

Losing face in South Dravidian: A phonological and perceptual account of debuccalization in the history of Kannada

A striking feature of Modern Kannada (MK) is the presence of /h/ in word-initial position where Tamil, an older parent language, has /p/. While debuccalization is hardly a rare phenomenon in the world's languages, its history in Kannada is somewhat unique as it is characterized by its lack of a clear progression. A purely acoustic-perceptual account of the change from /p/ to /h/ would posit some intermediary stage whereby oral place features of the old sound are partially lost while frication is maintained (e.g. [f]). There is no such evidence that /p/ was ever produced as [f] in the history of Kannada, but rather, the change to /h/ occurred directly from /p/. In this study we test a hypothesis proposed by Tuttle (1920), who suggests that the debuccalization of /p/ is connected to a separate change in the history of Kannada from /v/ > /b/. With the introduction of /b/ into the phonology of Kannada, previously unaspirated /p/ is made more distinctive in contrast. In an artificial language learning experiment (Exp.1), native Tamil speakers (whose phonology does not exhibit plosive aspiration), aspirate word-initial /p/ when forced to contrast it with a newly learned /b/ initial word. In Experiment 2, native Tamil speakers identify [p^h] with native /p/-initial words, but rate it as less native with increasing voice onset time. Finally, Experiment 3 shows that listeners readily confuse [p^h] with [h] in noise. Together, the results of these experiments support Tuttle's hypothesis for internal phonological and perceptual factors contributing to this 1000 year old sound change in Dravidian.