Decoding the full-reduced vowel distinction in Southern Tutchone (Dene)

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The orthography of Southern Tutchone (ST), a critically endangered Northern Dene language, includes both FULL and REDUCED vowels, with full <e> being described as alternating between a long and a short variant in open and closed syllables, respectively (Tlen 2022). Across Dene languages, there is commonly reference to a distinction between full and reduced vowels, a contrast between peripheral and centralized vowels, respectively (Krauss 1964). However, the phonological underpinning of the full-reduced distinction in ST has not been investigated. I provide evidence that the full-reduced distinction primarily encodes a length contrast.

ST has seven orthographic vowels: full <i, u, e, o, a> and reduced <ü, ä>, with reduced vowels marked with umlauts as in other Alaskan and Yukon Dene languages (Manker 2012:10; Ryan & Robinson 1990). While the reduced vowels are both central (typically [ɨ, ə], resp.), I argue that the distinction between the two groups is underlyingly in terms of length, evidenced in the realization of nasality and rhotacization. First, coda nasals and vowel nasalization are in complementary distribution. Full <i, u, a> can be nasalized (1a), but cannot have a nasal coda. In contrast, reduced <ä> cannot be nasalized but can have a nasal coda (1b). Examples in (1) are in the Kluane dialect.

(1) a. *tth'į* [tθ'ĩː] *[tθ'iːn] 'mosquito' b. *män* [mən] *[mə̃] 'lake'
shą [ʃãː] *[ʃaːn] 'rain' *shän* [ʃən] *[ʃə̃] 'I, me'

I propose that this difference is due to full vowels being underlyingly bimoraic and reduced vowels underlyingly monomoraic (2a). Nasalization thus occurs with long vowels only to avoid the possibility of a three-position (superheavy) rhyme (2b), which is crosslinguistically marked (Kaye et al. 1990). An underlying nasal that follows a reduced vowel then surfaces as a nasal coda.

(2) a. μ μ μ b. μ μ *μ μ μ μ μ
∨ | ∨∧ ∨ | | |
a ə a N a n ə n

Second, reduced vowels can be rhotacized, while full vowels cannot. Rhotacization, orthographically <Vr>, produces an R-coloured vowel that surfaces as long (3a). Rhotacized vowels then pattern with full vowels in terms of nasalization, as they can be nasalized but cannot have a following nasal coda (3b). Examples in (3) are from Kluane.

(3) a. *shür* [ʃɨ̆ː] 'coney, butterfish' b. *gür* [kɨ̆̃ː] *[kɨ̆ːn] 'lark'
shär [ʃə̆ː] 'bear' *tl'är* [tɬ'ə̆̃ː] *[tɬ'ə̆ːn] 'horsefly'

I propose that only reduced vowels can be rhotacized as they are the only monomoraic vowels. Taking the rhotic to be a part of the rhyme (and therefore moraic), a rhotacized full vowel would result in a three-position rhyme (4a). In addition, the fact that rhotacized vowels pattern with full vowels in terms of nasalization aligns with an analysis where both are bimoraic (4b), cf. (2b).

(4) a. μ μ b. μ μ *μ μ μ
| | | ∧ ∨ |
ɨ R ɨ R N i R

A notable exception to the clear orthographic distinction between full and reduced vowels (i.e., the use of the umlaut) is <e>, which patterns as a full vowel (long, tense [eː]) in open syllables and a reduced vowel (short, lax [ɛ]) in closed syllables. However, [ɛ] is a common realization of /ə/ across dialects (5a, cf. 1b), and <e> as [ɛ] is preceded by palatalization in many dialects with none permitting palatalization before <e> as [eː] (5b). Examples in (5) are from Lake Laberge.

(5) a. łät /łət/ [łɛtʰ] 'smoke' b. łet /ɬjət/ [ɬjɛtʰ] *[łɛtʰ] 'scab'
män /mən/ [mɛn] 'lake' ke /kʰeː/ [kʰeː] *[kʰjeː] 'tracks'

That is, cross-dialect variation reveals that <e> actually represents the light diphthong /jə/ in closed syllables and the expected full vowel /eː/ in open syllables. Future work will further examine <e>; however, its alternation in realization does not challenge the central claim that reduced vowels are underlyingly monomoraic while full vowels are underlyingly bimoraic.

References

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