Wolves more prosocial than pack dogs in touchscreen experiment

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Set-up of the test condition Credit: Dale et al., 2019

In a touchscreen-based task that allowed individual animals to provide food to others, wolves behaved more prosocially toward their fellow pack members than did pack dogs. Rachel Dale of the Wolf Science Center in Vienna, Austria, and colleagues present these findings in the open access journal PLOS ONE on May 1, 2019.

Prosocial behaviors—actions intended to benefit others—are important for cooperation. Some scientists hypothesize that dog domestication has selected for cooperative tendencies, suggesting that dogs should be more

prosocial than their closest living relatives: wolves. Competing hypotheses hold that prosocial behaviors observed in pet dogs arose from ancestral traits, and since wolves rely heavily on cooperation, they should be more prosocial than dogs. To explore these competing hypotheses, Dale and colleagues compared prosocial tendencies between nine wolves and six dogs raised and living in packs at the Wolf Science Center. They trained each animal to use its nose to press a "giving" symbol on a touchscreen in order to deliver food to an adjacent enclosure, where another animal of the same species may or may not be present.

Over multiple trials, the wolves opted to deliver significantly more food to the adjacent enclosure when it held a member of their own pack than when the same pack member was nearby but in a different enclosure. When the task was repeated with two wolves from different packs, there was no difference in the amount of food delivered to the adjacent enclosure when it was occupied by the other wolf than when the other wolf was merely nearby.

Touchscreen test. Credit: Rachel Dale, 2019

In contrast, the dogs delivered no more food to the adjacent enclosure when it was occupied by a pack member than when the pack member was merely nearby. These findings suggest that wolves are more prosocial than dogs raised in similar pack conditions, supporting hypotheses that prosocial behaviors seen in pet dogs can be traced to

ancestral traits.

The authors note that results of prosocial experiments can be sensitive to subtle differences in methods, so they advise caution in applying their work with pack dogs to pet dogs. Previous studies have revealed prosocial tendencies in pet dogs, and the authors suggest those tendencies could be the result of training or encouragement in pets. Additional research could directly address prosocial differences between pet dogs and pack dogs.

Dale adds: "This study shows that domestication did not necessarily make dogs more prosocial. Rather, it seems that tolerance and generosity towards group members help to produce high levels of cooperation, as seen in wolves."

More information: Dale R, Palma-Jacinto S, Marshall-Pescini S, Range F (2019) Wolves, but not dogs, are prosocial in a touch screen task. *PLoS ONE* 14(5): e0215444. doi.org/10.1371/journal.pone.0215444

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