PART III – Proposed Research Project (to be completed by the student)

Everyday speech is prone to a phonetic process known as 'reduction', whereby people simplify sound sequences (for example, pronouncing 'Did you eat yet?' as 'Jeet yet?'). Reduction is more common in certain positions in a sentence and within specific groupings of sounds; the most likely environments for reduction vary among dialects and subgroups of speakers.

The primary goal of this project is to recognize and analyze environments where reduction occurs regularly in – and particular to – Western Canadian English (WCE). More specifically, we aim to isolate environments and specific reductions typical to the dialect, and investigate how they are affected by differences in gender.

Conversations of ten participants (5 males and 5 females) will be recorded while each speaks to a friend or relative, via telephone, in a soundproof booth. These conversations will be roughly twenty minutes in length. This method of data elicitation will allow us to record speech which is a close approximation of natural, spontaneous speech due to the relaxed atmosphere created through conversation with a close friend or relative in a high-quality recordings setting. Following the phone call we will also record each participant producing a list of words for comparison purposes. Pilot data of a single speaker has been recorded and the initial analysis is currently underway.

After data collection, we will analyze the speech collected with a relatively new technique known as forced alignment – this computer aided speech-data analysis quickly annotates words and the individual sounds of each word based on the speech and a written transcript of the speech. Forced alignment can quickly analyze the 20 minutes of recorded speech, which would normally take as many as 20 hours of manual labeling, in as little as five minutes of computation and 40 minutes of manual transcription.

Upon completion of this project we hope to publish the results in both local and international forums. As well, we hope to make the resulting corpus of fully analyzed WCE generally available to other researchers, where it then becomes an invaluable resource for others looking to explore these particular speech patterns.

Another practical application of the findings lies in speech synthesis and recognition, where computers require vast databases of speech to draw from. Typically, these programs struggle with casual, reduced forms of speech, but a collection such as the one that will be supplied by this project can aid in advancing technologies for the disabled and even in products like cell phones.

As a Linguistics major with aspirations of graduate school, additional time in the laboratory benefits my studies by offering further opportunity to develop the skills needed to excel in Phonetics. In addition to the experience gained through the creation of and running my own project, this opportunity will help build my academic resume by providing the foundation for future papers, posters and presentations. Moreover, the project will increase my knowledge of current, relevant technologies; acoustic analysis; ethics; and formal writing through publications.

SIGNATURE

I hereby acknowledge that the information above is accurate and I agree to abide by the regulations governing this award.

Signature of Student

Ryan Podlubny

3 March, 2011

Name of Student (please print)

Date