàʔ “clay pan”
	High btá “move.IMP”	rʂáʔá “go.PROG”	ʂáʔ “my father”
	Rising gǎ “nine”	blàʔá “break.1ST.PST”	gǎʔ “basket”
	Falling kwâ “corn flour dough”	záʔà “corn”	kâʔ “like that”

Imperative mood (2a), past tense (2b), present tense (2c), and future tense (2d) are marked by the prefix of verbs: /b-, b-, ʒ-, g-/. The prefixes of verbs in the imperative mood and in the past tense are the same. Person is marked by the suffix of verbs: /-áʔ, -óʔ, -éʔ/ (3). Imperatives are not marked by person (2a).

(2)	(a)	b-èt	tò	bêʒʁ	
		IMP-kill	one	chicken	
		“Kill one chicken!”			
	(b)	b-ét-áʔ	tò	bêʒʁ	n:èʁé
		PST-kill-1SG	one	chicken	yesterday
		“I killed one chicken yesterday.”			
	(c)	ʒ-ót-áʔ	tò	bêʒʁ	jògòzà
		PRS-kill-1SG	one	chicken	everyday.
		“I kill one chicken everyday.”			
	(d)	g-ót-áʔ	tò	bêʒʁ	wʂê
		FUT-kill-1SG	one	chicken	tomorrow
		“I will kill one chicken tomorrow.”			
(3)	(a)	b-ét-áʔ	tò	bêʒʁ	
		PST-kill-1SG	one	chicken	
		“I killed a chicken.”			
	(b)	b-èt-óʔ	tò	bêʒʁ	
		PST-kill-2SG	one	chicken	
		“You killed a chicken”			
	(c)	b-ét-éʔ	tò	bêʒʁ	
		PST-kill-3SG.RESPECT	one	chicken	
		“He (respectful) killed a chicken”			

When adding person marker to a verb stem ending in vowel, the modal vowel in the verb stem becomes a checked vowel (4a, 5a, 5b, 5c). The checked vowel in the verb stem becomes a rearticulated vowel (4b, 5d, 5e). When adding person marker to a verb stem ending a rearticulated

vowel, the vowel remains to be rearticulated (4c). However, if the person marker has the **same** vowel quality as the final vowel in the verb stem, a tonal change occurs (5f vs. 5g: The tone on /au/ changed from **low** to **falling**). This contrast can be illustrated by comparing the imperatives, which are unmarked by person, with the past tenses, which share the same prefix as the imperatives and are marked by person.

- (4) (a) $V_{\text{stem}} + V_{\text{person}}^? \rightarrow V_{\text{person}}^?$
 (b) $V_{\text{stem}}^? + V_{\text{person}}^? \rightarrow V^?V_{\text{person}}$
 (c) $V^?V_{\text{stem}} + V_{\text{person}}^? \rightarrow V^?V_{\text{person}}$
- (5) (a) gâná-zé b-luâ
 there-FOC IMP-sweep
 “Only sweep there!”
- (b) gâná-zé b-l-uâ[?]
 there-FOC PST-sweep-1SG
 “I only swept there.”
- (c) gâná-zé b-l-uê[?]
 there-FOC PST-sweep-3SG.RESPECT
 “He (respectful) only killed one chicken”
- (d) tó-zé şkwét-èn b-j-á[?]
 one-FOC basket-DEF IMP-carry
 “Only carry one basket!”
- (e) tó-zé şkwét-èn b-j-á^{’á}
 one-FOC basket-DEF PST-carry-1SG
 “I only carried one basket.”
- (f) tó-zé béné-n b-wauz-á^{’á}
 one-FOC man-DEF IMP-hit
 “Only hit one man!”
- (g) tó-zé béné-n b-wauz-á^{’á}
 one-FOC man-DEF PST-hit-1SG
 “I only hit (PST) one man.”

As Example 5 shows, the TAM system in Yateé Zapotec is marked by both segmental (prefix and suffix) and suprasegmental morphemes (tone and phonation). Although there is a phonation contrast between imperative and past tense with certain person marker (5a vs. 5b; 5d vs. 5e), we would refrain from calling the phonation contrast as grammatical phonation, because the phonation contrast is caused by the coalescence between the final vowel of the vowel stem and the person marker. Nevertheless, when the imperatives and the past tense cannot be distinguished by phonation, a tone change is observed, suggesting that tone be used with a grammatical function in the language. Our study calls attention to the important role of phonation and tone in marking TAM in Yateé Zapotec.

References

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- Jaeger, J. J. 1983. The fortis/lenis question: evidence from Zapotec and Jawoñ. *Journal of Phonetics*, 11, 177–189.