Prosody to Mark Stance in Polish and Russian

This paper explores how prosody is used to mark stance in Polish and Russian. This paper follows research conducted by Freeman (2015) who was interested in the acoustic properties of stance in English, which include measures of pitch, vowel duration, and intensity. Regarding stance, this paper follows Freeman (2015) who defines stance as, "attitudes, opinions, beliefs, or judgments about an object, person, or proposition relevant to the topic of discussion" (p. vi). Freeman (2015) created a corpus in which dyads performed collaborative tasks that she expected to elicit progressively stronger stances. Phrases were annotated by a team of annotators for stance strength on a scale from 0 meaning no stance to 3 meaning strong stance using annotation guidelines created by Freeman (2015). In addition, phrases were annotated for polarity where a minus sign indicated negative polarity, a plus sign indicated positive polarity, and the lack of either sign indicated neutral polarity. When analyzing a subset of her data, she found that, "intensity and pitch increase with stance strength," while, "longer vowel duration is the primary signal of positive polarity" (Freeman, 2015, p. 4). Given the findings in Freeman (2015) and the lack of research on the acoustic properties of stance the in other languages, the research question for this paper is do languages other than English also use prosody to mark stance? This paper uses data taken from *Multi-language Conversational Telephone Speech 2011–Slavic Group* (Jones, Graff, Walker, & Strassel, 2016). There are three Slavic languages represented in the corpus: Russian, Polish, and Ukrainian, but for this study, only Polish and Russian are used. The naturalistic data consists of recorded telephone conversations between acquaintances discussing a range of topics. Given the quality of the data and the composition of the corpus, four Polish women dyads and four Russian women dyads were chosen for analysis, for a total of sixteen women speakers. In order to exert experimental control over the data, only the words *yes* and *no* were analyzed. Each token was marked for stance strength using the annotation guidelines presented in Freeman (2015). Given the quality of the data from this corpus and the tokens for analysis, only pitch range and vowel duration were measured. All annotation and measurements were managed using Praat (Boersma & Weenink, 2016). Then, the data were manipulated using R (R Core Team, 2013). The Polish and Russian data for this paper show an association between pitch range and stance strength such that when stance strength increases, pitch range increases. In addition, the Polish and Russian data does not show that speakers use vowel duration to express stance. The findings were similar to Freeman (2015) who found that stance strength was significant for pitch but not vowel duration in English. This study shows evidence that speakers use prosody to express stance. Given the words that are used for acoustic analysis in this study, it is likely that this result would be repeated in a larger scale study that involves more lexical items than *yes* and *no*. Additionally, this study demonstrates that it is worth pursuing this topic in languages other than English and that there are some similarities between pitch and vowel duration usage in English, Polish, and Russian.

References

Boersma, Paul & Weenink, David (2016). Praat: doing phonetics by computer (Version 6.0.22). http://www.praat.org/.

Freeman, Valerie. (2015). *The phonetics of stance-taking* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. https://search-proquest-com.offcampus.lib.washington.edu/docview/1724690377?pq-origsite=primo.

Jones, Karen, Graff, David, Walker, Kevin, & Strassel, Stephanie. (2016) *Multi-Language Conversational Telephone Speech 2011 -- Slavic Group LDC2016S11*. Philadelphia: Linguistic Data Consortium. https://catalog.ldc.upenn.edu/LDC2016S11.

R Core Team (2013). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. http://www.R-project.org/.