

Prosodic cues of an onomatopoetic word for agent size in infant-directed speech

Sachiyo Kajikawa*, Asami Yoshimura* & Yoshitaka Kumasaka+

*Tamagawa University + Yamaha Music Foundation

Previous studies have described that the prosody of speech, such as pitch, speech rate, and amplitude, conveys para-linguistic information. Conversely, other studies have connected it to word meaning. Speakers produce prosodic cues for word meaning, and these cues promote listeners' comprehension. Similarly, mothers contrast prosodic cues when they teach novel antonyms to their 2-year-old children.

This study thus investigated whether the prosody of Japanese onomatopoetic words relates to the size of the agent in infant-directed speech and whether there is a difference in prosodic cues according to infants' ages. The participants were mothers of 6-month-old ($n = 15$) and 10-month-old infants ($n = 15$). The mothers read a picture-book in which a Japanese onomatopoetic word (*tottoko*, a kind of footsteps) was repeatedly used for 11 animal agents of different sizes. Each mother's reading was recorded in both infant-directed (ID) and infant-absent (IA) conditions.

The mothers of 6-month-olds read the onomatopoetic word with higher pitch, larger pitch range, and at a slower speaking rate in ID than in IA. There was no difference among words in both readings. The mothers of 10-month-olds read with higher pitch in ID than in IA and produced prosodic variations among words, especially in ID.

These findings suggest that mothers shift the production of prosodic cues that relate to word meanings in accordance with infants' language development.