Exploring the Other-Race Effect in Taiwanese Infants and Adults

Hsin-Yueh Hsu and Sarina Hui-Lin Chien
Graduate Institute of Neural and Cognitive Sciences, China Medical University

The *other-race effect* (ORE) refers to the phenomenon that we can discriminate own-race faces better than other-race faces. The present study aims to explore the face processing ability for own-race and other-race faces in Taiwanese infants aged between 4 and 9 months when the visual system is still maturing. The stimuli contained faces of three ethnic groups (Asian, Caucasian, and African). In each race, the face discrimination task had three levels of difficulty (Easy, Median, and Hard). The visual paired-comparison (VPC) task was used to assess 4-, 6-, and 9-month-old infants' discriminability for the familiar/novel faces via recording infant's looking time. Comparable 3-alternative forced-choice procedure was used in the adult experiment except that an additional "identical" condition was added. The results showed that 4-month olds can only discriminate Asian "easy" faces. 6-month olds can discriminate "easy" faces of all three ethnic groups. 9-month olds can further discriminate "median" Asian and Caucasian faces but not African "median" faces. For adults, the accuracy decreased and response time increased as the stimulus difficulty increased, indicating the validity of the stimulus difficulty. In conclusion, own-race advantage emerges around 4 months of age, while ORE may take place between 6 and 9 months as the discriminability for African faces does not improve. Taken together, these findings suggest a mixture of general improvement in face processing ability as well as a specific tuning by the own-race experience.

Keywords: *face recognition, infant vision, other-race effect, perceptual narrowing, visual paired-comparison task*