

New dog, old tricks? Stray dogs can understand human cues

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If you have a dog, hopefully you're lucky enough to know that they are highly attuned to their owners and can readily understand a wide range of commands and gestures. But are these abilities innate or are they

exclusively learned through training?

To find out, a new study in *Frontiers in Psychology* investigated whether untrained stray [dogs](#) could understand [human](#) pointing gestures.

The study revealed that about 80% of participating dogs successfully followed pointing gestures to a specific location despite having never received prior [training](#). The results suggest that dogs can understand complex gestures by simply watching humans and this could have implications in reducing conflict between stray dogs and humans.

Dogs were domesticated 10,000-15,000 years ago, likely making them the oldest domesticated animals on the planet. Humans then bred dogs with the most desirable and useful traits so that they could function as companions and workers, leading to domesticated dogs that are highly receptive to human commands and gestures.

However, it was not clear whether dogs understand us through training alone, or whether this was innate. Can dogs interpret a signal, such as a gesture, without specific training, or even without having met the signaling person previously? One way to find out is to see whether untrained, stray dogs can interpret and react to human gestures.

Stray dogs are a common feature in cities around the world and particularly in many developing countries. While they may observe and occasionally interact with people, such dogs have never been trained, and are behaviorally "wild". Conflicts between stray dogs and humans are a problem and understanding how humans shape stray dog behavior may help alleviate this.

To investigate, Dr. Anindita Bhadra of the Indian Institute of Science Education and Research Kolkata, India, and colleagues studied stray dogs across several Indian cities. The researchers approached solitary

stray dogs and placed two covered bowls on the ground near them. A researcher then pointed to one of the two bowls, either momentarily or repeatedly, and recorded whether the dog approached the indicated bowl. They also recorded the perceived emotional state of the dogs during the experiment.

Approximately half of the dogs did not approach either bowl. However, the researchers noticed that these dogs were anxious and may have had bad experiences with humans before. The dogs who approached the bowls were noted as friendlier and less anxious, and approximately 80% correctly followed the pointing signals to one of the bowls, regardless of whether the pointing was momentary or repeated. This suggests that the dogs could indeed decipher complex gestures.

"We thought it was quite amazing that the dogs could follow a [gesture](#) as abstract as momentary pointing," explained Bhadra. "This means that they closely observe the human, whom they are meeting for the first time, and they use their understanding of humans to make a decision. This shows their intelligence and adaptability."

The results suggest that dogs may have an innate ability to understand certain human gestures which transcends training. However, it should be noted that the shyer, more anxious animals tended not to participate, so future studies are needed to determine more precisely how an individual dog's personality affects their ability to understand human cues.

Overall, dogs may be more perceptive than we realize. "We need to understand that dogs are intelligent animals that can co-exist with us," said Bhadra "They are quite capable of understanding our body language and we need to give them their space. A little empathy and respect for another species can reduce a lot of conflict."

More information: Debottam Bhattacharjee et al, Free-Ranging Dogs

Are Capable of Utilizing Complex Human Pointing Cues, *Frontiers in Psychology* (2020). [DOI: 10.3389/fpsyg.2019.02818](https://doi.org/10.3389/fpsyg.2019.02818)

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