ACOUSTICS2008/1690 Effects of boundary tones on accent-related F0 peak alignment

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Speakers sometimes delay the F0 peak of a high accent beyond the accented syllable (Silverman and Pierrehumbert, Papers in Laboratory Phonology I, 1990; Xu, Phonetica, 2001). Previous studies of factors affecting peak alignment focused on the phrasal position of the accented word and the segments of the accented syllable (Jilka and Möbius, Interspeech 2007). Shue et al. (Interspeech 2007) hypothesized that if an accented word also contains boundary tones, that could influence the position and height of the F0 peak. A test corpus controlling for vowel type, syllable number and position of the focused word, based on the utterances "Dagada gave Anne a dada (daily)" and "A dada gave Anne dagadas (daily)", was produced using four prosodically different contours, involving high (H*) and low (L*) pitch accents on either "dagada" or "dada", in declarative and interrogative forms eliciting different boundary tones. Analysis of five repetitions spoken by four male and four female native American English speakers reveals that for most speakers, the presence of boundary tones on the target word shifts the accent-related F0 peak earlier when other factors are held constant. Preliminary results suggest effects of boundary tone on H* F0 peak height as well.