Infants Show a U-Shaped Pattern in Non-Native Vowel Discrimination

Maartje de Klerk, Elise de Bree, Annemarie Kerkhoff, Frank Wijnen

*Utrecht Universiteit*

Previous research has shown that speech sound discrimination changes from universal to language-specific during the first year of life; sensitivity to native speech sound contrasts increases whereas sensitivity to (some) non-native contrasts decreases. This process is often referred to as perceptual attunement (Maurer & Werker, 2014). For vowels, attunement has been found to take place around 6 months of age (Kuhl et al., 1992). However, there are indications that attunement is less uniform than previously suggested (e.g. Mazuka et al., 2014).

The aim of this study was to investigate whether perceptual attunement is attested in vowel perception of Dutch-learning infants (6-10 months old). Infants were tested on a native (/aː/-/eː/) and non-native (/æ/-/ɛ/) contrast, using tokens of multiple speakers. The six-month-olds (n = 53), the 8-month-olds (n = 41) and the 10-month-olds (n = 35) discriminated the native contrast. However, the non-native contrast was discriminated by the 6-month-olds (n = 61) and the 10-month-olds (n = 41) but not by the 8-month-olds (n = 39).

The recovery of the 10-month-olds is interpreted to be caused by an interaction between task demands (multiple speakers) and developmental level of the infants.