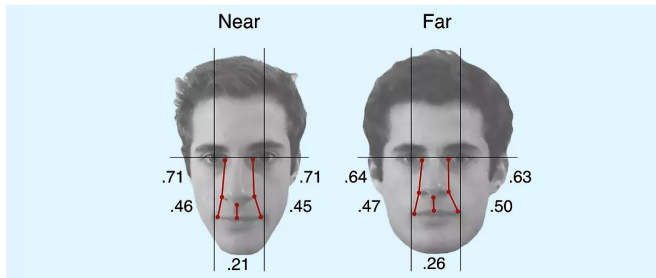


Researcher discovers huge flaw with anthropometry, the measurement of facial features from images

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The distance between features of a face varies as a result of the camera-to-subject distance manipulation and demonstrates that anthropometry, which is the measurement of facial features from images, is not a reliable method of identification. Credit: University of Huddersfield

University of Huddersfield lecturer Dr. Eilidh Noyes was among world-leading experts in the science of face recognition who assembled in Australia for a conference that will lead to policy recommendations designed to aid police, governments, the legal system and border control agencies.

Taking place at the University of New South Wales, which is home to an Unfamiliar Face Identification Group (UFIG), the conference brought together [academic experts](#) in psychology, computer science and law plus policy makers and practitioners in police and government. Their aim was to work out how to define expertise in face recognition.

"Accurate face [identification](#) is crucial in many police investigations and border security scenarios," said Dr. Noyes, a specialist in the field who was one of 20 global academic experts invited to attend the conference, titled Evaluating face

recognition expertise: Turning theory into best practice.

"People are very good at recognizing the [faces](#) of their friends and family—people who they know well—across different images. However, the science tells us that when we don't know the person/people in the image(s), face matching is actually very difficult," said Dr. Noyes, who lectures in Cognitive Psychology at Huddersfield.

Face identification algorithms have made huge strides in accuracy in recent years, with the latest algorithms outperforming humans in a recent comparison of human and machine performance. Algorithms can play an important role in the identification process, she continued.

"We need to define what it means to be a face identification [expert](#) in this day and age. Is it a human? Is it an algorithm? Is it some combination of them both?"

Dr. Noyes' conferenced paper was based on research she carried out with Dr. Rob Jenkins, University of York, on the effect of camera-to-subject distance on [face recognition](#) performance and was the subject of an article published by the international journal *Cognition*.

"The distance from which a photograph is taken affects the appearance of the face in the image," explained Dr. Noyes.

"Faces appear flatter when photographed from afar, and more convex at a reduced distance. That has profound consequences for facial comparisons across multiple images.

"Images of the same person can look very different if they are taken at two different distances, whereas

images of different people can appear more similar if the camera-subject distance is manipulated," she added.

More information: Eilidh Noyes et al. Camera-to-subject distance affects face configuration and perceived identity, *Cognition* (2017). [DOI: 10.1016/j.cognition.2017.05.012](https://doi.org/10.1016/j.cognition.2017.05.012)

Provided by University of Huddersfield

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