A cinefluorographic study of the articulation of uvular consonants in Swedish and West Greenlandic

Abstract

This poster concerns the articulation of uvular consonants with particular reference to quantal aspects of speech production. Data from X-ray motion films are presented. Two speakers of Southern Swedish give examples of [R], and one speaker of West Greenlandic Inuit gives examples of [R] and [q]. Traditionally, uvular consonants are said to be produced by articulating the dorsum against the uvula. Unfortunately, this ought not work, owing to the presence of air passages either side of the uvular: (1) these passages should prevent occlusion for a stop, (2) similarly they should prevent necessary conditions for a Bernoulli force for a tremulant, and (3) they should prevent a Reynolds number sufficiently small for fricatives. The formant transitions to vowels adjacent to these consonants suggest instead that the place of articulation is in the upper pharynx, at the same place as is constricted for [o]-like vowels. The X-ray films confirm that these three subjects constrict the upper pharynx for these consonants. But there was a difference of timing of the uvular consonant gesture for these two languages. The Swedish subjects completed the vowel as usual and then initiated the uvular tongue body gesture. The Inuit subject initiated both vowel and uvular consonant gestures earlier, so that the vocoid segment consisted of the transition to the uvular consonant, reflecting the regular pharyngeal assimilation of vowels preceding uvulars in West Greenlandic.