

Your Dog Is Listening – Does He Understand What You're Saying?

Dogs pick up on the emotional cues and nuances in your voice, but do they understand the words too? Research brings increased understanding into how dogs process speech, and it turns out its remarkably similar to humans.

Reviewed by Dr. Becker

STORY AT-A-GLANCE

- Research suggests dogs sense a difference between the verbal and emotional components of speech
- Dogs appear to process emotional cues and meanings of words in different hemispheres of the brain, similar to humans
- The average dog understands about 165 different words, although they may learn more if you train them to

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When you speak to your dog, you probably have a sixth sense that he somehow understands what you're saying. Dogs are intelligent creatures, after all, and they've been living with humans for tens of thousands of years.

The average dog understands about 165 different words, although they may learn more if you train them to.¹ It's known that dogs pay attention to the tone of our voices, the pitch and the rhythms in our speech, but whether or not they pay attention to the meaning of the words was less clear — until now.

Researchers from the University of Sussex in England conducted a unique experiment to determine whether dogs listen to our words, with results that may not be too surprising for many dog owners.

Dogs Process Speech in Ways Similar to Humans

When listening to another person speak, humans tend to use the left hemisphere of their brain to process the verbal content and the right hemisphere to process the emotional content and characteristics of speech (such as whether it's familiar or not). According to study author Victoria Ratcliffe:²

"Previous studies have shown that other mammals also have hemispheric biases when processing their own species' vocalizations, but no one had ever looked at whether biases existed in domesticated animals in response to the different components of human speech."

The study, which was published in the journal *Current Biology*,³ involved 250 dogs that heard the "come" command out of speakers on the right or left side of their heads. The command was played with varying inflections, emotional cues, in different languages, and even with gibberish in place of the words.

The researchers then recorded whether the dogs turned their heads toward the left or right speaker. A pattern emerged, with the dogs turning toward the right when they heard meaningful words and to the left when the command included just emotional cues.

The results suggest dogs are able to distinguish between meaningful and meaningless sounds. As reported by NPR:⁴

"The study also suggests that a dog's brain breaks up speech into two parts: the emotional cues and the meaning of the words. Then it processes these two components on opposite sides of the brain: emotional cues on the right, meaning of words on the left. (Yes, it's opposite to the way the dogs turned.)"

"That's a bit similar to how we humans process speech. We also break up speech into several parts, such as the meaning of the words, clues about the speaker and emotional cues."

Although it appears dogs do sense a difference between the verbal and emotional components of speech, it's still unclear to what extent they understand each.

Dogs Pay Attention to Your Non-Verbal Communication Too

When you communicate, it's not only your words that matter. Your posture, gestures and eye contact also speak volumes, and your dog pays attention to these cues closely. Dogs will follow your gaze similarly to a 6-month-old infant, but only if you convey the intention of communication, which suggests they're quite in-tune with your communicative signals.⁵

There are many theories as to why and how dogs developed such strong responsiveness to our communicative gestures. It could be that dogs spend more time around humans than other species, or that they quickly learned paying close attention might get them more rewards (like food). As reported in the journal *Behavioral Processes*:⁶

"Dogs are more skillful than a host of other species at tasks which require they respond to human communicative gestures in order to locate hidden food. Four basic interpretations for this proficiency surface from distilling the research findings."

"One possibility is that dogs simply have more opportunity than other species to learn to be responsive to human social cues. A different analysis suggests that the domestication process provided an opening for dogs to apply general cognitive problem-solving skills to a novel social niche."

"Some researchers go beyond this account and propose that dogs' co-evolution with humans equipped them with a theory of mind for social exchanges."

"Finally, a more prudent approach suggests that sensitivity to the behaviors of both humans and conspecifics would be particularly advantageous for a social scavenger like the dog. A predisposition to attend to human actions allows for rapid early learning of the association between gestures and the availability of food."

How Does Your Dog Communicate with You?

While humans use speech as a primary form of communicating, your dog may "talk" to you using different forms of communication — like tail movements. Dogs display submission by tucking their tails and lying on their backs. They display dominance by staring, raising their fur, and baring their teeth.

Further, dogs tend to wag their tails to the right side when they encounter something pleasant (like their owners). When they see something threatening, for example a strange dog exhibiting dominant behaviors, they wag more to the left side.⁷

Certain species of **canines also use their eyes to communicate**, and the fact that your dog will make direct eye contact with you may be one important feature that distinguishes him from wild dogs, or wolves. As written in Current Biology:⁸

"... we suggest that the key difference between dog and wolf behavior is the dogs' ability to look at the human's face.

Since looking behavior has an important function in initializing and maintaining communicative interaction in human communication systems, we suppose that by positive feedback processes (both evolutionary and ontogenetically) the readiness of dogs to look at the human face has lead to complex forms of dog-human communication that cannot be achieved in wolves even after extended socialization."

Dogs are even known to respond in a unique way when a person cries. Many dogs approach crying people while displaying submissive behaviors, both of which suggest (but do not prove) some level of empathy.

It's likely that ongoing research into the emotional lives and capabilities of dogs will continue to reveal their seemingly uncanny ability to understand us. And even if it doesn't ... simply looking into your dog's eyes or having him sit loyally by your side after a hard day is proof enough for most dog owners.

Sources and References

¹ [Animal Planet, Can Dogs Understand What We Say?](#)

² [University of Sussex November 28, 2014 \(Archived\)](#)

³ [Current Biology December 15, 2014](#)

⁴ [NPR November 28, 2014](#)

⁵ [Curr Biol. 2012 Feb 7;22\(3\):209-12](#)

⁶ [Behav Processes. 2009 Mar;80\(3\):325-33](#)

⁷ [Current Biology, Volume 23, Issue 22, 2279-2282, 31 October 2013](#)

⁸ [Curr Biol. 2003 Apr 29;13\(9\):763-6](#)