Speech errors wrap-up
7 or 9 November 2017

1   We saw a bunch of parallels between speech errors and OCP/consonant harmony
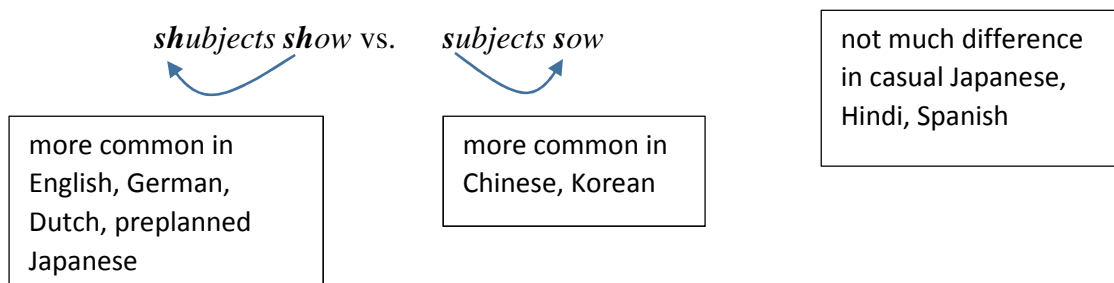
1.1   Similarity

- In speech errors, already-similar segments tend to interact
    - *subjects sh*ow → *sh*u*bjects sh*ow: already are both voiceless coronal fricatives
    - explanation: /s/ sends activation down to features/gestures like *tongue-tip critical constriction*, which sends activation back up /ʃ/
        - if your model includes feedback, there's always the danger of activating sounds that are similar to the one you wanted

- In consonant harmony, already-similar segments tend to become identical
    - /ku**n**+i**l**+a/ → [ku**nin**a] : already are both coronal sonorants

- In OCP, nearby, highly similar segments are forbidden
    - Arabic /**kt**b/ 'write' is a good verb root; /**st**b/ would be kind of bad; /**dt**b/ would be really bad

1.2   OCP sometimes has an exemption for identical sounds

- MacEachern 1999: laryngeal co-occurrence restrictions
    - Peruvian Aymara can only have one ejective per morpheme: *[t'ank'a]
    - unless they're identical: [k'ink'u] 'clay'

- Consistent with above idea that what's difficult about similar sounds ([t'] and [k']) is preventing them from becoming identical
    - So if they're already identical, there's no problem

1.3   Anticipation vs. perseveration

*sh*u*bjects sh*ow vs.   *subjects s*ow

not much difference in casual Japanese, Hindi, Spanish

more common in English, German, Dutch, preplanned Japanese

more common in Chinese, Korean

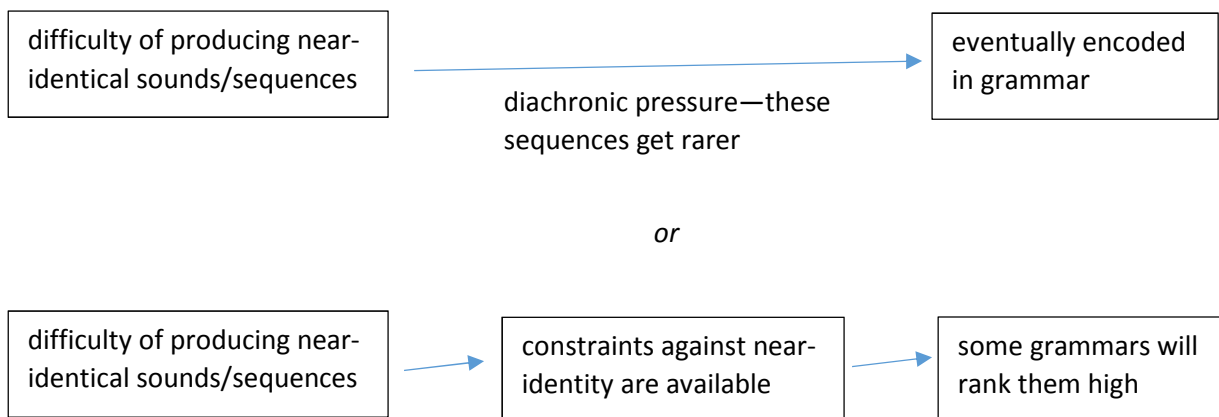- Consonant harmony tends to be anticipatory (spread right-to-left)

1.4 Prosodic position

- In speech errors, target and source phoneme tend to be in same syllable position

- Some consonant harmony systems also require same syllable position

1.5 Not all features are equal

- In speech errors, consonants get swapped more frequently than vowels (e.g., MacKay 1970)
  - Is long-distance consonant harmony more common than long-distance vowel harmony?
  - Does OCP affect consonants more than vowels?

