Chamorro Umlaut: An Argument Against Candidate Chains

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Chamorro Umlaut

- The process of Chamorro umlaut involves the weakening of root-initial vowels.

\[ \text{Root vowel} \rightarrow \text{weakened vowel} \]

OT-CC & Umlaut

- OT-CC: outputs are produced incrementally, with each step in the derivation evaluated by the constraint ranking. Two requirements:

  - Gradualness: Chains can only make one change at a time; each step adds just one violation of a “basic” faithfulness constraint.

    \[ \text{Chains for (1) and (2):} \]
    \[ \Rightarrow \text{(Just one violation of IDENT(back))} \]
    \[ \Rightarrow \text{(Two violations of IDENT in one step)} \]
    \[ \Rightarrow \text{(One violation of IDENT per step)} \]

  - Harmonic Improvement (HI): Only spreading in which each spreading step improves the candidate’s violation profile is allowed.

    - Attraction to stress (Walker 2005): umlaut may be driven by LICENSE(back):
      \[ \Rightarrow \text{(back)} \]

    - But now, \( <i \text{ pulonun}, i \text{ pulonun}> \) is a possible chain for Chamorro!
      \[ \Rightarrow \text{Using LICENSE(back), OT-CC can produce either Chamorro or Central Venetan, but not both.} \]

Classic OT: Stress as Trigger

- Suppose umlaut is only triggered by immediately pretonic prefixes. Why would this be?

  - Prefixes are weak (Stearn 1995, Beckman 1999).
  - Immediately pretonic syllables are weak in Chamorro: clash is tolerated, except that the syllable immediately before primary stress must be unstressed (Chang 1983).

  \[ \Rightarrow [\text{-back}] \text{ spreads from a doubly weak position to a stronger position, the root:} \]

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(5) LICENSE-Pretonic: Immediately pretonic [–back] features must be linked to root segments.

- This constraint motivates umlaut in just the right places:

  - \( [i \text{ gumap}]/[\text{Lic-Pretonic IDENT}/[i \text{ pulonun}]/[\text{Lic-Pretonic IDENT}] \)

  - Why stress is the trigger of umlaut, not the target.

  - Central Venetan can still be produced with LICENSE(back).

  - These analyses are available to OT-CC, but then candidate chains aren’t doing any work.

Conclusion: Despite appearances, Chamorro umlaut does not argue for OT-CC.

- Standard OT accounts for umlaut. No appeal to HI is necessary.

  - Without LICENSE-Pretonic, OT-CC can produce either Chamorro or Central Venetan, but not both.

  - With LICENSE-Pretonic, OT-CC provides no advantage over standard OT.

  \[ \Rightarrow \text{OT-CC is not necessary to produce (the appearance of) HI.} \]

  \[ \Rightarrow \text{Nonetheless, such cases suggest an advantageous role for LICENSE-Pretonic. This result would undermine an important argument for OT-CC:} \]

References