

The development of the other-race effect in school-aged Taiwanese children: Using a morphed face paradigm

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People often say they find it difficult to distinguish between individuals of other races, which is known as the "other-race effect". The other-race effect (ORE) refers to better recognition memory for faces of one's own race than faces of other unfamiliar races. Using a morphed face paradigm, Walker and Tanaka (2003) reported an encoding advantage for processing faces of own-race over other-race in Canadian Caucasians. The present study sets out to take Walker and Tanaka's approach to examine the encoding advantage hypotheses in school-aged children in Taiwan. Here we examined the developmental change of the other-race effect during childhood by testing a group of 6- to 12-year-old children and a group of undergraduate students as a comparison. The methods of constant stimuli with swathes of morphed pictures of Caucasian and Taiwanese female face images were used. The participants were to perform a sequential 2AFC same/different face discrimination task. In each trial, participant viewed an Asian or Caucasian parent face for 1 s and followed by either the same parent face or a different morphed face with equal probability. In the "*different*" trials, the Asian (or Caucasian) parent face will be followed by a morphed face consisting of 0%, 15%, 30%, 45%, 60% contribution from that parent face and the remaining percent contribution morphed from the Caucasian (or Asian) parent face. The psychometric function on the percent of correct rejections for Asian- and Caucasian-parent conditions were separately fitted with an accumulative normal function. The results showed that the slopes of the psychometric functions for the Asian condition gradually increased with age, while the slopes for the Caucasian condition remained shallow and unchanged across age, indicating steady improvement in visual encoding for own-race faces during childhood. Meanwhile undergraduate students were clearly superior at recognizing Asian faces.

Keywords: Other-race effect; face perception; child development; morphed faces; perceptual encoding

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