Canadian Raising or Canadian Shortening?
A Study of Vowel Abbreviation Patterns in Canadian English

Sky Onosson (University of Victoria)

English vowels vary in duration in relation to the voice quality of following coda consonants, with shorter allophones occurring before voiceless codas [1,2]. *Canadian Raising* (CR), the occurrence of raised-nucleus allophones of /aj, aw/, occurs in the same environment [3,4]. Although CR was originally described as a counterpart to durational abbreviation [3], recent work describes durational patterns for the CR diphthongs which correspond with the general English pattern [5].

My poster presents results from an acoustic study of Canadian English vowels. Two statistical techniques for the comparison of nonlinear curves, *smoothing spline analysis of variance* (SSANOVA) [6,7] and *generalized additive mixed models* (GAMMs) [8,9], were used to compare vowel formant patterns before voiced vs. voiceless codas, using three models of comparison: *time-normalized* (relative time), *proportionally-scaled* (real time) *and left-aligned*, *proportionally-scaled and right-aligned*.

Investigation of durational and formant patterns across the Canadian English vowel inventory indicates that different subsets of the vowel system are best described by different models. The CR diphthongs fall under the *scaled, right-aligned* model, round-nucleus vowels under *time-normalization*, and other monophthongs under *scaled, left-aligned*. Such differences suggest that different vowel types may achieve durational abbreviation via different articulatory means.

[192 words]

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[186 words]