

LARYNGEAL-ORAL COARTICULATION IN GLOTTALIZED ENGLISH PLOSIVES

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In most accents of British English, glottalization of /p/, /t/ and /k/ is common in contexts other than prevocalic (Roach, 1973). In an experimental study of the articulation of glottalized English plosives laryngeal opening and closing was measured by photo-electric glottograph, and oral closures were detected by electro-palatograph and lip contacts. All instrumental measurements were made and stored synchronously by computer. Laryngeal closure was found to precede oral closure by an average of 8 csec; the time varied according to the magnitude of the articulator movement required to complete the oral closure. There was great variability in the interval between release of the laryngeal closure and of the oral closure. However, there was a very regular relation between release of the laryngeal closure and the onset of a second oral consonant. Considerable timing differences were found between plosive-plus-plosive and plosive-plus-fricative clusters, though the duration of the laryngeal closure was the same in both cases.

Glottalized and aspirated allophones of /p/, /t/, /k/ are in complementary distribution, and it is hypothesized that glottalization has perceptual importance in indicating that the voiceless plosive which it precedes will not be articulated with the extreme glottal opening required for aspiration.

Reference

Roach, P.J. (1973): "Glottalization of English /p/, /t/, /k/ and /tʃ/",
J.I.P.A. 3.1, 10-21.