Eye-movement pattern modulates holistic processing of faces: evidence from the composite face effect and the inverted face effect

NIANZENG ZHONG, JANET HSIAO, and W.HAYWARD
Department of Psychology, University of Hong Kong, Hong Kong, China

Introduction

• People are hard to identify the features or parts of faces isolated but perceive the entire face as a whole. It is the so-called holistic processing of faces. The composite face effect and the face inversion effect are two of the representative effects of the holistic processing (Tanaka and Gordon, 2011)

• Eye-movement patterns on faces are discrepant across individuals but consistent within individuals. (Chuk, Chan, & Hsiao, 2014). However, no previous studies, as we known, have taken the role of the individual differences of eye-movement pattern into account the holistic processing of faces.

Question: whether eye-movement pattern modulates the holistic processing of faces?

Method (56 participants did all four tasks below)

Result

• Two representative eye-movement patterns generated from the upright face identification task. It is consistent with previous studies (An, Hsiao, 2020; Chuk, Chan et al., 2017; Chan et al., 2018).

• No significant differences in the face inversion effect were found between eye-movement groups.

• The upper-focused group showed a stronger composite effect in top cue condition than bottom cue condition, but the lower-focused group showed equally strong composite effect in two conditions.