

顔の性別判断における幼児と成人の情報処理： 眼球運動を指標とした検討

Eye-tracking investigation of facial processing in
discriminating gender: Developmental differences
between young children and adults

杉村智子

Tomoko SUGIMURA

E-mail : sugitomo@fukuoka-edu.ac.jp

英文要旨

Children aged 5–6 years and adults were asked to discriminate the gender of 12 facial stimuli constructed by the combination of 4 types of internal facial features (i.e., masculine-male, feminine-male, masculine-female, and feminine-female) and 3 types of hairstyle (i.e., hair concealed, short hair, and long hair). Participants' eye movements were recorded during the discrimination task. Results showed that children's discrimination behavior, in contrast to that of adults, was inaccurate and mainly based on the external cue of hairstyle. However, eye movement data revealed that both children and adults mainly gazed on internal facial features and gave little attention to the external hairstyle. These results are discussed from the perspective of developmental differences in information processing related to disregarding inappropriate cues from the peripheral visual field.

キーワード：幼児，性別判断，眼球運動

Keywords : young children, gender discrimination, eye movement

Gender discrimination of faces by young children is considered to be less accurate, compared with that of adults, because of attention to the inappropriate cue of hairstyle. For example, 5-year-old children often classify a male with long hair as a female (Sugimura, 2006a). However, differences between young children and adults regarding information used in gender discrimination are unclear. In this study, by measuring eye movements, we investigated differences in information processing of young children and adults when categorizing the gender of natural faces with a variety of hairstyles.

Studies on gender discrimination of faces, which examined facial processing in adults, have

focused on which specific features (e.g., eyes, nose, mouth) contribute to discriminating gender (e.g., Brown & Perrett, 1993; Bruce et al., 1993; Burton, Bruce, & Dench, 1993; Roberts & Bruce, 1988; Yamaguchi, Hirukawa, & Kanazawa, 1995). For example, Brown and Perrett (1993) investigated the contribution of different facial parts by means of a discrimination task using composite faces with a facial part replaced by that of the opposite gender (e.g., a male nose replacing the nose on a female face). Results showed that the eyebrows, eyes, and jaw played the most important roles in deciding gender. Yamaguchi et al. (1995), using a task similar to that used in Brown and Perrett (1993), showed