

Human brain recognizes and reacts to race

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The human brain fires differently when dealing with people outside of one's own race, according to new research out of the University of Toronto Scarborough.

This research, conducted by social [neuroscientists](#) at UofT Scarborough, explored the sensitivity of the "mirror-neuron-system" to race and ethnicity. The researchers had study participants view a series of videos while hooked up to electroencephalogram (EEG) machines. The participants - all white - watched simple videos in which men of different races picked up a glass and took a sip of water. They watched white, black, South Asian and East Asian men perform the task.

Typically, when [people](#) observe others perform a simple task, their motor cortex region fires similarly to when they are performing the task themselves. However, the UofT research team, led by PhD student Jennifer Gutsell and Assistant Professor Dr. Michael Inzlicht, found that participants' motor cortex was significantly less likely to fire when they watched the visible minority men perform the simple task. In some cases when participants watched the non-white men performing the task, their brains actually registered as little activity as when they watched a blank screen.

"Previous research shows people are less likely to feel connected to people outside their own ethnic groups, and we wanted to know why," says Gutsell. "What we found is that there is a basic difference in the way peoples' brains react to those from other ethnic backgrounds. Observing someone of a different race produced significantly less [motor-](#)

[cortex](#) activity than observing a person of one's own race. In other words, people were less likely to mentally simulate the actions of other-race than same-race people"

The trend was even more pronounced for participants who scored high on a test measuring subtle [racism](#), says Gutsell.

"The so-called mirror-neuron-system is thought to be an important building block for empathy by allowing people to 'mirror' other people's actions and emotions; our research indicates that this basic building block is less reactive to people who belong to a different race than you," says Inzlicht.

However, the team says cognitive perspective taking exercises, for example, can increase empathy and understanding, thereby offering hope to reduce prejudice. Gutsell and Inzlicht are now investigating if this form of perspective-taking can have measurable effects in the brain.

The team's findings are published in the *Journal of Experimental Social Psychology*.

Provided by University of Toronto

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