

Phonetics or phonology?

Why do sonorants not voice in Hungarian?

The traditional view concerning the laryngeal state of sonorants is that they are phonetically voiced but since they fail to participate in the voiceless–voiced opposition, they are phonologically represented as unspecified for voicing. This underspecified representation of sonorants provides an elegant explanation of why sonorants do not induce voicing assimilation: they do not possess a voicing feature that could spread to the preceding voiceless obstruent. However, this approach simplifies matters and fails in languages like Slovak in which sonorants – including vowels – do cause voicing assimilation in a specific morphological environment, which can be broadly described as ‘over a strong morpheme boundary’ (Pauliny 1979), see (1). Word-internally, however, sonorants do not trigger voicing assimilation (2).

(1) /pm/ → [bm] *kúp múkú* [ku:bmú:ku] ‘buy flour’; /pl/ → [bl] *chalp lozí* [xlablozi:] ‘man climbs’; /sta/ → [zda] *list a známka* [lizdazna:mka] ‘letter and stamp’

(2) *tma* [tma] ‘darkness’, *kladivo* [klaʃivo] ‘hammer’

Strycharczuk (2012) reports a similar process in various languages (including West-Flemish, Poznań Polish, Central Catalan and Quito Spanish).

The patterning of sonorants in Slovak is in contrast with ‘obstruent voicing’ languages, such as Hungarian, in which sonorants do not induce voicing assimilation in any context:

(3) /tb/ → [db] *hát-ba* [ha:dbɔ] ‘back-ill.’ but: /tn/ → *[dn] *hát-nak* [ha:tnɔk] ‘back-dat.’

In this paper, we will explore a phonetically-grounded, laboratory phonology approach to the laryngeal phonology of the two types of languages (sonorant voicing vs. obstruent voicing), which, we hope, will provide a better understanding of sonorant voicing.

A crucial observation in connection to these two types of voicing languages is that sonorant voicing seems to occur if obstruent voicing is neutralized word-finally. In Hungarian, voicing contrast is not lost word-finally, while it is in Slovak. Our hypothesis is based on this correlation between word-final obstruent devoicing and sonorant voicing: if a language displays presonorant voicing (over word boundaries), then that language also exhibits word-final devoicing (the reverse is not true, however). Jansen & Toft (2002), Jansen (2004, 2007) suggest that neutralized (devoiced) obstruents can fall prey more easily to the effect of voicing coming from neighbouring vowels/sonorant consonants, since they have no inherent/local voicing control so as to counter-balance the voicing spill-over from these neighbouring sounds. This increased amount of voicing can be argued to be interpreted (and perceived by listeners) as ‘voicing assimilation’, although it is phonetically different from that induced by actively voiced/voiceless obstruents to actively voiced/voiceless obstruents. Only laryngeally neutralized stops are capable of displaying passive voicing assimilation effects (from sonorants, including vowels). The crucial hypothesis of this approach is that presonorant voicing is a distinct process from ‘regular’ voice assimilation to obstruents.

The primary research question of the paper is the following: which cases of presonorant voicing show evidence of phonetic gradience and which show evidence for a phonological/categorical interpretation? Furthermore, this paper will provide experimental evidence to check the hypothesis of the ‘Jansen model’ of sonorant voicing. We will present the results of acoustic experiments (laboratory speech) with 6 native speakers of Hungarian and 6 native speakers of Slovak, aiming to (i) enumerate the potential phonetic parameters that cue voicing in obstruents vs. sonorants (active/passive voicing correlates such as phonation, the duration of neighbouring vowels, etc.), (ii) measure and compare the voicing of word-final obstruents (/t d s z/) before /p b l m/ and before the vowel /e/, in Hungarian vs. Slovak, and (iii) measure and compare the voicing and length of post-obstruent sonorants (over a word boundary) in Hungarian and Slovak.

References

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