Game-play Methodology and the Documentation of Prosody and Intonation in Kwak'wala

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Phrase-level prosody and intonation are understudied cross-linguistically from the viewpoint of language documentation. This relative lack of documentation is particularly true of endangered languages, which typically do not have a large pool of literate speakers who are available to participate in large-scale experiments. In addition, it can be challenging to elicit speech suitable for analysis in a fieldwork context where literacy and comfort with experimental paradigms is relatively low. Like any phonetic study, it is necessary that the data be controlled enough to generalize from the recorded speech, and yet naturalistic enough that it is representative of naturally-occurring language.

We discuss the preliminary results of a two-phase study with the goal of documenting and analyzing prosody and intonation in Kwak'wala, a critically endangered Wakashan language spoken in BC. In Phase 1, we recorded pairs of native speakers of Kwak'wala engaged in a semi-structured game-play task, a guessing game loosely based on "Guess Who" (Caldecott & Koch 2014), and designed to elicit yes/no questions and answers (Elfner & Shaw 2017). These recordings together form a corpus of semi-structured naturalistic speech; semi-structured because the game had rules (e.g. limiting question types to yes/no questions) and because the lexical items were controlled (i.e. limited to the pictures on the game cards), and naturalistic because the two speakers were engaged in a natural conversation and were encouraged to be creative in the questions and answers, within the "rules" of the game. In Phase 2, we worked closely with one of the participants from Phase 1 to transcribe, translate, and reproduce each of the utterances that were recorded in the game-play task. This produced a second corpus of recordings consisting of elicited materials that were based on naturally-produced utterances. In this corpus, the speaker was asked to repeat the utterances three times, resulting in multiple tokens of each utterance.

Our goals in this project are two-fold: (a) to provide an analysis of word, phrase, and utterance-level prosodic patterns, particularly in terms of the distribution of pitch accents and boundary tones (Pierrehumbert 1980; Ladd 2008 [1996]) and (b) to conduct a comparison between the semi-structured spontaneous speech in the game-play tasks and the elicited versions in the transcription task (see also Caldecott & Koch 2014; Silva & AnderBois 2016).

As a first pass at evaluating our two-phase methodological procedure, we share the preliminary results of our intonational analysis, which provide a four-way comparison between yes/no questions and answers in both types of tasks (game-play and elicitation). From this data set, we argue that the most salient properties of sentence-level tonal patterns include (a) the presence of H* pitch accents aligning with the stressed syllable of each prosodic word and (b) the scaling of these pitch accents across the utterance. We show that there are no systematic differences between the elicited and spontaneous speech in terms of the distribution of pitch accents and other tonal properties. However, the main difference between the two speech types may be characterized in terms of pitch range: the elicited forms have overall a flatter pitch range compared to the spontaneous counterparts. We speculate that this difference likely arises from the speakers finding the task more engaging, and thus may be more reflective of natural conversational speech in this way. In terms of usefulness for analysis, however, the elicited speech is valuable as a way to systematically investigate the structure of sentences, as there were fewer false starts and sentence fragments, as well as fewer interruptions due to extra-linguistic interjections (such as laughter). Overall, we conclude that the combined paradigm of game-play

and post-game elicitation is a useful model for creating naturalistic and semi-controlled corpora that can be used for documenting the prosodic properties of endangered languages.

References:

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