Laryngeal timing relationships in Germanic: a Q Theory approach

Q Theory (Inkelas & Shih 2016, 2017; Shih & Inkelas 2019) is an approach in which – all things being equal – segments have a quantized representation in terms of three discrete units, q_1, q_2 and q_3. Support for this representation comes from such segments as circumoralized nasals (e.g. [bmb]) and prenasalized affricates (e.g. [nts]), as well as from vowels with three tones (e.g. HLH).

Q Theory also assumes that tripartite structures are appropriate for 'normal' consonant articulations. For example, Garvin et al. (2018) maintain that in stops, the three q-positions correspond to the approach stage (q_1), the hold stage (q_2), and the release stage (q_3). Geminate stops are argued to involve a 'scaling up' of the number of q-positions, which may be as high as five (see Schwarz et al. 2019).

In our talk, we apply the quantized representations of Q Theory to the issue of laryngeal or 'fortis/lenis' contrasts in Germanic stops. Within the Germanic languages, there is a distinction between voicing languages, aspiration languages and singleton vs. geminate languages (cf. Jakobson 1949, Kraehenmann 2001). Aspiration languages (e.g. Danish) have a contrast between zero-lag (plain) and long-lag (aspirated) stops. Voicing languages (e.g. Dutch) have a contrast between prevoiced (voiced) and zero-lag (plain) stops. Recent approaches in 'laryngeal realism' assume that aspiration languages employ [spread glottis], while voicing languages employ [voice] (see e.g. Iverson & Salmons 1995; Honeybone 2005; Beckman et al. 2013). In addition, there are also Germanic languages (e.g. Swiss German) in which the contrast involves singleton vs. geminate stops (Kraehenmann 2001).

We show that the segment-internal architecture of Q Theory provides us with a better understanding of laryngeal timing relationships in Germanic – both with respect to the nature of the contrasts involved, and with respect to attested patterns of final neutralization. Specifically, we argue that quantized representations, which distinguish between 'closure' and 'release' positions, obviate the need for the feature [spread glottis], which in our approach is replaced by scaling up the number of q-positions. Final neutralization involves the loss of q-positions and, in voicing languages, deletion of the feature [voice]. This captures, among other things, the fact that final neutralization in German and Dutch yields identical results, despite the fact that the two languages have different underlying contrasts.

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