

# Gender and age can be determined from face silhouettes

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A new study published in *Journal of Vision* demonstrates that face silhouettes are visually processed much like regular face stimuli and provide enough information to determine traits about the subject including age and gender.

Researchers from Stanford University conducted a variety of studies using silhouetted face profiles obtained by reducing gray-scale photographs of face profiles to two-tone black and white images. Study participants were asked to determine the gender and age of the individuals in silhouette. Results showed that people can extract information from silhouetted face profiles about their front-view counterparts.

Male silhouettes were classified as male 83.3 percent of the time and female silhouettes were classified as female 55.7 percent of the time. Researchers believe the difference in accuracy can be attributed in part to the lack of hair on the silhouettes which may be perceived as baldness, a possible cue to maleness. Over 68 percent of respondents selected the correct age-range for the silhouettes, compared to a chance level of 38.8 percent.

“Most research on face perception focuses on the role of features such as the eyes, the nose, and the mouth,” said lead researcher Nicholas Davidenko, PhD. “Our studies demonstrate the importance of shape in face recognition. By using mathematically defined face silhouettes, we have discovered the types of shape variations that determine the gender,

age, and distinctiveness of a face.”

Source: Association for Research in Vision and Ophthalmology

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