Coarticulation, categorisation, and sound change

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There is compelling evidence that languages on the one hand build words out of discrete, permutable categories of sounds whereas on the other hand speech can be viewed as continuous and gradient movement (Studdert-Kennedy, 1998). Further evidence suggests that the relationship between categorical and continuous aspects of speech can sometimes be highly ambiguous due not only to the difficulty that listeners sometimes have in parsing the timing relationships of speech signals (Beddor, 2009; Ohala, 1993) but also because of evidence suggesting that this association is idiosyncratic and updated by experience (Pierrehumbert, 2002). In recent years, we have been developing a theory that sound change is an inevitable consequence of this ambiguous relationship between categories and movement (Harrington, 2012; Kleber, Harrington, Reubold, 2012). The task of the present talk is to extend this research by examining whether ambiguities in parsing coarticulatory timing relationships that could give rise to sound change are exacerbated when speech is hypoarticulated: this model also and provides a link between coarticulatory (Ohala, 1993) and hypoarticulation/reduction models of sound change (Bybee, 2009; Lindblom et al, 1995). The studies to be reported are based on how the relationship between coarticulation and categorisation changes when speech is produced (a) with a lower level of prosodic prominence and (b) at a faster rate. The tentative conclusion from both types of investigation is that, whereas the effect of context on coarticulation in speech production is largely unchanged in both these conditions, its influenced on category boundaries is diminished. It will be suggested that this changing relationship between speech timing and phonological categorisation in these hypoarticulated forms of speech can be a source of sound change.

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