

Study tests how well humans interpret dog growls

May 17 2017, by Bob Yirka



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(Phys.org)—A team of researchers with Eötvös Loránd University in

Hungary has conducted a study regarding how well humans interpret dog growls. In their paper published in *Royal Society Open Science*, the group reports on how well volunteers listening to taped dog growls correctly guessed the circumstances behind them.

People have been living with [dogs](#) for a very long time, but, the [researchers](#) with this new effort wondered, have we learned to understand their communications? Other groups have studied barking in dogs and how people interpret them—in this new effort, the researchers sought to learn more about how well we humans understand what dogs are driving at when they growl.

Growling in dogs is generally associated with aggressiveness, though growls are not always threatening—dogs often growl as part of their play, for example. To learn more about how well people are able to interpret dog growls, the researchers looked at how well they discern the differences between growls that occur during different activities such as when encountering a stranger (dog or human), defending a bowl of food, or when playing. They obtained recordings of dogs engaging in such activities and then played them individually for a group of volunteers—as growls were played, the researchers asked the volunteers to match the growl with a given [activity](#).

In all, the researchers asked 40 volunteers to listen to recordings of 18 dogs growling and to report which activity they felt was involved with each. They [report](#) that overall, the volunteers correctly matched the growl with the activity 63 percent of the time, which, they suggest, is well above guesswork. The researchers also found that women were better at reading the growls than men, guessing correctly 65 percent of the time, compared to just 45 percent for men. They also found that [people](#) who owned or worked with dogs regularly were better at reading the dog growls than those who did not by a margin of 60 percent to 40 percent. The volunteers were best at recognizing growls during play, but

found it difficult to differentiate between growls associated with food guarding versus those associated with threat when encountering another dog.

More information: T. Faragó et al. Dog growls express various contextual and affective content for human listeners, *Royal Society Open Science* (2017). [DOI: 10.1098/rsos.170134](https://doi.org/10.1098/rsos.170134)

Abstract

Vocal expressions of emotions follow simple rules to encode the inner state of the caller into acoustic parameters, not just within species, but also in cross-species communication. Humans use these structural rules to attribute emotions to dog vocalizations, especially to barks, which match with their contexts. In contrast, humans were found to be unable to differentiate between playful and threatening growls, probably because single growls' aggression level was assessed based on acoustic size cues. To resolve this contradiction, we played back natural growl bouts from three social contexts (food guarding, threatening and playing) to humans, who had to rate the emotional load and guess the context of the playbacks. Listeners attributed emotions to growls according to their social contexts. Within threatening and playful contexts, bouts with shorter, slower pulsing growls and showing smaller apparent body size were rated to be less aggressive and fearful, but more playful and happy. Participants associated the correct contexts with the growls above chance. Moreover, women and participants experienced with dogs scored higher in this task. Our results indicate that dogs may communicate honestly their size and inner state in a serious contest situation, while manipulatively in more uncertain defensive and playful contexts.

Citation: Study tests how well humans interpret dog growls (2017, May 17) retrieved 25 April 2024 from <https://phys.org/news/2017-05-humans-dog-growls.html>

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