

The phonology of multiple types of vowel devoicing in Cheyenne

This paper provides a new phonological analysis of three vowel devoicing (VD) patterns in Cheyenne (Algonquian, spoken in Montana and Oklahoma[1]). I propose that they reflect two fundamentally different types phenomena based on their segmental and prosodic conditioning environments: one domain span process involving [spread glottis] (SG), and two domain limit processes involving [-voice]. I demonstrate that VD is not one unitary phenomenon and moreover, multiple types of VD can exist within one language. My analysis also provides evidence that both [-voice] and [SG] are active in Cheyenne.

Prepenultimate devoicing (PPD) affects vowels before voiceless fricatives in any syllable preceding the penult[2] (*káhamaxe* ‘stick’[3], devoiced vowels bolded in all examples).

Phonological analyses of VD often involve the spreading of a laryngeal feature ([-voice] or [SG]) from the voiceless consonant to the vowel[4,5,6]. Because PPD occurs before fricatives but not other voiceless consonants, I propose that the crucial feature is [SG], following cross-linguistic arguments for default specification of [SG] for voiceless fricatives[7].

Penultimate devoicing (PD) affects underlying word-final syllables before any voiceless consonant, but surfaces in penultimate syllables due to <e> epenthesis after word-final obstruents[2] (*matsénèsts*<e> ‘kingfisher’[3]). While feature spreading could account for PD like PPD, since PD occurs before more consonant types, the same laryngeal feature cannot predict the application of both processes. This suggests that PD involves [-voice] (specified for all voiceless consonants), rather than [SG]. PD and PPD also differ in their prosodic environments. PPD is a domain span process, applying freely throughout most of the word; PD is a domain limit process, targeting only one (word-final) syllable.

Phrase-final devoicing (PFD) is also a domain limit process, affecting phrase-final vowels[2] (*návóómo* ‘I see him’[2]). Since it occurs even without adjacent voiceless consonants, PFD cannot result from feature spreading. Instead, I propose the insertion of [-voice] at phrase boundaries.

References

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