

Are phonemic length contrasts in Japanese exaggerated in infant-directed speech?

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Abstract

In Japanese, vowel length contrasts, e.g., *chizu* “map” vs. *chiizu* “cheese”, and consonant length contrasts, e.g., *haken* “dispatch” vs. *hakken* “discovery”, are cued primarily by the duration of the target vowel or consonant. However, since the duration of short and long vowels and singleton and geminate consonants overlap considerably in ordinary speech, learning to perceive phonemic length contrasts is not straightforward. Meanwhile, infant-directed speech (IDS) is known to “exaggerate” certain properties of adult-directed speech (ADS). If so, then it is possible that phonemic length contrasts might also be exaggerated in IDS. In this talk, I will report analysis results from a speech corpus, the RIKEN Japanese Mother-Infant Conversation Corpus, which contains 11 hours of IDS by 22 mothers talking with their 18-to-24-month-old infants, and 3 hours of ADS by the same mothers. The duration of all short and long vowels and singleton and geminate consonants in the corpus were analyzed, and comparisons were made between ADS and IDS. The results seem to suggest that vowel and consonant duration serves several purposes. The first purpose is to facilitate learning of the sound system of the native language. This is based on the fact that phonemic length contrasts were in fact exaggerated in IDS compared to ADS in certain specific contexts. The second purpose is to draw infants’ interest and engage them in communicative interactions. This is based on the fact that vowel and consonant duration was used for emphatic or other stylistic purposes more often in IDS than ADS. Possible differences in durational tendencies between vowel length contrasts and consonant length contrasts will also be discussed.