Reduplication of Nouns in Mayrinax Atayal

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Introduction

Mayrinax Atayal is an endangered Austronesian language which is mainly spoken in central Taiwan and there are less than five people who can really speak this language.

Reduplicant forms of nouns vary in Mayrinax Atayal. Nouns to be reduplicated to express plurality, and there are two forms of it: Ca and leftward reduplication.

Ca Reduplication (plurality): Some specific type of words can only have Ca reduplication, and some other words can only have leftward reduplication depending on carrying distributive meaning or not.

Leftward reduplication: they do not share an obvious template for its RED. In that case, under the framework of Optimality Theory, I suggest that the variations of reduplicant of noun are due to the effect of the need of fulfilling prosodic well-formedness and morphological well-formedness, therefore, alignment constraints (of General Alignment (McCarthy and Prince, 1993)) and constraints like PARSE-μ and FT-BIN are applied for analysis.

Ca Reduplication—[distributive]

• Ca Reduplication for plurality in Mayrinax is used to express distributive meaning on some nouns.
  /kiʔman/ ‘grass’ /ka-kiʔman/ ‘grass all over’
  /ʔaʔaʔaʔ/ ‘dust’ /ʔa-ʔaʔaʔ/ ‘dust all over’
  /ʔuʔuʔuʔ/ ‘salt’ /ʔa-ʔuʔuʔ/ ‘salt all over (in the soup)’
  /raʔuʔuʔ/ ‘blood’ /ra-raʔuʔuʔ/ ‘blood all over’
  /hulʔiʔiʔ/ ‘snow’ /ha-hulʔiʔiʔ/ ‘snow all over’
  /ʔaʔuʔalən/ ‘intersection’ /ʔa-ʔaʔuʔalən/ ‘every direction’

Leftward Reduplication

(a) CVC → CV-CVC
  /kəʔiʔ/ ‘bug’ /kə-ʔiʔ/ ‘a lot of bugs’
(b) CVC.CVC → CV.CV-CVC.CVC
  /ʔaʔaʔaʔ/ ‘leaf’ /ʔa-ʔaʔaʔ/ ‘a lot of leaves’
  /ʔaʔaʔaʔ/ ‘small river’ /ʔaʔaʔ-ʔaʔaʔ/ ‘a lot of small rivers’
  /ʔuʔuʔuʔ/ ‘mud’ /ʔaʔ-ʔuʔuʔ/ ‘mud are everywhere’
  /ʔaʔaʔʔ/ ‘house’ /ʔaʔaʔʔ-ʔaʔaʔ/ ‘a lot of houses’
  /ʔiʔiʔiʔ/ ‘they’ /ʔiʔ-ʔiʔiʔiʔ/ ‘a lot of them’
(c) CVC.CVC → CV-CVC.CVC.CVC
  /ʔaʔuʔalən/ ‘mouse’ /ʔa-ʔuʔalən/ ‘a lot of mice’
  /ʔaʔuʔalən/ ‘officer, chieftain’ /ʔaʔ-ʔuʔalən/ ‘a lot of officers,','

(d) CVC.CVC → CV.CV-CVC
  /kəʔuʔiʔ/ ‘tree’ /kə-ʔuʔiʔ/ ‘a lot of trees’
  /ʔaʔaʔaʔ/ ‘banana’ /ʔaʔaʔaʔ/ ‘a lot of bananas’
  /ʔaʔaʔaʔ/ ‘stone’ /ʔaʔaʔaʔ/ ‘a lot of stones’
  /ʔaʔaʔaʔ/ ‘snow’ /ʔaʔaʔaʔ/ ‘snow everywhere’
  /ʔaʔaʔaʔ/ ‘knife’ /ʔaʔaʔaʔ/ ‘a lot of knives’

Constraints

• In this pattern, reduplicant forms vary from words to words with different syllable size and different syllable quantity.

  (1). Red-augment Aligning Constraint
  RED⇌SEG:ALIGNSEG-RIGHT(AFFIX(RED), μRED) (Hendricks 1999)
  The rightmost segmental root node in any Red is the rightmost segment of a heavy syllable. One * when Red is not so aligned.

  (2). Size Restriction Constraint
  ALIGN-ROOT-LEFT
  The leftmost segment of any root is aligned with the leftmost segment of any prosodic word. One * when root is not so aligned.

  (3). FT-BIN
  Foot must be binary

  (4). PARSE-μ
  Every μ in a prosodic word must be parsed into a foot

  (5). Well-formedness constraint: ALIGN-FT-LEFT
  ALIGN (FT L, σ L)
  The left edge of a foot coincides with the left edge of a syllable.

  (6). IDENTLINK-μ-RED (modified from Wiltschko 2006)
  Do not add a mora to a consonant in the reduplicant that it did not have in Base.

OT Analysis

<table>
<thead>
<tr>
<th>RED, CV-CVC/CVC</th>
<th>IDENTLINK-μ-RED</th>
<th>RED-SIZE-RIGHT</th>
<th>ALIGN-FT-L</th>
<th>PARSE-μ</th>
<th>FT-BIN</th>
<th>ALIGN-ROOT-L</th>
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</thead>
<tbody>
<tr>
<td>a. (CVC)/(CVC)</td>
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<td>b. (CVC)/(CVC)</td>
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<td>c. (CVC)/(CVC)</td>
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<td>d. (CVC)/(CVC)</td>
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Conclusion

The variations of reduplicant of noun are due to the effect of the need to fulfill prosodic well-formedness and morphologic well-formedness.

The crucial ranking IDENTLINK-μ-RED⇌RED-μ-RED⇌PARSE-μ⇌FT-BIN⇌ALIGN-ROOT-LEFT is concluded for the analysis of reduplication of noun.

References: