

Moraic geminates in Malayalam: evidence from minimal word effects and loanword adaptation

We present new evidence to show that, contrary to previous stress-based analyses (e.g. Mohanan (1989)), Malayalam geminates must be moraic in at least some contexts. We present and discuss evidence for the moraicity of geminates in both native words and in loanword adaptations, and we provide criteria for determining which of two strategies are used in the adaptation of CVC loanwords from English.

The minimal word in Malayalam is bimoraic (Mohanan (1989)). Vowel and consonant length is phonemic, and long vowels are bimoraic, though CVC syllables are monomoraic (Broselow et al. (1997)). Both schwas and geminates have been claimed to be nonmoraic (Cyran (2001); Mohanan (1989)). However, evidence from native Malayalam words shows that geminates must be moraic; CVC:ə structures are licit (1), while *CVCə structures are not (2):

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|-----|---------|-----|-------|
| (1) | palə | (2) | *palə |
| | CVC:ə | | CVCə |
| | ‘tooth’ | | |

The contrast between (1) and (2) can only be explained if we assume that the geminate in (1) is moraic, satisfying the minimal word requirement.

Further evidence that geminates are moraic comes from loanword adaptation. Malayalam speakers adapt CVC words from English using two different strategies: in (3), the vowel is lengthened, while in (4), the vowel stays short and the coda consonant is geminated, which results in a word with the structure CVC:ə. In both cases, a schwa is epenthesized in order to resolve an illicit coda, but crucially, in order to account for examples like (4), geminates must be moraic, as /ə/ does not contribute a mora and the minimal word must be bimoraic.

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| (3) | a. /p ^h ɑ:s/ (<i>English input</i>) | (4) | a. /bɑs/ (<i>English input</i>) |
| | b. pa:ɪsə (<i>vowel-lengthened loanword</i>) | | b. bas:ə (<i>geminated loanword</i>) |
| | ‘pass’ | | ‘bus’ |

Choice of strategy depends on perceived vowel length. English tense vowels are adapted as long Malayalam vowels, as in (5), while lax vowels are borrowed as short vowels with geminate coda consonants, as in (6). The one exception is lax /æ/ (7), which we assume is due to its greater phonetic length (van Santen (1992)).

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|-----|--------------------------------|-----|---------------------------------|-----|--------------------------------|
| (5) | a. /seɪ/ (<i>input</i>) | (6) | a. /kʌp/ (<i>input</i>) | (7) | a. /mæp/ (<i>input</i>) |
| | b. *sel:ə (<i>geminate</i>) | | b. kɑp:ə (<i>geminate</i>) | | b. *mɑp:ə (<i>geminate</i>) |
| | c. se:lə (<i>long vowel</i>) | | c. *kɑ:pə (<i>long vowel</i>) | | c. mɑ:pə (<i>long vowel</i>) |
| | ‘sale’ | | ‘cup’ | | ‘map’ |

English CVC loanwords can undergo gemination in order to satisfy minimal word constraints in Malayalam, and this process is sensitive to both phonemic length (= tense vowels) and phonetic length (= /æ/) in English. The gemination strategy is unexpected given previous analyses claiming that Malayalam geminates are nonmoraic. Our analysis, which treats Malayalam geminates as moraic, correctly accounts for the gemination strategy for loanword adaptation, explains the presence of native words with the structure CVC:ə, and preserves the inherent moraicity of geminates, as posited in Moraic Theory (Hayes (1989)). In the talk, we will also discuss the implications of this analysis for longer loanwords and the moraic status of geminates in other positions.