

# **Bridging Word and World: Vocal Iconicity in Chinese Child-Directed Speech and Child Production**

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Iconicity plays an important role in language acquisition and cognition. This study aims to better understand the use of three types of vocal iconicity in Chinese adult-directed speech (ADS), child-directed speech (CDS), and child production, including sound effects (e.g., making the sound of eating), onomatopoeia (e.g., meow), and iconic prosody (e.g., loong). We analyzed a corpus of Chinese ADS and CDS (including 6740 utterances), in which mothers semi-spontaneously told the same story to an adult and their 18-month-old (N = 21) or 24-month-old (N = 19) children. We asked the following research questions: First, what are the differences in the frequency of vocal iconicity between CDS and ADS? Second, how is iconicity prosodically modulated in CDS? Third, do 18- and 24-month-old children begin to produce the three types of vocal iconicity, especially iconic prosody? Our findings revealed that (1) mothers used significantly more sound effects and iconic prosody in CDS compared to ADS, but not onomatopoeias. Interestingly, mothers' iconic prosody was also acoustically more congruent with lexical meanings, such as slowing down when saying "slow" and speeding up when saying "fast"; (2) The frequency of these types of iconicity in CDS followed this order: iconic prosody > sound effects > onomatopoeias; However, children hardly produced any iconic prosody in this corpus, except for one instance of repeating mother's high pitch when saying "high". (3) While previous research shows that onomatopoeias are among the first words that young children produce, children were able to produce sound effects, but they had not yet produced lexicalized onomatopoeias by this age. These findings suggest that iconicity is more prevalent and prosodically marked in CDS than in ADS, which may help children's word-to-world mapping. Also, iconic prosody is an advanced prosodic skill that is not typically developed by two-year-old children.