L1 Acquisition of Prosody: American English and Cairene Arabic

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In this paper, we show how errors in early L1 acquisition can reflect the language competence of the child and are not just developmental constraints on performance as maintained by Blevins (2009). Research on typical phonological development of American English (e.g. Redford and Gildersleeve-Neumann 2007) show that by the age of 3 many children have target appropriate aspiration, using it to parse words into phrases. Davis has shown that the distribution of aspiration (and the feature [spread glottis] more generally) demarcates foot (and word) boundaries in American English (Davis & Cho 2003). The consequence is that the relatively early acquisition of aspiration in typically developing children reflects the acquisition of higher-level prosodic structure. Inkelas and Rose (2007) observe a pattern of velar fronting in child phonology where target velar stops are fronted to alveolars at the beginning of syllables with primary stress (e.g. target "again" where /g/ is pronounced as [d]), at the beginning of syllables with secondary stress (e.g. target "alligator" where /g/ is pronounced as [d]), and at the beginning of a word-initial stressless syllable (e.g. target "conductor" with the initial consonant pronounced at [t]); velars are pronounced target-appropriately in other environments. This pattern of distribution mimics what is found for aspirated and unaspirated voiceless stops in American English: aspirated stops occur at the beginning of syllables with primary or secondary stress, and at the beginning of a word-initial stressless syllable; the unaspirated variant occurs in the other environments. We argue that this error pattern is reflective of higher-level foot structure and thus provides a mirror on language competence.

Ragheb & Davis (2010) show that word-final gemination is the common strategy for the pronunciation of target final consonant clusters in Cairene Arabic; for example, target /kalb/ "dog" is pronounced as [kabb] and target /?ism/ "name" is pronounced as [?imm]. We show that this error pattern reflects the specific nature of Cairene Arabic prosodic structure. While a word-final singleton consonant is always extrametrical (nonmoraic) in Cairene Arabic, word-final geminates are always moraic. Target syllables with clusters like /kalb/ are bimoraic; by geminating the final consonant, as in [kabb], the child is able to preserve the bimoraic prosodic structure of the target form. Thus, this error pattern reflects upon language competence and is not merely a developmental constraint on performance.