

Your brain is making subliminal, near-instantaneous judgements of people based on their faces

We've all heard about the importance of first impressions. All it takes is a matter of milliseconds for your mind to decide whether someone is friend or foe; to recognize loved ones or to judge strangers. But what if you don't even know you saw someone? Your brain is still passing judgement, according to new research.

A team led by psychologist Jonathan Freeman, from New York University, performed a set of experiments wherein they used MRI to track volunteers' brain response to different faces even when the faces were being masked from their conscious perception. In other words, they didn't know they'd seen faces. But their brains still responded to the apparent trustworthiness of the faces they were being shown.

The team used both natural faces rated for their trustworthiness and computer-generated faces.

[Wired UK explains the experimental structure:](#)

Subjects were asked to look at images of faces that had been modified to enhance features known to signal trustworthy (high inner eyebrows and well-defined cheekbones) or untrustworthiness (the opposite). Another group was allowed to rate all the faces according to how trustworthy they were, in order to check the authors' assumptions were correct. Those having their brain activity monitored while being exposed to the images had to view those images during a process called backward masking. This is a process used in cognitive experiments and involves showing two images, or an image and another form of stimuli, in quick succession in order to mask the first one piece of content.

What they found was that the amygdala, a small region deep in the brain that's associated with strong emotions, including the famous "fight or flight" response, reacted similarly to faces regardless of whether or not the brain consciously perceived it. But the real question, [as captured by The Guardian](#), is whether or not these differences in brain perception would amount to differences in behavior:

Freeman said the biggest question now was whether the brain activity altered how people behaved. "Even though people might not have conscious awareness, they might move back very subtly when perceiving an untrustworthy face, but that is still unknown," he said.

The evolutionary logic is that, historically, one of the biggest dangers our species faced was, well, our species. Conflict between groups claimed many lives, so it's to our evolutionary benefit as a social (and occasionally violent) species to be able to read whether a new face poses a threat or not and prep the body accordingly.

The Independent offers some useful context:

[A] University of York study last month provided further evidence that similar principles can be applied to other characteristics. Breaking down faces to their key constituent parts and shapes, they found that subjects nearly always identified large smiles with approachability.

Youthfulness and attractiveness were governed by the size and shape of our eyes and eyebrows, while the way the brain registered “dominance” was closely aligned with masculine facial structures.

Like others, though that study showed that there is really no correlation between these features and a person’s actual personality.

There’s the rub: if these apparently subconscious measures of others’ personalities have to have been accurate and useful at some point in our evolutionary history to have become so deeply ingrained in how our brains function. And deeply ingrained they appear to be, as demonstrated by this latest research.

As for what’s next, Freeman and his colleagues note that this could just be the tip of the iceberg in terms of what sort of complicated social processing is taking place beneath the level of consciousness. First impressions may run deeper than we ever realized.

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Additional Resources:

- [Your brain helps you judge a face before you even see it](#), Washington Post
- [Friend Or Foe? Even When Faces Are Not Clearly Visible, Your Brain Unconsciously Makes Judgments](#), Medical Daily
- [MIT researchers use MRI to study genetic activity in brains](#), Genetic Literacy Project