Prosodic transfer in the imitation of a foreign accent

Foreign accent imitation tasks have proved to be useful tools in the area of forensic phonetics (e.g., Neuhauser, 2008) and in L2 speech research (e.g., Rojczyk, 2015). In our experiment, we aim at obtaining new insights on prosodic transfer in situations in which the speaker has been asked to make a conscious effort to imitate a non-native accent.

We used a subset of the corpus being collected within the framework of the DIANA project to compare the productions of Spanish speakers imitating a French accent (IA, Imitated Accent) with those of the same speakers in Spanish L1 (NA, Native Accent) on the one hand, and with those of native speakers of French speaking in Spanish L2 (RA, Real Accent) on the other. The recordings were automatically segmented into voiced and unvoiced intervals using Praat (Boersma & Weenink, 2016) in order to compute the rhythmical measurements proposed by Dellwo & Fourcin (2013). Additionally, long-term distributional measures of fundamental frequency, such as $f_0$ mean and range were calculated.

A preliminary exploration of the data on read speech (at the moment, $N = 4$) shows that the imitated accent differs from the native accent, but not from the real accent, in particular in voiced intervals. More specifically, we observe higher PVI values for voiced intervals (i.e., the average duration difference between two consecutive voiced intervals) in IA in comparison with NA, but not compared to RA. This finding could be explained by the variability introduced by the duration increase resulting from the attempt to imitate the French accentuation, which is realized by the lengthening of the final syllable of the rhythmic group (Lacheret-Dujour & Beaugendre, 1999). We also found that mean $f_0$ value was higher in the imitated accent than in NA for one of the speakers, in line with the results reported by Neuhauser (2008) for German speakers imitating a French accent.

It is expected that the study of a significant number of speakers and the inclusion of semi-spontaneous speech in our analyses will provide data on the L2 prosodic features which can be successfully imitated and on those which are the result of prosodic transfer from the L1.

References


