

## People who wear rose-colored glasses see more, study shows

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A University of Toronto study provides the first direct evidence that our mood literally changes the way our visual system filters our perceptual experience suggesting that seeing the world through rose-coloured glasses is more biological reality than metaphor.

"Good and bad moods literally change the way our visual cortex operates and how we see," says Adam Anderson, a U of T professor of psychology. "Specifically our study shows that when in a positive [mood](#), our visual cortex takes in more information, while negative moods result in tunnel vision. The study appears today in the [Journal of Neuroscience](#) at [www.jneurosci.org](http://www.jneurosci.org).

The U of T team used [functional magnetic resonance imaging](#) to examine how our [visual cortex](#) processes sensory information when in good, bad, and neutral moods. They found that donning the rose-coloured glasses of a good mood is less about the colour and more about the expansiveness of the view.

The researchers first showed subjects a series of images designed to generate a good, bad or neutral mood. Subjects were then shown a composite image, featuring a face in the centre, surrounded by "place" images, such as a house. To focus their attention on the central image, subjects were asked to identify the gender of the person's face. When in a bad mood, the subjects did not process the images of places in the surrounding background. However, when viewing the same images in a good mood, they actually took in more information -- they saw the

central image of the face as well as the surrounding pictures of houses. The discovery came from looking at specific parts of the brain -- the parahippocampal "place area" -- that are known to process places and how this area relates to primary visual cortical responses, the first part of the cortex related to vision. Images from the experiment are at [aclab.ca](http://aclab.ca)

"Under positive moods, people may process a greater number of objects in their environment, which sounds like a good thing, but it also can result in distraction," says Taylor Schmitz, a graduate student of Anderson's and lead author of the study. "Good moods enhance the literal size of the window through which we see the world. The upside of this is that we can see things from a more global, or integrative perspective. The downside is that this can lead to distraction on critical tasks that require narrow focus, such as operating dangerous machinery or airport screening of passenger baggage. Bad moods, on the other hand, may keep us more narrowly focused, preventing us from integrating information outside of our direct attentional focus."

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