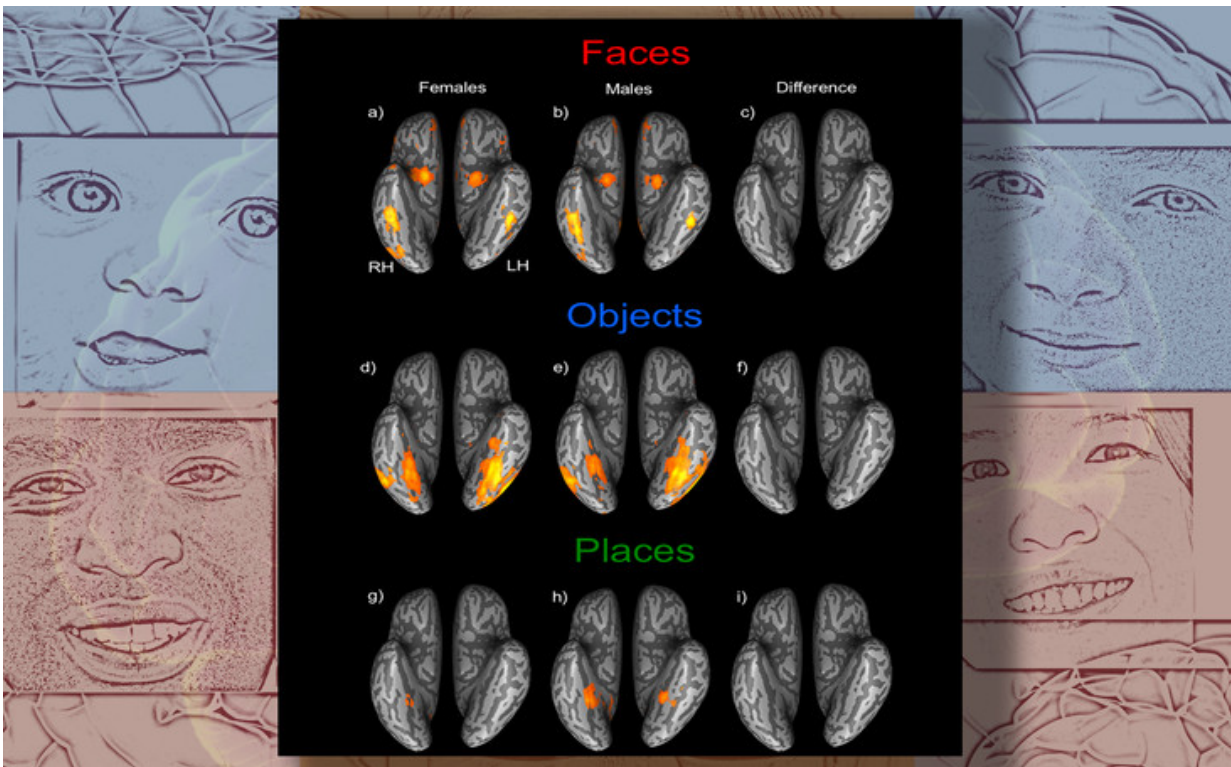


Men and women show equal ability at recognizing faces

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The study found no evidence of the commonly held belief that women can recognize faces more accurately than men. Credit: Patrick Mansell

Despite conventional wisdom that suggests women are better than men at facial recognition, Penn State psychologists found no difference between men and women in their ability to recognize faces and categorize facial

expressions.

In the study, the researchers used behavioral tests, as well as neuroimaging, to investigate whether there is an influence of biological sex on facial [recognition](#), according to Suzy Scherf, assistant professor of psychology and neuroscience.

"There has been common lore in the behavioral literature that [women](#) do better than men in many types of face-processing tasks, such as [face recognition](#) and detecting and categorizing [facial expressions](#), although, when you look in the empirical literature, the findings are not so clear cut," said Scherf. "I went into this work fully expecting to see an effect of biological sex on the part of the observer in facial recognition—and we did not find any. And we looked really hard."

Scherf said that facial recognition is one of the most important skills people use to navigate social interactions. It is also a key motivation for certain types of behavior, as well.

"Within 30 milliseconds of looking at a face, you can figure out the age, the sex, whether you know the person or not, whether the person is trustworthy, whether they're competent, attractive, warm, caring—we can make categorizations on [faces](#) that fast," said Scherf. "And some of that is highly coordinated with our behavioral decisions of what we are going to do following those attributions and decisions. For example, Do I want to vote for this person? Do I want to have a conversation with this person? Where do I fit in the status hierarchy? A lot of what we do is dictated by the information we get from faces."



Facial recognition and the categorization of facial expressions are important skills people use to navigate social interaction. Credit: Patrick Mansell

Scherf added that the importance of facial recognition for both sexes underlines the logic of why men and women should have equal facial recognition abilities.

"Faces are just as important for men, you can argue, as they are for women," said Scherf. "Men get all the same cues from faces that women do."

According to Scherf, the researchers did not find any evidence of another commonly held belief that women could recognize faces of their own biological sex more easily than the other, also referred to as "[own gender bias](#)."

The researchers, who report their findings in *eNeuro* (available online), used a common face recognition task called the Cambridge Face Memory Test, which measures whether a person can identify a male face out of a line up of three faces. They also created their own female version of the memory [test](#). Because of previous concerns of an own gender bias in women, the Cambridge Face Memory Test features only male faces.

"We couldn't test the own gender bias without a female version of this test," said Scherf, who worked with Daniel B. Elbich and Natalie V. Motta-Mena, both graduate students in psychology.



Suzy Scherf is an assistant professor of psychology and neuroscience at Penn State. Scherf studies adolescents and pubertal development with an emphasis on

visual functionality. Credit: Patrick Mansell

In a second test, they scanned the brains of participants in an MRI machine while the subjects watched a series of short video clips of unfamiliar faces, famous faces, common objects and navigational scenes, such as a clip of the Earth from outer space; and in a separate task as they recognized specific faces.

After the tests, the scans of neural activity happening in areas known for facial recognition—as well as other types of visual recognition—were statistically identical for both men and women.

Participants were carefully selected for the study because certain conditions can affect [facial recognition](#).

"In order to enroll someone in our study, we went through a careful screening procedure to make sure that people did not have a history of neurological or psychiatric disorders in themselves, or in their first-degree relatives," said Scherf. "This is important because in nearly all the affective disorders—depression, anxiety, schizophrenia, bipolar—face processing is disrupted."

The researchers also screened out participants with concussions, which can disrupt patterns of brain activation and function, Scherf added.

Scherf, who also studies adolescents and pubertal development, began to investigate [biological sex](#) differences to further her own understanding of what sex differences—if any—exist in sexually mature men and women, compared to adolescents.

Provided by Pennsylvania State University

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