

# When you're happy, your dog might look sad

## ASU study reveals surprising twist in how we read canine emotions

By Joe Rojas-Burke, ASU News  
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When people are feeling happy, they're more likely to see other people as happy. If they're feeling down, they tend to view other people as sad. But when dealing with dogs, this well-established psychological effect ceases to work as expected.

That's according to a new study by behavioral scientists at Arizona State University.

In one experiment, nudging people into positive emotional states by showing them pictures that usually cheer people up did not significantly impact how they perceived dog emotions. In a modified experiment, the effect actually worked in reverse: People prompted to feel upbeat tended to rate dogs as being sadder. Those nudged into a negative mood deemed dogs to be happier.

"In this domain of how people understand dog's emotions, I'm continuously surprised," said study co-author [Clive Wynne](#), a professor of psychology and director of the [Canine Science Collaboratory](#) at ASU. "I feel like we are just scratching at the surface of what is turning out to be quite a big mystery."

The research is part of a broader effort to uncover the biases of the human mind that shape our perceptions of animal emotions.

"If we can better understand how we perceive animal emotions, we can better care for them," said first author Holly Molinaro, president and senior animal welfare scientist at Animal Wellbeing Solutions. She and Wynne [published their findings](#) in the journal PeerJ.

The researchers recruited a trio of dogs to help with the work: Oliver, a 14-year-old mixed-breed; Canyon, a 1-year-old Catahoula dog; and Henry, a 3-year-old French bulldog. They needed videos of the canines reacting in a positive, neutral or negative state, so they asked the dogs' owners to prompt their pets with emotional cues.

For the positive nudge, a treat worked for Oliver and a toy for Canyon. Henry only had to hear he was going to see "Grandma." To kill the mood, Oliver was shown a cat. Viewing a vacuum cleaner did it for Canyon and Henry. Neutral-mood videos showed the dogs resting or waiting for their owner to present another prompt. The researchers edited the video clips so that only the dog was visible on a black background.

In the first experiment, 300 undergraduate students viewed images from a standardized set used by psychologists to bring about a positive, neutral or negative mood. After watching short video clips of the dogs in positive, neutral or negative states, the participants rated how happy or sad each dog looked, and how calm or excited it seemed.

While the priming successfully shifted people's moods, it did not affect how people rated the emotional state of dogs.

"It just didn't work the way that it does when you do this with humans," Wynne said.

To make sense of the surprising result, the researchers decided to run a second experiment. They wanted to find out if the priming didn't work as expected because it relied largely on pictures of people.

"We thought what if we use priming images that were actually dogs — a dog playing in the park, a puppy in a teacup, for example, or a dog that looks sad behind bars or a dog left on the side of the street," Molinaro said.

(Video: <https://vimeo.com/1143524049?share=copy&fl=sv&fe=ci>)

They recruited another 300 undergraduates to repeat the experiment with dog-only images used to prime their mood.

"This time what we found was an effect, but in the opposite direction," she said. "All those that saw the happy dog images rated the dogs as more sad. And all those who saw the sad dog images rated the dogs in the videos as happier."

Also noteworthy, the researchers found that merely watching the videos of dogs against a black background — even dogs shown in a negative mood — lifted the emotional state of study participants.

In all, the findings highlight how much remains to be learned about our relations with dogs.

