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By Judith Burns

Science reporter, BBC News



Facial expressions for "fear" and "surprise" were confused by some participants

A new study suggests that people from different cultures read facial expressions differently.

East Asian participants in the study focused mostly on the eyes, but those from the West scanned the whole face.

In the research carried out by a team from Glasgow University, East Asian observers found it more difficult to distinguish some facial expressions.

The work published in Current Biology journal challenges the idea facial expressions are universally understood.

In the study, East Asians were more likely than Westerners to read the expression for "fear" as "surprise", and "disgust" as "anger".

The researchers say the confusion arises because people from different cultural groups observe different parts of the face when interpreting expression.



Western participants tended to scan the whole face

East Asian participants tended to focus on the eyes of the other person, while Western subjects took in the whole face, including the eyes and the mouth.

Co-author, Dr Rachael Jack, from the University of Glasgow, said: "Interestingly, although the eye region is ambiguous, subjects tended to bias their judgements towards less socially-threatening emotions - surprise rather than fear, for example.

"This perhaps highlights cultural differences when it comes to the social acceptability of emotions."

The team showed 13 Western Caucasians and 13 East Asians a set of standardised images depicting the seven main facial expressions: happy, sad, neutral, angry, disgusted, fearful and surprised.

They used eye movement trackers to monitor where the participants were looking when interpreting the expressions.

A computer program given the same information from the eyes as the East Asian observers was similarly unable to distinguish between the emotions of disgust and anger, and fear and surprise.

East West differences in Emoticons Emotion WestEast 'Happy' :-)(^_^) 'Sad' :-((;_;) or (T_T) 'Surprise' :-o (o.o)

The paper states that the Eastern participants used a culturally specific decoding strategy that was inadequate to reliably distinguish the universal facial expressions of fear and disgust.

It concluded that information from the eyes is often ambiguous and confusing in these expressions, with consequences for cross-cultural communication and globalisation.

The researchers also point out that this difference in perception is reflected in the differences between Eastern and Western emoticons - the typographical characters used to convey emotions in e-mails.

The Eastern emoticons are not only the right way up but focus on the eyes, whilst in the West the mouth is important.

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