

## **The developmental pattern of native and non-native speech perception during the 1st year of life in Japanese infants**

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Language development during the 1st year of life is characterised by perceptual attunement: following language-general perception, a decline in the perception of non-native phonemes and a parallel increase in or maintenance of the perception of native phonemes (Kuhl et al., 2005, 2006). Most evidence documenting these patterns comes from behavioral studies designed to test perception of the same contrast in two groups of infants acquiring different native languages, such that one group of infants is tested on non-native and another group on native perception of that contrast. Since these are two different groups of infants who are in addition exposed to completely different types of input beyond the speech sound contrast tested, it is more difficult to assess the relation between non-native and native discrimination compared to an assessment in the same group of infants with the same linguistic experience. The present study, leveraging the presence of documented patterns of native improvement and non-native decline in Japanese, therefore assessed the native and non-native speech perception in Japanese-acquiring monolingual infants from six- to 12-months of age. Results demonstrated a decline in non-native speech perception evident in discrimination of non-native /r/-/l/ contrast at 10- (N=30,  $t(29) = -3.00$ ,  $p < .01$ ), but not at 12-months (N=31,  $t(30) = 1.14$ ,  $p = .27$ ). Additionally, a parallel increase in native speech perception was demonstrated evident in an absence of native phonemic vowel length discrimination at six- (N=30,  $t(29) = -1.85$ ,  $p = .07$ ), and 10-months (N = 30,  $t(29) = -1.12$ ,  $p = .27$ ) and a discrimination of this contrast at 12-months (N=32,  $t(31) = -3.48$ ,  $p < .01$ ). These results, based on a different experimental design, corroborate theoretical proposals on two hallmarks of perceptual attunement: a decrease in non-native and a facilitation in native speech perception during the first year of life.