

Dogs read our intent too: study

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Dogs pick up not only on the words we say, but also on our intent to communicate with them, according to a report published online in the Cell Press journal *Current Biology* on Jan. 5. Image: *Current Biology*, Téglás et al.

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The findings might help to explain why so many people treat their furry friends like their children; dogs' receptivity to [human communication](#) is surprisingly similar to the receptivity of very young children, the researchers say.

"Increasing evidence supports the notion that humans and dogs share some social skills, with dogs' social-cognitive functioning resembling that of a 6-month to 2-year-old child in many respects," said József Topál of the Hungarian Academy of Sciences. "The utilization of

ostensive cues is one of these features: dogs, as well as human infants, are sensitive to cues that signal communicative intent."

Those cues include verbal addressing and eye contact, he explained. Whether or not dogs rely on similar pathways in the brain for processing those cues isn't yet clear.

Topál's team presented dogs with video recordings of a person turning toward one of two identical plastic pots while an eye tracker captured information on the dogs' reactions. In one condition, the person first looked straight at the dog, addressing it in a high-pitched voice with "Hi dog!" In the second condition, the person gave only a low-pitched "Hi dog" while avoiding eye contact.

The data show that the dogs were more likely to follow along and look at the pot when the person first expressed an intention to communicate.

"Our findings reveal that dogs are receptive to human communication in a manner that was previously attributed only to human infants," Topál said.

As is often the case in research, the results will undoubtedly confirm what many dog owners and trainers already know, the researchers say. Notably, however, it is the first study to use eye-tracking techniques to study dogs' social skills.

"By following the eye movements of [dogs](#), we are able to get a firsthand look at how their minds are actually working," Topál said. "We think that the use of this new eye-tracking technology has many potential surprises in store."

More information: Téglás et al.: "Dogs' gaze following is tuned to human communicative signals." [DOI:10.1016/j.cub.2011.12.018](https://doi.org/10.1016/j.cub.2011.12.018)

Abstract

Recent evidence suggests that preverbal infants' gaze following can be triggered only if an actor's head turn is preceded by the expression of communicative intent. Such connectedness between ostensive and referential signals may be uniquely human, enabling infants to effectively respond to referential communication directed to them. In the light of increasing evidence of dogs' social communicative skills, an intriguing question is whether dogs' responsiveness to human directional gestures is associated with the situational context in an infant-like manner. Borrowing a method used in infant studies, dogs watched video presentations of a human actor turning² toward one of two objects, and their eye-gaze patterns were recorded with an eye tracker. Results show a higher tendency of gaze following in dogs when the human's head turning was preceded by the expression of communicative intent (direct gaze, addressing). This is the first evidence to show that (1) eye-tracking techniques can be used for studying dogs' social skills and (2) the exploitation of human gaze cues depends on the communicatively relevant pattern of ostensive and referential signals in dogs. Our findings give further support to the existence of a functionally infant-analog social competence in this species.

Provided by Cell Press

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