Laryngeal classification of Korean fricatives: evidence from sound change and dialect variation

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Korean has a three-way contrast of voiceless stops among aspirated (longest VOT), lenis (intermediate VOT), and fortis (shortest VOT) stops. Recent studies converge to show that Seoul Korean is undergoing a tonogenetic sound change whereby the VOT distinction between lenis and aspirated stops is neutralized and the tone on the following vowel (a high tone following aspirated stops and a low tone following lenis stops) becomes the primary phonetic distinction (Silva 2006, Kang 2014 among others). Korean fricatives, on the hand, show a two-way contrast between a fortis and a “non-fortis” fricative. While the fortis fricative unambiguously pattern with fortis stops, the laryngeal classification of the non-fortis fricative has been a topic of much debate, as its phonetic patterning is ambiguous between aspirated and lenis categories. Various segmental phonological processes (Post-obstruent tensing, Initial tensification, and Sound symbolic word alternation) converge to show that the non-fortis fricative pattern with the lenis stops phonologically but the non-fricative pattern with aspirated stops in inducing a high tone on the following vowel in Seoul Korean (See Chang 2012 for a recent overview). In this study, I will bring additional evidence to the topic by examining the patterning of the fricatives in the on-going sound change in Seoul and two North Korean dialects (Phyeongan and Hamkyoung) as spoken by ethnic Koreans in China. The results are based on production data gathered from over 100 speakers from these dialects. The results shows that the f0 perturbation following the non-fortis fricative is phonologized differently in different dialects; while in Seoul and Hamkyoung dialects the non-fortis fricative induces a high tone on the following vowel, in the Phyeongan dialect the non-fortis fricative induces a low tone, similar to that found following lenis stops. The results illustrate that the phonologization of consonant-induced f0 perturbation is not an automatic process but involves a language-specific (in this case dialect-specific) choice. Seoul and Hamkyoung dialects “chose” to phonologize the f0 in the way more true to its aspirated stop-like laryngeal characteristics (wide glottal opening) while Phyeongan “chose” to phonologize the fricative in line with its lenis-like phonological patterns. Future studies will examine if this distinct tonal development in the dialects have consequences in the phonetic and phonological characteristics of the fricatives such as intervocalic voicing (which affects lenis stops but not aspirated or fortis stops).