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# The effect of cultural background on face and gaze scanning: An eye-tracking study

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## Abstract

A fundamental question about the development of social cognition is the effect of post-natal environment. However, it is difficult to test empirically because, unlike non-human animals, it is virtually impossible to control for the human postnatal environment. One of the promising ways to overcome this limitation is to study how the different cultural norms, which would systematically change the social experience, modulate the development of social cognition. We focused on the different cultural norms on the use of eye contact between British and Japanese cultures, and investigated whether it is related to the eye movement in response to the perceived eye contact. British and Japanese adult participants were presented with a series of animations of computer-generated faces, which made a gaze shift either toward or away from the participants, and either smiled or opened the mouth in a non-communicative manner. Results revealed differential pattern of face scanning between cultures, that Japanese participants fixated more ‘in between’ the eyes and less to the mouth. It was also found that participants followed the perceived gaze (i.e. looked to the same direction as the gaze shift) and looked more to the eyes when the face made eye contact and smiled. Critically, these differential response to facial displays did not interact with the cultural background of the participants, suggesting that the response to facial gestures are not modulated by the cultural backgrounds.

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