

Dogs found able to perceive slight changes in human spoken words

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A team of researchers with the University of Sussex, the Defence Science and Technology Laboratory and the University of Lyon, has found that dogs are able to detect minor differences in spoken human

words. In their paper published in the journal *Biology Letters*, the group describes experiments they carried out with pet dogs and what they learned about their ability to hear slight differences in human language.

Most people know that [dogs](#) can be trained to understand some words spoken by humans—sit, beg and stay are some familiar examples. But it has been assumed that dogs do not really follow or even listen to regular human conversation, because they are not able to understand what is being said. In their new effort, they found that dogs are able to notice when they hear words that they have not heard before. The researchers came to this conclusion by carrying out an experiment that involved taking video of dogs as they listened to human voices through a speaker.

In all, the researchers recorded 42 dogs of different breeds as they listened to words emanating from the speaker. Just six words were spoken, all single-syllable, non-command words. Also, many of the words were close in pronunciation, such as "hid," "had" or "who'd" to see if the dogs could hear and react to the differences. The words were prerecorded by several male and female volunteers speaking with different accents to determine if that might throw the dogs off.

The team reports that all of the dogs reacted to the voices coming from the speaker—at least initially. They turned their heads quickly to the source and focused on it for several seconds. But then the dogs became accustomed to the words and responded less to what was said—at least until they heard a new word. When that happened, the dogs snapped to attention again, demonstrating that they could hear the difference between "sit" and "sat," for example. The researchers found it did not matter if the [speaker's](#) gender or dialect changed; the dogs still responded in the same ways. They suggest this indicates that the dogs were capable of recognizing English words whether they understand their meaning or not.

More information: Holly Root-Gutteridge et al. Dogs perceive and spontaneously normalize formant-related speaker and vowel differences in human speech sounds, *Biology Letters* (2019). [DOI: 10.1098/rsbl.2019.0555](https://doi.org/10.1098/rsbl.2019.0555)

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