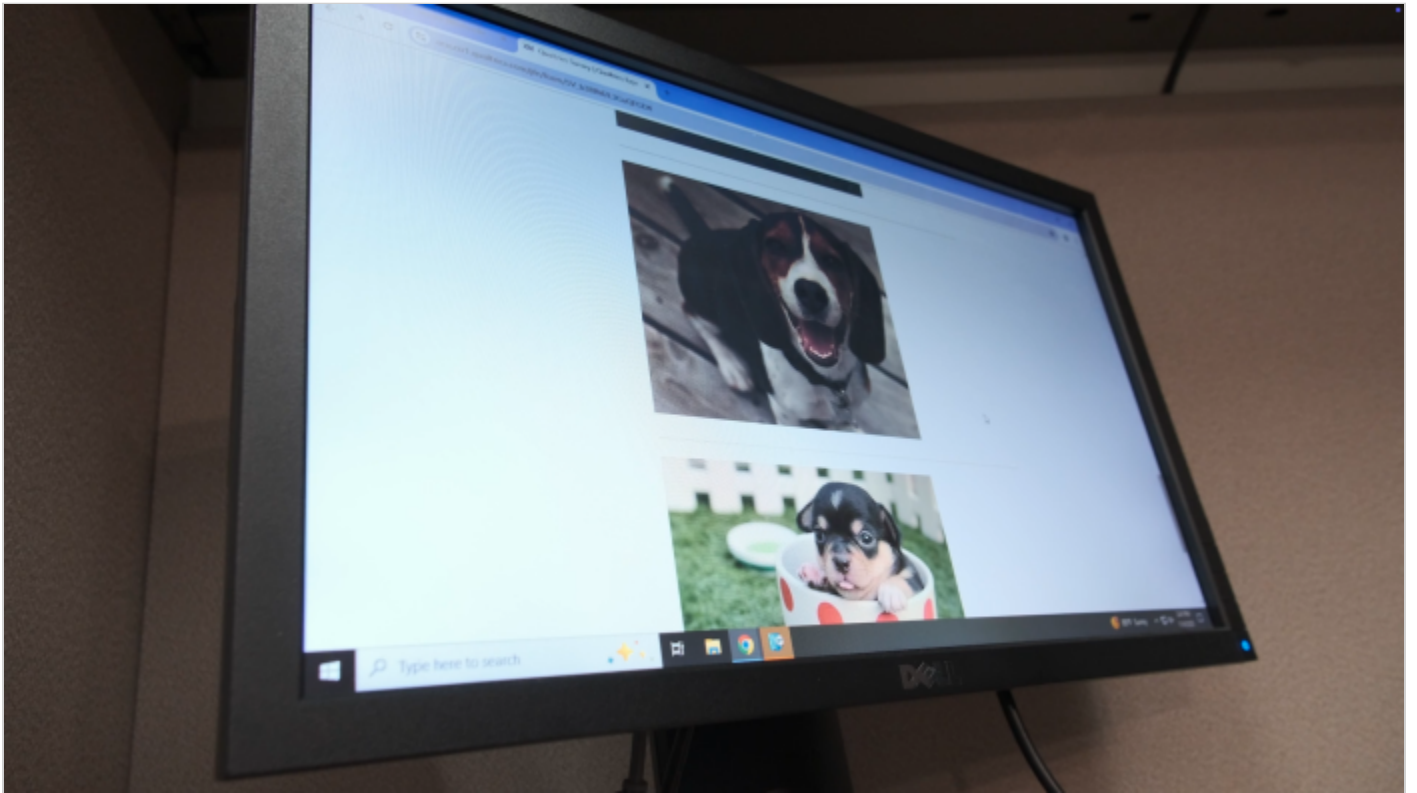
"People and dogs have been living intimately with each other for at least 14,000 years. And in that time, dogs have learned plenty of things about how to get along with human beings," Wynne said. "And yet our research suggests that there are quite big gaps in how we understand what dogs are feeling."

That matters because misreading or overlooking emotional cues can lead to inappropriate handling, delayed intervention, or unmet behavioral and psychological needs for animals in human care. Molinaro and Wynne believe their research can improve human-animal interaction and support more accurate, empathetic and welfare-conscious care.

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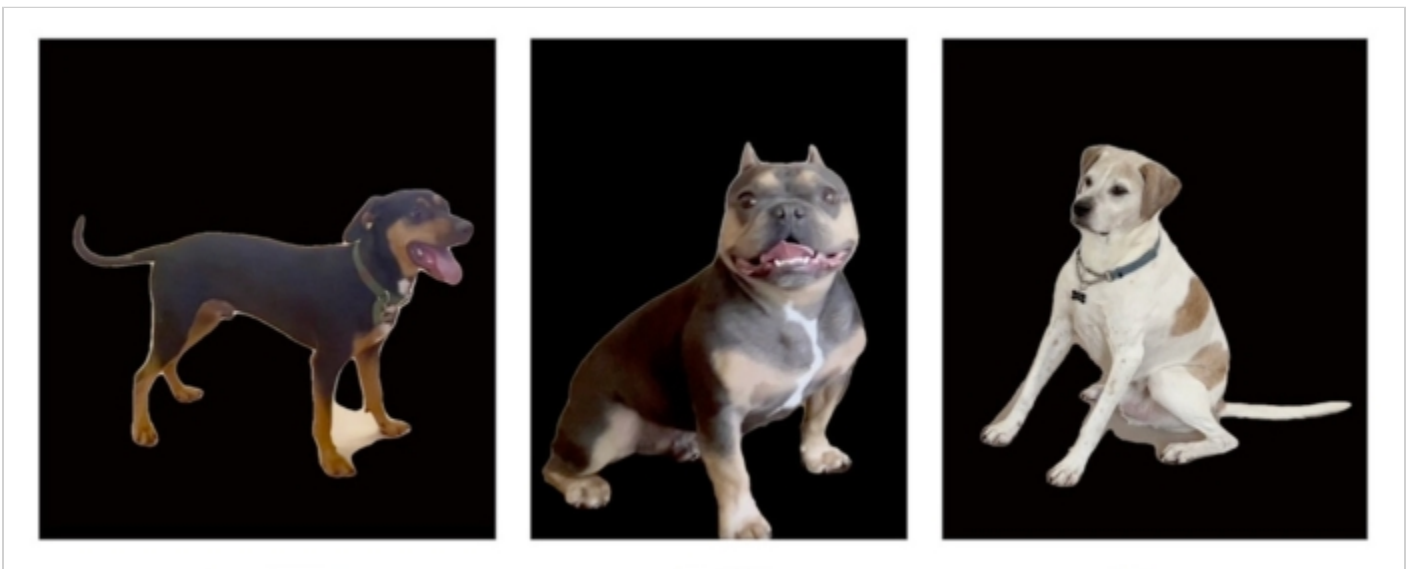
*This story originally appeared on [ASU News](#).*

## Main image



Researchers used images of dogs to shift the mood of study participants. Courtesy image

## Text image(s)



The three dogs used in the study videos, from left: Canyon, Henry and Oliver.