- In Stemberger's speech error corpus…
  - labials prefer to interact with other labials
  - velars prefer to interact with other velars
  - alveolars are just as happy to interact with labials and velars
    - there is some effect of shared alveolarness, but it's weak/fragile

- In Frisch, Pierrehumbert & Broe 2004's study of OCP in Arabic verb roots…
  - Two adjacent labials never happens: */bmk/
  - Two adjacent velars/uvulars is very rare: ??/kgb/, ??/kʁb/
  - Two adjacent "gutturals" is very rare: ??/ħhb/
  - Two adjacent coronals is underrepresented but not by as much: ?/tdb/

2 What does it all mean? How does the causality work here? (emphasis added)

difficulty of producing near-identical sounds/sequences	→	eventually encoded in grammar

diachronic pressure—these sequences get rarer

or

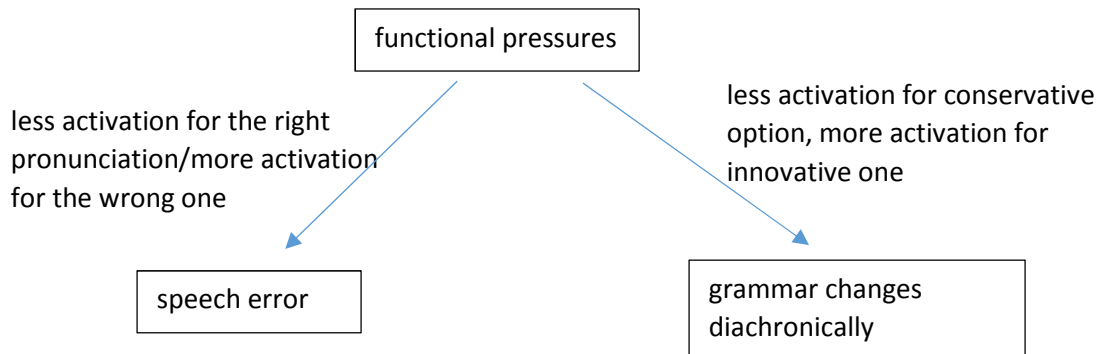| difficulty of producing near-identical sounds/sequences	→	constraints against near-identity are available	→	some grammars will rank them high

- Hansson 2001: "In a sense, CH [consonant harmony] can be viewed as '**phonologized** speech errors' (though this phrase should not be taken too literally). The wide-ranging parallels that hold between slips of the tongue and phonological CH processes provide strong support for the hypothesis that the latter have their **roots (diachronic and/or synchronic)** in the domain of speech planning and phonological encoding."

- Rose & Walker 2004: "we suggest that LDCA [long-distance consonant agreement] may arise through **production-based pressures in diachronic change** but may also operate as an active constraint in a synchronic grammar. We leave open the possibility that perception-based factors might also play a role. […] We interpret these production-based pressures as supplying the functional origins and motivation for the formal phonological constraints that drive LDCA. We assume a model of phonology that includes **constraints informed by factors in the domains of psycholinguistics and phonetics** but that nevertheless stands apart from these as an autonomous grammatical component." (pp. 488-489)

- Walker, Hacopian & Taki 2002: "root morphemes containing combinations of consonants which are more prone to participate in a speech error, such as m-b or n-d, would be excluded from the lexicon; this could take place diachronically or in a synchronic grammar"

- Walker 2007: "the functional basis does not represent a conscious intention of the speaker but it exerts influence on language change and shapes certain synchronic phonological processes through constraints grounded in production" (p. 1104)

Here's something a bit different (same Berg as in Berg & Abd-El-Jawad 1996)

Berg 1998:

functional pressures

less activation for the right pronunciation/more activation for the wrong one

less activation for conservative option, more activation for innovative one

speech error

grammar changes diachronically

- "the likelihood of error increases with the number of processing biases. The function of these biases is best expressed by the designation 'facilitator'. […] Each facilitator influences the activation levels to a certain degree. If a number of facilitators conspire, a non-intended unit may amass more activation than the intended one, and an error is outputtted. […] linguistic change represents the replacement of one intention by another whereas slips of the tongue represent a violation of an intention. […] **In both areas, the competitor has to accumulate more activation** than the norm. The advantage that accrues to the innovative form [in language change] comes from a set of facilitators which may be of social, psychological, or any other origin in the case of language change." (pp. 297-298)

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