

What does research into L2-induced phonetic drift in L1 tell us about laryngeal phonology?

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The extent to which phonetic detail should influence phonological representations has been the centre of a debate for quite some time. Despite some claims disregarding the necessity of conducting phonetic studies in order to validate phonological assumptions (e.g. Substance-free phonology; Hale and Reiss 2000), acoustic experiments have been shown to shed new light on some of the impressionistic assumptions made by phonologists and improve phonological analyses of various processes. As noted by Ohala (1990), if phonological representations fail to refer to phonetic research, they may fail to accurately encapsulate linguistic phenomena. While some progress in this respect has been made in recent years, “phonetics as a motivating force for phonology remains controversial” (Dziubalska-Kołaczyk 2012). At the same time, however, phonologists appear to fall into the trap of idealisation of phones as units underlying phonological theories and it is to these idealisations that modern phonetic research constitutes a growing problem (Ladd 2009).

With respect to laryngeal typology the approaches differ. Some theories – e.g. Feature Theory (Chomsky and Halle 1968) – treat the phonetic implementation of laryngeal contrasts as an issue of no interest to phonology. Others – e.g. Laryngeal Realism (Lombardi 1991; Harris 1994; Honeybone 2005) – attempt to incorporate the phonetic reality into their representations.

In this talk I argue that phonetic evidence and insights from SLA research into cross-linguistic interaction might indeed help us determine the way in which two-way laryngeal systems should be represented and yield empirical support to the proposals made by leading laryngeal theories. According to Speech Learning Model (Flege 1995), bi-directional cross-linguistic interaction stems from “equivalence classification”, whereby L2 learners classify two sounds as belonging to the same phonological category and this can lead to a foreign accent in L2 as well as phonetic drift in L1 (Chang 2012). Assuming equivalence classification is correct in its predictions, the degree of CLI should depend on what a given theory sees as equivalent.

The current study looks at the effects of phonetic drift in the productions of Polish (a voicing language) learners of English (an aspiration language), a language pair which showcases striking differences in the implementation of VOT. Groups of 20 first year students (henceforth: 1BA) 15 second year students (henceforth: 2BA), and 15 third year students read wordlists in Polish, comprising mono- and disyllabic words starting with /p, t, k, b, d, g/ and followed by a non-high vowel. Longitudinal data obtained from 1BA students (tested three times; in October, February, and June) were compared with the productions of 2BA and 3BA students as well as with 15 quasi-monolingual Polish speakers. The results show that no influence of phonetic training in English was exerted on Polish /p, t, k/, whereas drift effects in the case of /b, d, g/ were much more striking. Such an asymmetry was also found in other language pairs, e.g. English-Czech (Podlipský et al. 2020), Bulgarian-English (Dokovova 2015), English-Spanish (Herd et al. 2015), or Brazilian Portuguese-English (Osborne 2016).

It can be assumed, then, that /b, d, g/ are phonologically identical in Polish and English and hence, subject to drift effects. It will be shown that neither Feature Theory nor Laryngeal Realism predicts such a scenario. An alternative approach is offered by the Onset Prominence (Schwartz 2016 *et seq*) representational environment. The representations postulated by OP

rely on the feature [fortis] only, move away from linear, segment-oriented representations, and – as will be shown – predict the results of the empirical study presented herein, offering a preferable laryngeal typology of two-way systems.