

Not all rhythms are equal: late emergence of mora-timed rhythm in Japanese

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Spoken languages are rhythmic, and some have argued that rhythmic properties of speech play a role in the early stages of language development. Researchers have commonly identified three basic rhythmic types of language: English and German are considered stress-timed; French and Spanish are syllable-timed; and Japanese is mora-timed. To date, however, research on this topic has focused mostly on the stress- and syllable-timed rhythms most often found in Western languages. In this talk, we will review results of our studies that examined the emergence of mora-timed rhythms among Japanese infants and young children. Across all our studies, we found no indication that Japanese learners are initially sensitive to the rhythmic units of mora-timed language (i.e., moras). At around 10 months, however, infants seem to become sensitive to the difference between heavy (two-mora) and light (one-mora) syllables, which we construe as a sensitivity to moras per se (noting that production does not become predominantly mora-based until 11 years of age). This is significant because, as we have reported elsewhere, Japanese mothers use infant-directed vocabulary (IDV) that is predominantly trochaic (heavy-light). We propose that Japanese infants learn word segmentation according to a three-step process, by first learning to differentiate heavy and light syllables, then using that sensitivity to learn IDV, then using those words to process speech that includes non-trochaic vocabulary. This contrasts with both French and English, for which the predominant rhythmic patterns are already accessible to infants, without resort to an intermediating IDV.