Dorsal harmony and dissimilation in Mayan languages

Masaki Noguchi
University of British Columbia

Introduction
• Correspondence is the structural basis for non-local interaction between segments. It is established between two segments in an output string provided that the similarity between the segments is equal or higher than the threshold defined by relevant CORR constraints.

• Agreement by correspondence
  - Non-local harmony
    • CORR, CC-IDENT[F], and IO-IDENT[F]
  - Surface correspondence theory of dissimilation
    • CORR, CC-Limiter (incl. CC-IDENT[F]), IO-IDENT[F]
    - Same correspondence relationship can be the basis for harmony and dissimilation when the relevant CC-Limiter is CC-IDENT[F]
  - CORR[F], CC-IDENT[G], IO-IDENT[G] → harmony in [F] or [G]
  - CORR[F], CC-IDENT[G], IO-IDENT[G] → dissimilation in [F]

• Goals of this study
  - Present an analysis of a type of velar palatalization in some Mayan languages as a dissimilation using SCTD.
  - Present a possible harmony counterpart of the dissimilation in other Mayan languages.

Mayan languages

Mayan language family consists of about 30 languages spoken in Mexico, Belize, Guatemala, and Honduras.

Dorsal harmony
• Campbell (1974, 1977) reports that San Carlos Alsatate Pokomam (SCAP) shows harmony instead of palatalization.

Dorsal dissimilation
• Velar palatalization in K’iche’ language

Proto-K’iche’
K’acchipul

k’aq
“red”

x’aq
“to die”

(kamppal’t
“fish”

k’ik
“chicken”

x’aj
“mask”

“will come to this side”

k’ax
“squirrel”

k’ox
“mask”

“will come to back”

• Co-occurrence of [+back] dorsal consonants

k’aq
x
q’aq

• Dorsal features (Chomsky and Halle 1968)
  - Palatized velar back -low -high
  - Velar -back -low -high
  - Uvular -back -low -high

• /k’aq/ and /x’aq/ do not co-occur (Palatalization)
• /k’aq/ and /q’aq/ do not co-occur (Palatalization)
• “Same” [+back] dorsal consonants co-occur.
• /x’aq/ and /q’aq/ co-occur.

When two similar [+back] dorsal consonants co-occur, one of them (/k’aq/) becomes [back].

Directionality or underrepresentation of /x’aq/’/ and /q’aq/’/ are not found.

Dorsal harmony
• Same” dorsal harmony in other Mayan languages outside the Mayan family (e.g. Totonac).
• More data are needed.

• Working hypothesis
  - Dorsal harmony is an emerging non-local harmony.

Summary
• Velar palatalization in the low vowel context in Mam is a dissimilation.
• Non-local
• Based on a correspondence relation between [+back] dorsal consonants

• Dorsal harmony in SCAP is a possible candidate for a harmony counterpart of the Mam dissimilation.

• Mam dissimilation

• Pokomam harmony

References