Men Are Better Than Women at Ferreting Out That Angry Face in a Crowd

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Trying to get someone's attention? Looking angry may be the key. The face most likely to stand out in a crowd is an irate one, according to a new study, and men are better than women at picking up the anger that a face conveys.

On the other hand, women are more adept at detecting more socially relevant expressions that communicate happiness, sadness, surprise and disgust.

"The really interesting effect," said Mark A. Williams, the study's lead author, "is the difference between males and females."

Dr. Williams, a postdoctoral fellow at the Massachusetts Institute of Technology, and his co-author, Jason B. Mattingley, a psychology professor at the University of Melbourne in Australia, set out to measure how efficiently the emotions conveyed by facial expressions are identified in a large group by others.

The results appear in the June issue of Current Biology.

In the experiment, they showed arrays of human faces to 78 men and 78 women, using photographs displaying angry, fearful, happy, sad, surprised, disgusted or neutral expressions.

First, participants were shown a group of four photographs depicting three neutral expressions and one expression that was clearly angry — brow compressed, eyes narrowed, teeth flashing in a menacing grimace. The subjects were asked to pick out, as quickly as they could, the angry face from all the others.

Then the scientists used the same procedure while showing the subjects seven faces that were neutral and one that was unmistakably enraged. In some examples the photograph depicted an infuriated man, in others an angry woman.

Next, the experimenters ran the same tests using fearful faces in place of the angry ones. Among the four or eight neutral faces was one picture of a man or woman, eyebrows raised, eyes wide open with the whites visible, lips pursed — obviously a person who was terrified.
Men and women consistently detected the angry faces more quickly than the terrified ones. But the ease of detecting angry faces depended on the sex of the person in the photograph and the sex of the observer.

The time required to pick out the face of a woman, whether angry or frightened, increased with the rise in the number of photographs from four to eight.

But there was no difference in the speed with which people were able to find the angry man, no matter how many faces were in the array.

Detecting the angry man in a sea of faces, the authors say, has a survival advantage for both sexes.

"From an evolutionary perspective," they write, "the potential for physical threat from a male is greater than that from a female."

So any perceptual system that helps detect an angry man is an advantage.

In background information in the article, the authors point out that there are significant differences between males and females in other cognitive skills as well. Women, for example, tend to perform better than men at fine motor tasks, while men have are better at finding directions using a map. They also suggest that the size difference between men and women may have helped shape cognitive processes.

Men and women picked out fearful faces with equal facility, but men were significantly faster than women when asked to find the angry face. On the other hand, when participants were asked to use the same procedure to pick out a happy, sad, surprised or disgusted face, women were faster than men.

Qazi Rahman, a visiting research fellow at the Institute of Psychiatry of King's College London who has written widely about sexuality and human sex differences but was not involved in this study, praised the study and said that the results were not a surprise.

"This elegant study," he said, "found precisely what we would predict from sexual selection theory — an evolutionary theory that predicts specific differences between male and female organisms — in that anger in the male face would be detected rapidly by other males to whom such cues might have had very real survival consequences."

The authors conclude that their findings are consistent with the idea that detection systems for facial expressions have evolved differently in men and women, and that this finely-honed ability probably developed as a response to threat and danger.
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