

Dogs give friends food

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The donor dog (right) can pull a tray and donate food to the receiver-dog (left).
Credit: Mylène Quervel-Chaumette/Vetmeduni Vienna

Compared to the rest of the animal kingdom, the human capacity for cooperation is something quite special. Cooperating with one another

requires a certain amount of prosocial behaviour. This means helping others without any direct personal benefit.

Prosociality has already been demonstrated in animals that are very closely related with humans, i.e. primates. In other animals, the phenomenon has so far only been studied experimentally in rats and jackdaws. One study found [prosocial behaviour](#) in dogs toward humans. According to Friederike Range of the Messerli Research Institute, however, it remains questionable whether the dogs were merely reacting to the communication from the humans and were being "obedient" or if they were truly exhibiting prosocial behaviour.

"Dogs and their nearest relatives, the wolves, exhibit social and cooperative behaviour, so there are grounds to assume that these animals also behave prosocially toward conspecifics. Additionally, over thousands of years of domestication, dogs were selected for special social skills," explains study director Range. For this reason, Range and her colleagues Mylene Quervel-Chaumette, Rachel Dale and Sarah Marshall-Pescini studied 16 dogs to test their readiness to benefit familiar versus unfamiliar partners.

The researchers studied the prosocial behaviour of the animals using a bar-pulling task in which the dogs had to pull trays and decide whether a second dog would receive a treat or not. In the test, the donor dogs used their mouths to pull a string to bring a tray toward a second dog. They could choose either an empty tray or a tray containing a treat on the partner's side.

Dogs donate to familiar partners more often than to unfamiliar ones

Whether the donor dogs knew the recipient made a difference. Donor

dogs pulled the giving tray more often for familiar dogs than for unfamiliar ones. "Dogs truly behave prosocially toward other dogs. That had never been experimentally demonstrated before. What we also found was that the degree of familiarity among the dogs further influenced this behaviour. Prosocial behaviour was exhibited less frequently toward unfamiliar dogs than toward familiar ones.

Prosocial behaviour put to the test

In the bar-pulling task, the donor dogs decided whether another dog would receive a treat or not. The donor dog itself did not get the treat. The only purpose of the task was to benefit the other dog. By conducting several control tests, the researchers excluded the possibility that the dogs were simply pulling the trays for the fun of it. Donor dogs were reserved in pulling the tray when an unfamiliar dog was in the next enclosure.

At the end of each test run, the researchers conducted another test to show that the donor dogs knew what pulling the tray meant. They allowed the donor dogs to pull on a tray to give themselves a treat, and all dogs did just that. "This control excludes the possibility that the dogs did not pull on the tray out of fear of the unfamiliar dogs. Given the same situation, the dogs gladly gave themselves a treat," says Range.

"We were also able to disprove the argument that the [dogs](#) pulled the string less frequently because they were distracted by the unfamiliar partner during the test. Only rarely did a donor dog interact with the unfamiliar dog," Range explains.

More information: Mylene Quervel-Chaumette et al. Familiarity affects other-regarding preferences in pet dogs, *Scientific Reports* (2015). [DOI: 10.1038/srep18102](https://doi.org/10.1038/srep18102)

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