

# Labial Coarticulation

## A possible example of language-specific coarticulatory effects

Boyce (1990), "*Coarticulatory organization for lip-rounding in Turkish and English*", J. Acoust. Soc. America, 88, 2584-2595.

Investigations of lip-rounding in English have shown reduction of protrusion in a consonant spoken between two rounded vowels, e.g /utu/ (see fig.).

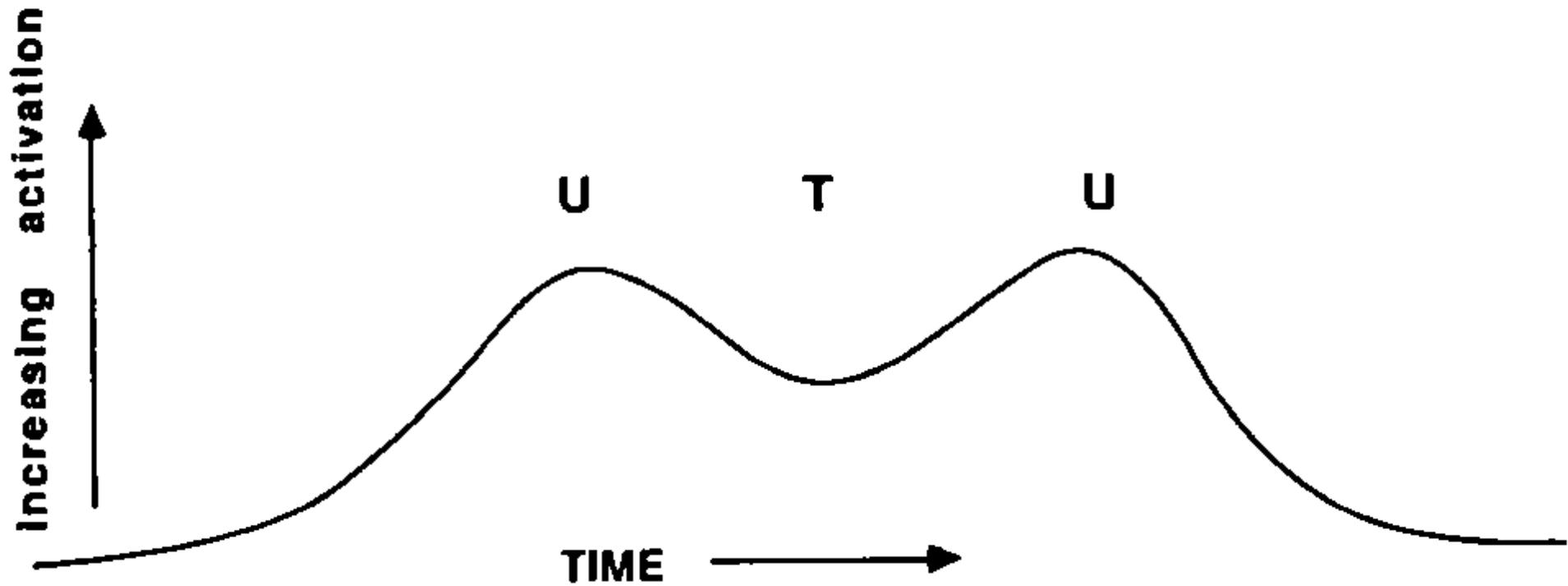
Thus a simple feature-spreading model is probably not correct for English. Consonants such as /t/ are probably not completely unspecified for lip-rounding. (cf. handout on velar coarticulation)

However, Turkish does not show this so-called '*trough*'-pattern; the lips stay protruded through the consonant.

Unlike English, Turkish has vowel harmony:

If a word contains a sequence of vowels, and if the first vowel is rounded, then all vowels in the word will be rounded.

→ Specification of rounding involves larger phonological units in Turkish than in English.



**FIG. 1. Schematized version of “trough” pattern, representing EMG from the orbicularis oris muscle for the utterance /utu/.**