The influence of linguistic experience on the perception of accented speech by monolingual and bilingual children

Kathleen M. McCarthy[1] & Bronwen G. Evans[2]
[1]*Linguistics, Queen Mary University of London;* [2]*Speech, Hearing & Phonetic Sciences, UCL*
k.mccarthy@qmul.ac.uk; bronwen.evans@ucl.ac.uk

In large urban cities such as London, children grow up in diverse multicultural environments. Depending on their local community and home language environment, these children may be exposed to more than one language, as well as different regional and foreign accents. In some London boroughs, where there are dense immigrant communities, bilingual children will be additionally exposed to their heritage language as well as heritage-language-accented varieties (McCarthy et al., 2014). The current study investigates whether exposure to variability in the ambient language environment affects children's processing of accented speech. In 2 experiments, 96 children aged 4-7 years old from differing language environments, were tested in their ability to identify BKB sentences (Bench et al., 1979) produced in familiar and unfamiliar regional and foreign accents in quiet and noise.

Experiment 1: Fifty-six children (27 monolingual English Inner-London, 29 Sylheti-English sequential bilinguals, matched for English receptive vocabulary) identified sentences in 3 accents: London-English (familiar to all), Sylheti-accented English (only familiar to Sylheti-English bilinguals), Spanish-accented English (unfamiliar to all). Accents were presented in separate blocks in quiet and noise (0 dB SNR), giving a total of 6 conditions. On each trial, children heard and repeated a sentence, with their response scored for the number of keywords correct. All children performed significantly better in the London-English accent condition than in the foreign-accent conditions, but there were also group differences. Monolinguals were more accurate with London-English sentences in quiet and noise than bilinguals ($p < .05$). In contrast, bilinguals were more accurate with the Sylheti-accented condition than the monolinguals ($p < .05$). There were no differences in performance in the Spanish-accent condition ($p > .05$), and monolinguals performed similarly with both foreign accents ($p > .05$). However, bilinguals performed significantly better with the Sylheti-accent than the Spanish-accent ($p < .05$).

Experiment 2: Forty monolingual English children (vocabulary-matched) growing up in a more homogeneous suburban community in Greater London. These children identified sentences in quiet and noise in the London-accent (familiar regional) and Spanish-accent (unfamiliar foreign) conditions. In quiet, there were no significant differences between groups ($p > .05$). In the London-English noise condition, the Inner-London children were more accurate than both the Greater London and bilingual children ($p < .05$). Interestingly, in the Spanish noise condition, the Greater London children had significantly lower accuracy than the Inner-London monolinguals and Sylheti-English bilinguals ($p < .05$).

Taken together, the results suggest that differences in the variation that children are exposed to early in life, give rise to differences in the processing of familiar and unfamiliar accented speech.

References

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