

Genes May Predispose Some People to Focus on the Negative

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New research finds that a previously known gene variant may predispose individuals to perceive emotional events — especially negative ones — more vividly than others.

The new findings are published in [Psychological Science](#), a journal of the [Association for Psychological Science](#).

“This is the first study to find that this genetic variation can significantly affect how people see and experience the world,” says psychological scientist Rebecca Todd of the University of British Columbia. “The findings suggest people experience emotional aspects of the world partly through gene-colored glasses — and that biological variations at the genetic level can play a significant role in individual differences in perception.”

The gene in question is the ADRA2b deletion variant, which influences the hormone and neurotransmitter norepinephrine. Previously found to play a role in the formation of emotional memories, the new study shows that the ADRA2b deletion variant also plays a role in real-time perception.

The study’s 200 participants were shown positive, negative and neutral words in a rapid succession. Participants with the ADRA2b gene variant were more likely to notice negative target words than others, while both groups were able to pick out positive words better than neutral words to an equal degree.

“These individuals may be more likely to pick out angry faces in a crowd of people,” says Todd. “Outdoors, they might notice potential hazards — places you could slip, loose rocks that might fall — instead of seeing the natural beauty.”

The findings shed new light on ways in which genetics — combined with other factors such as education, culture, and moods — can affect individual differences in emotional perception and human subjectivity, the researchers say.

Further research is planned to explore this phenomenon across ethnic groups. While more than half of Caucasians are believed to have the ADRA2b gene variant, statistics suggest it is significantly less prevalent in other ethnicities. For example, a recent study found that only 10 per cent of Rwandans had the ADRA2b gene variant.