

## Voice Onset Time in Plains Cree: The Case of Relearners

Merion Hodgson, University of Calgary

**Issue** This paper will report on VOT facts in Plains Cree as spoken by L1 speakers as well as relearners. The latter are adult learners of Plains Cree who had acquired and spoken Plains Cree in their early childhood (0-5 years), but who were then removed and raised in all-English environments until adulthood. Of particular interest is whether VOT differs in Plains Cree relearners vs. more typical L1 speakers.

**Background** Plains Cree is part of the Cree dialect continuum which is the most widely spoken Indigenous language in Canada (StatsCan, 2016) yet it remains vulnerable to language endangerment (Moseley, 2010). As a result of colonization and its continued effects, English has become the first language (L1) to many Indigenous people and has otherwise compromised the continued transmission of Plains Cree as an L1. Lessened critical exposure and input from family and friends in home and community contributes to the state of Plains Cree in a speaker (see Steinkrauss & Schmid, 2016, etc), and presumably to VOT values. Voiceless stops in English, the dominant language in Western Canada, present long VOTs at the beginnings of words and stressed syllables, whereas their counterparts in Plains Cree are reportedly unaspirated (Wolfart, 1996). (In practice, no acoustic study of VOT in Plains Cree is available. Its sound system remains underdescribed more generally, and reports on its consonant system are especially limited and impressionistic (e.g., Wolfart, 2003; Wolvengrey 2011).) As a useful comparison, Māori is an official language of New Zealand, but is similar to Plains Cree in other respects, including the phonemic inventory. Ongoing studies of Māori (King et al, 2011; Watson et al, 2016) show that VOT is becoming longer in younger speakers. Aspiration is presumably the result of the influence of NZ English, which suggests that younger speakers are acquiring a phonemic system with its own internal parameters and consistencies (Watson et al, 2016). Such a shift in VOT is not apparent in Plains Cree at present, contrary to what might be expected based on the greater dominance of English in Canada.

**The Present Study** In early 2019, a study began with six adult native lifelong speakers of Plains Cree and six adult relearners of Plains Cree, including a thorough language background questionnaire and speech recordings of participants while performing translation and narration tasks. Tokens with the stop consonants /p t k/ are being analyzed in Praat (Boersma & Weenink, 2019) in order to identify VOT patterns. A preliminary analysis of recordings suggests that a relearner's VOTs for /k/ in Plains Cree (33 ms) and English (53 ms) are lower than typical English stops (80 ms) (Lisker & Abramson, 1964). Strikingly, the VOT measurements are closer to that of preliminary analysis of /k/ in a lifelong L1 speaker of Plains Cree (20 – 30 ms). These measurements indicate that the stops are indeed unaspirated in word- and syllable-initial positions.

**Implications** From the initial patterns found in a Plains Cree relearner, VOT is closer to that of an L1 Plains Cree speaker despite the complete dominance of English after their early childhood. This presents a different trajectory from the Māori VOTs, which seem to creep closer to English regardless of whether Māori is the speaker's L1. The apparent diachronic change in /p t k/ is evident between age groups. Understanding whether factors other than age, exposure, or fluency are influential in the state of Plains Cree VOT are beyond the scope of the present study. The striking similarity in VOT values between L1 speakers and relearners of Plains Cree merits further study.

## References

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