

# How Well Does Your Dog Understand You?

今回は、犬が私たちの言葉をどこまで理解しているのかを探った興味深いニュースです。「sit（おすわり）」「stay（まで）」「roll over（ごろん）」など、日常でよく使う飼い主の命令に従うのは、単なる訓練の成果と思われがち。でも最新の研究では、犬が人間の言葉の意味をイメージで捉える力を持っている可能性があるとして示されています。犬は思った以上に私たちの言葉をわかっているのかも？記事を読んであなたのペットとの体験を講師と共有してみましょう。



## 1. Article

Read the following article aloud.

Dog owners know that their dogs understand and answer commands such as “sit” and “stay.” Many believe that dogs also understand words connected to their favorite objects. “Bring me your ball” will often result in exactly that.

But science has had trouble determining whether dogs and other animals truly create a mental image in their minds when they hear the name of an object. Such an action would suggest a deeper understanding of language, like the kind that humans have.

A new study in Hungary has found that beyond being able to answer commands like “roll over,” dogs can learn to link words with exact objects. This is a relationship with language called referential understanding that has been unproven in dogs.

“When we are talking about objects, objects are [external](#) to the dogs, and dogs have to learn that words refer, they stand for something that is external to them,” said Marianna Boros. She is a co-lead writer of the study.

The study, which has been [peer-reviewed](#), appeared recently in the science publication called Current Biology. It involved 18 dogs and a non-invasive EEG procedure using [electrodes](#) attached to dogs’ heads to measure brain activity and record brain waves.

Dog owners participating in the study would play an audio clip in which they said the name of their dog’s toy — like “ball” or “frisbee” — and then they would show the dog an object. The researchers measured the dogs’ brain activity when the object in the recording matched the object that was displayed and also when it differed.

“We expected that if a dog really understands the meaning of the object’s word, it will expect to see that object. And if the owner shows a different one, there will be a so-called surprise reaction in the brain,” Boros said.

She added, “and this is exactly what we found.”

The study found a different brain pattern when the dogs were shown an object that matched the word compared to when it did not. The finding suggests the animals created a mental image of an object based on hearing the word for it.

Lilla Magyari, also a co-lead writer of the study, said that while other animals have been shown to have some degree of referential understanding of language, those animals have usually been highly trained to do so.

In dogs, she said, the findings show that such abilities appear to be inborn and require no special training or talent.

The study supports ideas about “language [evolution](#) which actually say that referential understanding is not necessarily unique to humans,” added Magyari.

While the study has received praise, some experts have expressed doubt about its findings.

Clive Wynne of Arizona State University said in a post on Facebook that he believes that all the study shows is that dogs respond to [stimuli](#). Wynne does not believe the dogs understand the meaning of exact words.

Scientists believe the first dogs began to be kept by humans up to 30,000 years ago. The animals have lived closely alongside us ever since. But whether dogs gain the ability to understand referential language during that evolution remains unclear.

I’m John Russell.

Justin Spike reported on this story for the Associated Press. John Russell adapted it for VOA Learning English.

## 2. Key phrases and vocabulary

First repeat after your tutor and then read aloud by yourself.

**1. external (adj.) outside (of something)**

The building has an external water tank in case of an earthquake.

**2. peer-review (v.) to have experts in the same subject check the results of research**

Our research paper was peer-reviewed by a team of editors at the magazine.

**3. electrode (n.) a wire that carries electricity**

A battery has two electrodes, one at the negative side and one at the positive side.

**4. evolution (n.) the change and development of something over time**

The evolution of stars takes from millions to billions of years.

**5. stimulus (n.; plural: stimuli) something that communicates information to one of your senses (sight, hearing, and so on)**

When you are asleep, your brain does not react as much to stimuli.

## 3. Questions

Read the questions aloud and answer them.

1. What is the language ability of “referential understanding”?
2. Describe the test used by scientists in Hungary to test for dogs’ referential understanding ability.
3. What were the results of the test? Did all of the scientists agree on those results?
4. What do you know about the ability of other animals, such as chimpanzees, gorillas, or parrots, to use human language?
5. How do we benefit from studying the language ability of animals?