

Third Language Prosodic Focus Marking in Mandarin by Cantonese-English-Mandarin Trilingual Children with and without Autism Spectrum Disorder

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Abstract

Multilingualism has become a global trend, and multi-lingual exposure is also increasing among children with autism spectrum disorder (ASD). Non-native speech produced by autistic children then becomes an interesting topic yet to be investigated, and acoustic analyses of utterance prosody of this population in the third language (L3) are even rarer. The present study attempts to fill in the gap by investigating prosodic focus marking in L3 Mandarin by 17 Cantonese-native children with ASD, in comparison with typically developed (TD) Cantonese-native and Mandarin-native peers with matched backgrounds. All children speak English as L2. Prosodic focus in Mandarin features on-focus f_0 exaggeration, lengthening and post-focus compression (PFC), a feature difficult for non-native speakers to adopt [1], while on-focus lengthening is argued to be the major correlate of prosodic focus in Cantonese [2]. Natural prosodic marking of broad and narrow focus on different words in five-syllable SVO sentences was elicited by picture-based questions. We hypothesize that Cantonese-speaking children will use on-focus expansion but not PFC in L3 Mandarin focus marking (H1), and children with ASD may show abnormal use of prosodic cues and hence mark focus with less prominence than their TD peers (H2).

Results support H1 but not H2. Children's use of f_0 correlates, duration, and intensity in Mandarin focus marking is more influenced by language status than clinical conditions (Fig.1). The Cantonese-native prioritized tone realization over focus marking, producing larger f_0 excursion and smaller on-focus expansion. This may be due to the influence of L1 Cantonese, a tone language of complex tone system, which motivates speakers to prioritize tone accuracy and limited their use of prosodic cues in focus marking. The differences between the two Cantonese-native groups with and without ASD were not significant. In addition, although both the native and non-native children made on-focus expansion in f_0 range and duration, the Mandarin-native children also showed clear PFC in intensity, a cue not used by the non-native children.

The comparable L3 performance found in the two Cantonese-native groups also suggests that autistic children should not be limited in their multilingual exposure, especially in this era of globalization.