ABC↔C
Session 3: Multiple Correspondences

Rachel Walker (USC): **Prominence-control and multiple triggers in vowel harmony: An ABC analysis**

John Sylak-Glassman, Stephanie Farmer, Lev Michael (UC Berkeley): **An Agreement-by-Correspondence Analysis of Máíhǐki Nasalization Harmony**

Florian Lionnet (UC Berkeley): **Doubly Triggered Harmony as Subphonemic Agreement-by-Correspondence**

Discussants:

Jeff Mielke (North Carolina State University) &

Rebecca Scarborough (University of Colorado, Boulder)

Agreement and assimilation

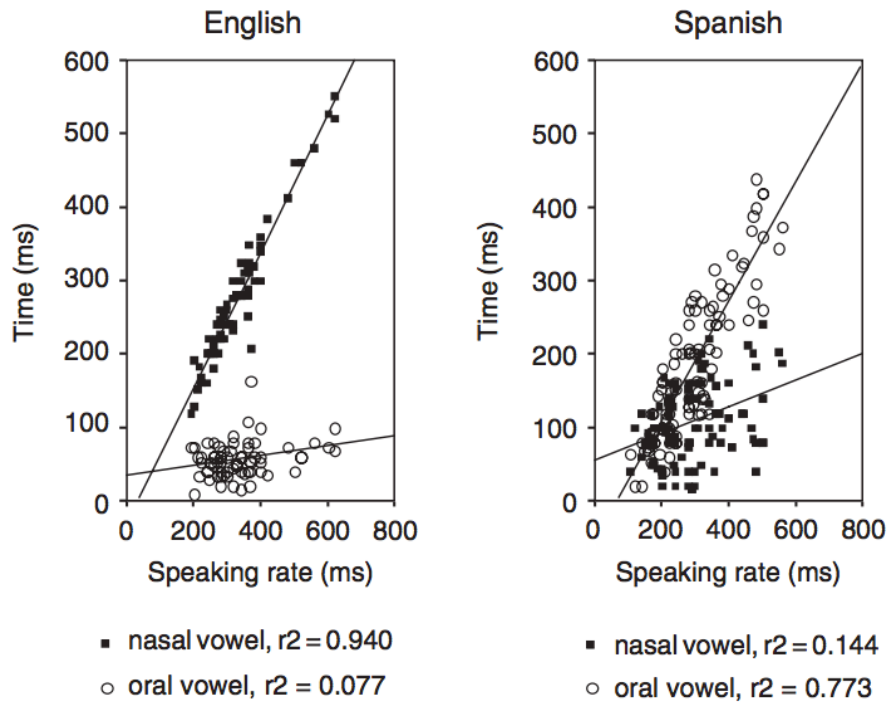
ABC is concerned with assimilatory patterns. Some assimilation is thought to be due to the phonologization of coarticulation. ABC models…

a. the phonologization of coarticulation, etc.
b. the patterns that *result* from the phonologization of coarticulation, etc.
c. the *difference* between observed phonological patterns and what would be expected solely on the basis of phonologization of coarticulation, etc.
d. patterns that are independent of phonologized coarticulation, etc.
e. something else

5/19/14

Coarticulation, conventionalized coarticulation, and assimilation

- Mechanical coarticulation is clearly spreading
- ABC is a way to treat phonological assimilation as not literally spreading



Solé (2007)

- Could vary speech rate, stress, neighborhood density, etc., to assess how phonological the nasalization/rounding/backing is.

Coarticulation, conventionalized coarticulation, and assimilation

- Laal rounding harmony seems to be most phonetic (Lionnet).
  - Is the threshold phonological (an accumulation of features) or phonetic (acoustic/perceptual)?
  - Even the opaque /w/ case may be phonetically explainable.
- Eastern Meadow Mari harmony patterns seem to be straightforwardly categorically assimilatory (Walker).
  - Multiple triggers for harmony on different features shows sensitivity to categories of phonological prominence and discrete vocalic features.
- Máíhĩ̀ki reportedly shows coarticulatory and categorical nasalization (S-G et al.).
  - /g/ and /g^{w}/, which came from /k/ and /k^{w}/, do not participate in nasalization + sensitivity to the historical morpheme boundary suggest that the nasalization is lexicalized.
  - However, aerodynamic evidence suggests that vowel nasality may be associated with a (consonantal?) nasal appendix.

Coarticulation and compensation for coarticulation

- Coarticulation is clearly part of the story behind some of these patterns. An important aspect of the phonologization of coarticulation is compensation.
  - e.g., Coarticulatorily nasalized vowels are heard as less nasal (or more nearly oral) in the context of nasal consonants than the same nasalized vowels taken out of their coarticulatory context (Beddor & Krakow, 1999).
  - e.g., Acoustically distinct vowels in different but appropriate vowel-to-vowel coarticulatory contexts are judged as more similar than acoustically identical vowels in inappropriate coarticulatory contexts (Beddor et al., 2002).

- Failed / incomplete compensation is implicated in sound change (Ohala). When acoustic cues are not properly attributed to their source, they are misattributed to the segment on which they appear *causing* the representation of this segment to change.

What role might compensation play in these assimilation patterns?

- Laal: Could the blocking effect of /w/ be the result of compensation?
  - Vowels following /w/ don't *sound* rounded because the rounding is attributed to the /w/; thus the contribution of V2 to the rounding threshold is reduced.
- Máíhì̀ki: Could compensation affect the judgments of listeners who say post-N vowels are not fully nasalized? Alternately, if post-N vowels are not phonologically nasal (i.e., if there is not spreading through the vowel), could compensation be the reason?
- E. M. Mari: The two overlaid harmony patterns change the conditions under which the other exists. Rounding and backing have acoustic cues in common (F2). What consequences might this have?
- Generally, do multiple triggers present a special challenge to compensation?

Further roles for perception

- Temporally distributed features should be more robust / perceptible (e.g., Mattingly, 1981; Wright, 2001, 2004).
- Can we understand harmony as perceptual enhancement?
  - E. M. Mari: Triggers are prosodically prominent, and therefore potentially more important.
    - *cf.,* deJong (e.g., 2000) suggests that stress is (in part) perceptually motivated hyperarticulation to enhance prosodically important syllables
  - Coarticulation is enhanced in contexts in which perception is potentially difficult (e.g., Scarborough 2013), providing extra opportunity for phonologization of coarticulation in perceptually important contexts.