

## Your Dog Does This Every Day but What Is He Saying?

Scientists have been studying this daily doggie habit and they may have come to a far different conclusion than you'd expect. In fact, at least two other animals do this with far more clarity than dogs do. So why are scientists and dog owners apparently so far apart on this issue?

Reviewed by Dr. Becker

### STORY AT-A-GLANCE

- Dogs bark differently in different contexts, essentially producing a variety of bark subtypes that may act as specific forms of communication
- Dogs produce different barks in response to a disturbance, isolation and play, for instance
- Dogs can also be identified by their unique barks

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Many pet owners can distinguish meaning from their dog's various barks. One bark may be used when your dog is excited (such as when you come home), another when your dog senses a threat and another when he's feeling playful.

To the research world, however, it's been suggested that dog barking, which can sometimes continue at length even in the seeming absence of a reply, is mostly just noise.

This sentiment began to change in light of research on other animal vocalizations, such as that from chickens. Chickens make at least 30 different sounds, including "cluck," "pok," "bawk" and "squawk," each with its own translation.

They make different sounds for attention, food, warning about predators (even distinguishing between flying or ground-based predators) and more. If chickens have a complex language, then why not dogs? Even longer communications that seem to elicit no direct responses (like barking) may be misunderstood.

Studies have demonstrated that ground squirrels listening to long vocalizations from other ground squirrels change their activity and body postures in response. Even wolves may howl for hours on end, and it's unlikely this is done with no purpose.

### Dogs Produce Different Bark Subtypes

The late Dr. Sophia Yin, an applied animal behaviorist, explored the hypothesis that dogs bark differently in different contexts, essentially producing a variety of bark subtypes that may act as specific forms of communication.

She recorded 10 barking dogs in three different situations and found each could, in fact, be categorized into a subtype:

1. **A disturbance situation** — Dogs barking at the sound of a doorbell had harsh, low-pitched barks with little pitch variation. Yin wrote in *The Bark*, “Dogs blurted these barks out full force and so fast that they were often fused into what I formally dubbed ‘superbarks.’”<sup>1</sup>
2. **An isolation situation** — When dogs were locked outside, isolated from their owners, they used higher pitched, more tonal barks that varied in pitch and amplitude. Yin explained, “Usually, they occurred as single barks, but some dogs definitely learned to bark more repetitively when doing so eventually reunited them with their owner.”<sup>2</sup>
3. **A play situation** — Barking that occurred when dogs were playing with their owners or other dogs were similar to isolation barks but tended to occur in clusters, not singly.

The subtypes were revealed via careful analysis of more than 600 recorded barks. Yin and a colleague, acoustic animal communication specialist Brenda McCowan, Ph.D. from the University of California, Davis, used a sound-analysis program to convert the audio recordings into visual representations of pitch and amplitude over time.

## Dogs Can Be Identified by Their Barks

Another intriguing aspect of the study related to identifying individual dogs according to their bark. It turned out that this is indeed possible, but if you’re the owner of multiple dogs, you probably knew this already.

Not only can you likely determine which of your dogs is barking at any given time (without actually seeing them), if you pay attention you should also be able to identify which one of your neighbors’ dogs is barking solely by the sound.

In addition, the study revealed that since bark subtypes tend to occur in different contexts, barking can provide specific information to listeners. For instance, your dog may have a specific bark to alert you of an intruder and another to tell you that a familiar friend is at the door.

He may also use different sounds (huffs, for instance) depending on the urgency of his requests (such as to be let in or outside).

## Are Your Dog’s Barks a Form of Communication?

Again, most dog owners would quickly say, “yes,” but in terms of science “for a vocalization to be communication, the animal who hears the signal must respond in a specific way,” Yin wrote.<sup>3</sup>

At least one study on dogs in Italy suggests this is the case. When small groups of feral dogs heard the collective barks of a large group of feral dogs heading toward a garbage dump, the smaller groups left the area (presumably rather than staying to challenge the other dogs).

In order for vocalizations to be communication, it’s also said that the vocalizer should change its “tune” in response to its listeners reactions. Yin suggests that this, too, is likely the case. She wrote in *The Bark*:<sup>4</sup>

*“While there is little research in this area, general observations indicate that this happens too.”*

*For instance, when one dog barks at the doorbell and another dog, or even the resident human, joins in a barky 'No! No!,' the dog responds with louder and more prolonged bark behavior. Take away his back-up and suddenly, the initial barking bout abates."*

## **A Universal Animal Language**

Some researchers have also suggested that a universal animal language unites all mammals, even humans, to some extent. In a study published in the journal *Applied Animal Behaviour Science*, for instance, researchers found both adults and children could easily identify fearful/lonely, angry and playful dog barks.<sup>5</sup>

Even people who had little experience with dogs were able to correctly interpret a dog's emotional state based on its bark. It's possible that all mammals are genetically wired to make (and interpret) similar sounds in response to certain emotions.

It's also possible, as suggested by Stanley Coren, Ph.D., professor emeritus at the University of British Columbia, that humans preferred dogs with more interpretable barks, and this trait was selected for over time. The end result may be that dogs are able to easily communicate different emotions to us via their barks (and they, in turn, are able to pick up on our emotions as well).<sup>6</sup>

### **Sources and References**

<sup>1, 2, 3, 4</sup> [Kinship December 29, 2021](#)

<sup>5</sup> [Applied Animal Behaviour Science October 5, 2011](#)

<sup>6</sup> [Psychology Today October 21, 2015](#)

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