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Dog Tips

Talking This Way to Your Dog Could Strengthen Your Bond

Earlier, researchers concluded that adult dogs don't respond to baby talk like puppies do. However, in this new study, they set things up a little differently and discovered the type of talk adult dogs really prefer from their pet parents.

Reviewed by Dr. Becker

STORY AT-A-GLANCE

- A past study suggested that while puppies respond to “baby talk” (dog-directed speech similar to infant-directed speech), adult dogs don’t seem to
- U.K. researchers decided to test the validity of that conclusion by changing a component of the previous experiment — putting humans in the room with the dogs as they listened to speech recordings
- The study results showed that adult dogs also respond to “baby talk” when a human is present
- Research involving brain scans shows that adult dogs also have a heightened response to praise delivered in an upbeat tone
- The researchers observed that the dogs used the left hemisphere of their brains to process meaningful — but not meaningless — words, and the right hemisphere to process vocal tones

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When pet parents talk to their dogs, their pattern of speech is often very similar to the way adults talk to human babies. It's called "infant-directed speech," and it's characterized by a higher pitch, tone changes that rise and fall, and greater affect (e.g., slightly exaggerated facial expressions).

"Dog-directed speech" is similar to infant-directed speech, except that dog owners typically don't exaggerate their vowels as they do with babies, probably because there's no need to, since dogs can't learn to talk no matter how well we enunciate!

Research with infants shows they are often more responsive to infant-directed speech than adult-directed speech. But what about dogs? Do they prefer dog-directed speech to adult-directed speech? A pair of researchers in the U.K. decided to see if they could find the answer by observing 37 dogs at a boarding kennel.

We Know Puppies Respond to 'Baby Talk,' but Do Adult Dogs Prefer It as Well?

The research team published its findings in the journal Animal Cognition.[1] They built on previous research suggesting that while puppies prefer dog-directed speech ("baby talk"), adult dogs do not — at least not in situations in which recordings were played for them over a loudspeaker and there was no human in the room.

The researchers theorized the results of the previous study might be different if there had been a person in the room for the dogs to associate with, so they set out to test their hypothesis. They set up their study similar to the earlier one, but they replaced the loudspeakers with volunteers holding audio playback devices on their laps.

The volunteers were asked to play recordings of their own voices using either dog-directed or adult-directed speech. In the first phase of the experiment, the researchers had the volunteers record words and phrases people would normally say to dogs using both dog-directed and adult-directed speech.

Interestingly, dogs of all ages showed a definite preference for the dog-directed speech over the adult-directed speech. They were attentive to and willing to approach the speaker (the volunteer holding the playback device) after the recordings concluded.

Study Shows Dogs of All Ages Respond to Dog-Directed Speech When a Person Is Present

In the next phase, the researchers hoped to learn what aspects of dog-directed speech the dogs preferred. Was it the words and phrases, tone of voice and inflections, or a combination of factors that appealed to them? To accomplish this, the research team switched things up, pairing dog-directed intonations and inflections with adult-directed words and phrases, and adult-directed intonations with dog-directed words and phrases.

The result was that the dogs showed no preference for either type of speech, suggesting it is both factors — words/phrases and tone of voice/inflections — in dog-directed speech that attracts them. The researchers concluded dogs of all ages prefer natural dog-directed speech when a person is present, which may be linked to the heightened attention and **bonding** that takes place when people use dog-directed speech. The researchers offer three possible explanations for why dogs prefer "baby talk:"

1. The high-pitched tones are associated with "affiliation and submission" in many mammal species
2. During the process of domestication, dogs were attracted to and felt safer with humans who used high-pitched tones to speak to them
3. High-pitched speech often occurs during positive events involving play, toys and treats

> *"Whatever the reason," writes veterinary behaviorist Dr. John Ciribassi, "it does seem as though talking 'baby talk' to dogs can result in an increased response and tighter social bond between you and your dog."*
>
> *"But keep in mind that there can be too much of a good thing. Constant communication with dog-directed speech may result in habituation to the sound, resulting in a reduction in response. So restricting the use of dog-directed speech to periods of play or training may help maintain the effect for longer periods."*[2]

Ciribassi believes the U.K. study reinforces what most dog parents know, which is that the more animated we are when we interact with our dogs, the more actively they respond to us.

Earlier Study Shows Adult Dogs Respond to Praise Delivered in an Upbeat Tone

In a 2016 study, researchers concluded that adult dogs listen to both what we say, and how we say it.[3] When you **praise your dog**, her brain's "reward center" perks up if your words match your tone of voice. Lead researcher Attila Andics, Ph.D., of Eötvös Loránd University in Budapest explains:

> *"During speech processing, there is a well-known distribution of labor in the human brain. It is mainly the left hemisphere's job to process word meaning, and the right hemisphere's job to process intonation.*
>
> *The human brain not only separately analyzes what we say and how we say it, but also integrates the two types of information, to arrive at a unified meaning. Our findings suggest that dogs can also do all that, and they use very similar brain mechanisms."*[4]

For the study, 13 dogs were trained to lie completely still for functional magnetic resonance imaging (fMRI) brain scans so the researchers could analyze their brain activity as they listened to their trainer talk. The dogs were "volunteers," meaning they could leave the experiment at any time.

The trainer praised the dogs using words and phrases such as "good boy," "super" and "well done." The words were spoken in both an upbeat tone and a neutral tone. The trainer also used neutral conjunction words like "however," and "nevertheless" that meant nothing to the dogs.

While the trainer spoke, the researchers checked the scans for regions of the dogs' brains that were able to differentiate between praise words and meaningless words, as well as praise and non-praise (neutral) tones of voice.

The researchers observed that the dogs used the left hemisphere of their brains to process meaningful — but not meaningless — words, and the right hemisphere to process vocal tones. The research team also observed from the scans that the reward center of the dogs' brains was strongly triggered by praise, but only when the praise was spoken in an encouraging, upbeat tone.

All other combinations of words and vocal tones resulted in much less reward center activity. For example, when the trainer said "good boy" in a neutral tone, or "however" in either a positive or neutral tone, the result was the same — the dogs' reward centers didn't light up. According to Andics:

> *" ... [F]or dogs, a nice praise can very well work as a reward, but it works best if both words and intonation match. So dogs not only tell apart what we say and how we say it, but they can also combine the two, for a correct interpretation of what those words really meant. Again, this is very similar to what human brains do."*[5]

Sources and References

[1] Animal Cognition, May 2018, Volume 21, Issue 3, pp 353-364

[2] dvm360, May 31, 2018

[3] Science. 2016 Sep 2;353(6303):1030-1032

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