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I recognize you! But how did I do it?

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Are you someone who easily recognises everyone you've ever met? Or maybe you struggle, even with familiar faces? It is already known that we are better at recognising faces from our own race but researchers have only recently questioned how we assimilate the information we use to recognise people.

New research by the University of Nottingham Malaysia Campus has shown that when it comes to recognising people the Malaysian Chinese have adapted their facial recognition techniques to cope with living in a multicultural environment.

The study 'You Look Familiar: How Malaysian Chinese Recognise Faces' was led by Chrystalle B.Y. Tan, a PhD student at the University of Nottingham Malaysia Campus. The results have been published online in the prestigious scientific journal *PloS One*, This research is the first PhD student publication for Nottingham's School of Psychology in Malaysia.

Chrystalle Tan said: "Our research has shown that Malaysian Chinese adopt a unique looking pattern which differed from both Westerners and Mainland Chinese, possibly due to the multicultural nature of the country."

The ability to recognise different faces may have social and evolutionary advantages. Human faces provide vital information about a person's identity and characteristics such as gender, age, health and attractiveness. Although we all have the same basic features we have our own distinguishing features and there is evidence that the brain has a

specialised mental module dedicated to face processing.

Recognition techniques

Previous research by a group at Glasgow University in Scotland showed that Asians from mainland China use more holistic recognition techniques to recognise faces than Westerners.

- Chinese focus on the centre of the face in the nose area
- Westerners focus on a triangular area between the eyes and mouth
- British born Chinese use both techniques fixating predominantly around either the eyes and mouth, or the nose

Chrystalle said: "The traditional view is that people recognise faces by looking in turn at each eye and then the mouth. This previous research showed us that some Asian groups actually focus on the centre of the face, in the nose area. While Westerners are learning what each separate part of the face looks like - a strategy that could be useful in populations where hair and eye colour vary dramatically, mainland Chinese use a more global strategy, using information about how the features are arranged. Meanwhile British born Chinese use a mixture of both techniques suggesting an increased familiarity with other-race faces which enhances their recognition abilities."

Eye tracking technology

The study by the School of Psychology at the University of Nottingham Malaysia Campus set out to investigate whether exposure and familiarity with other cultures affects our recognition accuracy and eye movement strategies.

The team used specialised eye tracking technology to investigate the visual strategies used to recognise photographs of faces. They recruited 22 Malaysian Chinese student volunteers from across Nottingham's Malaysia campus. The results showed that Malaysian Chinese used a unique mixed strategy by focusing on the eyes and nose more than the mouth.

Chrystalle said: "We have shown that Malaysian Chinese adopt a unique looking pattern which differed from both Westerners and mainland Chinese. This combination of Eastern and Western looking patterns proved advantageous for Malaysian Chinese to accurately recognise Chinese and Caucasian faces."

The study was supervised by Dr Ian Stephen, an expert on face processing and Dr Elizabeth Sheppard, an expert in eye tracking. Dr Stephen said: "We think that people learn how to recognise faces from the faces that they encounter. Although Malaysia is an East Asian country its ethnic composition is highly diverse. The intermediate looking strategy that Malaysian Chinese use allows them to recognise Western faces just as well as Asians."

Provided by University of Nottingham

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