Retroflex Harmony in Kalasha: Agreement or Spreading?*  
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1. Introduction

This paper investigates co-occurrence restrictions on coronals in Kalasha evaluating current theories of consonant harmony.

We show that Kalasha roots exhibit retroflex consonant harmony that is sensitive to relative similarity of non-adjacent consonants.

We argue that the data are compatible with the agreement by correspondence approach which encodes featural similarity.

1.1. Previous work

Previously identified cases of retroflex harmony involve either stops or sibilants (affricates and/or fricatives).

Two theories of consonant harmony

1.1.1. Local Feature Spreading (Gafoz 1999):

The harmonic feature spreads across adjacent segments within some domain. All segments within the domain that are contrastive for the spreading feature are either targets or blockers. Others are permeated by the feature, but not auditorily affected (1a).

1.1.2. Agreement by Correspondence (Rose & Walker 2004; Hansson 2001):

A correspondence relationship is established between segments in an output string if they are highly similar. Agreement for the harmonic feature is enforced between correspondents. Segments that do not enter into the correspondence relationship are transparent (1b).

2. Background

Two theories of consonant harmony

2.1. Local Feature Spreading

The harmonic feature spreads across adjacent segments within some domain. All segments within the domain that are contrastive for the spreading feature are either targets or blockers. Others are permeated by the feature, but not auditorily affected (1a).

2.2. Agreement by Correspondence

A correspondence relationship is established between segments in an output string if they are highly similar. Agreement for the harmonic feature is enforced between correspondents. Segments that do not enter into the correspondence relationship are transparent (1b).

3. Coronal obstructions in Kalasha

Kalasha (Indo-Aryan, Dardic) has a rich inventory of coronal obstructions: dental, retroflex, and palatal fricatives, affricates, and stops (3) (Bashir 2003; Heegård & Mørch 2004; Trail & Cooper 1999).

Table 1. O/E ratios (shaded = categorical absence of a combination; bold = significant under-/over-representation, p < 0.05, χ² > 3.84).

4. Method

A corpus of 218 word-initial C1VC2 root sequences, where both C1 and C2 are coronal obstruents, based on an electronic copy of Trail & Cooper’s (1999) dictionary of Kalasha.

36 logically possible combinations of 8 C1/C2 place and manner classes (e.g. dental fricatives and retroflex affricates).

4.1. Similarity-based correspondence hierarchy, [±dist]

![Diagram](attachment:image.png)

Morgenstierne (1973) notes some diachronic cases of “assimilation at a distance” involving retroflexes. Retroflex harmony as a synchronic phenomenon, however, has not been investigated.

5. Results

The results revealed robust co-occurrence restrictions on coronals.

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5.1. Id-CC

5.2. Id-ID

In this paper we present new data that have an important bearing on the theoretical debate on mechanisms of retroflex harmony.

6. Discussion

The results show that Kalasha roots exhibit retroflex harmony, which is highly sensitive to relative similarity of non-adjacent consonants. It applies only when both consonants agree in [cont, strid].

The data are compatible with the agreement approach which encodes featural similarity, and are problematic for the spreading approach (unless the latter is modified to incorporate the notion of similarity).

We propose an agreement analysis of Kalasha retroflex harmony whose crucial component is a hierarchy of C–C Correspondence constraints (4), combined with the constraint IDENT-CC([±dist]) enforcing agreement for retroflexion between corresponding consonants in (5, 6) (following Rose & Walker 2004; Hansson 2001).

(4) Similarity-based correspondence hierarchy, [±dist]

(5) Retroflex harmony applies in same-manner combinations

(6) Retroflex harmony fails to apply in different-manner combinations

Selected References


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