The Rhythm of Hul’q’umi’num’

an exploration of Salish phonetics

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Hul’q’umi’num’

- Dialect of Coast Salish Hul’q’umi’num’-Halq’eméylem-ḥalk̓q̓umin̓il̓ language
- Territory extends along the Salish Sea from NanOOSE to Malahat on Vancouver Island and neighboring islands and is spoken by the Snaw-naw-as, Snuneymuxw, Stz’uminus, Penelakut, Lyackson, Halalt, Qw’iutsun, Lake Cowichan, and Malahat Peoples
- 40 fluent first-language speakers, 200 fluent second-language speakers, over 1,000 semi-fluent speakers and language learners, as well as several hundred fluent understanders (who understand but do not speak) [Put, 2016]

PHONETICS & PHONOLOGY

- Salish languages have very complex sound systems
- Very little phonetic documentation; none for Hul’q’umi’num’
- Hul’q’umi’num’ has 37 consonants; English has only 21 consonants

Table 1.

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<th>Hul’q’umi’num’ Alphabet (red: sounds not found in English)</th>
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- Consonants can be strung together in complex sequences, often in clitics e.g. k’q’ak’axawat’swaats’Bar’i’s ‘knocking on the house for me’
- Sounds and how they are strung together are difficult to learn, and when in longer segments, so is the rhythm [Put, 2016]
- Phonetics (segment length), phonology (segments, clusters), and morphology (clitics) affect the rhythm of the language

RHYTHM

- Traditional rhythm: stressed timed, syllable-timed, and mora-timed classes [Lambert, 1996]
- Classes are distinguished by infants: they can discriminate languages between rhythm classes but not within rhythm classes [Bail, Barkow, & Meier, 1996]
- Dauer (1983): two classes are on opposite ends of a continuum

STRESS-TIMED - - - - - - - SYLLABLE TIMED

- Metrics proposed for quantifying rhythm acoustically:
  - ΔC and ΔV: standard deviation of consonantal & vocalic interval duration
  - %V: proportion of vocalic material [Bierwisch et al., 1998]
  - VarCoC and VarCoV: same as ΔC and ΔV but normalized for speech rate [Put, 2016]
  - PV1: the mean of the differences between successive intervals [Price & Lux, 2003]

GOALS & METHODS

CONTEXT

- With few Elders remaining, adult second-language learners are championing the language revitalization movement and they are concerned with speaking in a way that honours their Elders
- Little research done on second language pronunciation of Coast Salish languages

GOAL

- Support L2 development of oral proficiency in Hul’q’umi’num’ by:
  - Documenting segmental phonetics of an Elder’s speech to better understand production of Hul’q’umi’num’
  - Comparing and contrasting written language to what is produced
  - Analyzing Hul’q’umi’num’ rhythm

METHODS

Collaboratively with Hul’q’umi’num’ linguists and language experts:
1. Audio recording of story by Bernard David, T’itlua, from Stz’uminus was transcribed by fluent speakers of Hul’q’umi’num’
2. PRAAT used to phonetically segment & transcribe the same story [Bierwisch & Nivens, 1997]
3. Consonants and vowels were segmented so that rhythm metrics could be calculated

PHONETIC FINDINGS

- Consonant cluster reductions, vowel alternations, especially <u> /[ə]/

CONTRIBUTIONS & FUTURE DIRECTIONS

CONTRIBUTIONS

- Collaborative research: jumping off point for collaborative work on Hul’q’umi’num’ pronunciation learning and teaching
- Phonetic structures: baseline for rhythm of Salish languages; documentation of pronunciation patterns in continuous, rapid speech

FUTURE DIRECTIONS

- More work connecting phonetic findings to rhythm (clitics, prosodic parsing, and reduction)
- L2 speech – do learners move through a syllable-timed-interlanguage?
- More work connecting phonetic findings to rhythm (clitics, prosodic parsing, and reduction)
- L2 speech – do learners move through a syllable-timed-interlanguage?

SHORTCOMINGS

- Only used a single person’s speech sample – rhythm metrics may reflect individual differences
- Cannot generalize this finding

Hay ch q’a’

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REFERENCES