

# Man's best friend

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Bonding between human and dog is natural. Credit: Fotolia, Bettina Kuss

People have an innate need to establish close relationships with other people. But this natural bonding behaviour is not confined to humans: many animals also seem to need relationships with others of their kind. For domesticated animals the situation is even more complex and pets may enter deep relationships not only with conspecifics but also with their owners. Scientists at the University of Veterinary Medicine, Vienna (Vetmeduni Vienna) have investigated the bond between dogs and their owners and have found striking similarities to the parent-child relationship in humans. Their findings are published in the journal *PLOS ONE*.

[Domestic dogs](#) have been closely associated with humans for about 15,000 years. The animals are so well adapted to living with human beings that in many cases the owner replaces conspecifics and assumes the role of the dog's main [social partner](#). The relationship between [pet owners](#) and dogs turns out to be highly similar to the deep connection

between young children and their parents.

## **The importance of the owner to the dog**

One aspect of the bond between humans and dogs is the so-called "secure base effect". This effect is also found in parent-child bonding: human infants use their caregivers as a secure base when it comes to interacting with the environment. Until recently the "secure base effect" had not been well examined in dogs. Lisa Horn from the Vetmeduni's Messerli Research Institute therefore decided to take a closer look at the behaviour of dogs and their owners. She examined the dogs' reactions under three different conditions: "absent owner", "silent owner" and "encouraging owner". The dogs could earn a food reward, by manipulating interactive dog toys. Surprisingly, they seemed much less keen on working for food, when their caregivers were not there than when they were. Whether an owner additionally encouraged the dog during the task or remained silent, had little influence on the animal's level of motivation.

## **When the owner is replaced by a stranger**

In a follow-up experiment, Horn and her colleagues replaced the owner with an unfamiliar person. The scientists observed that dogs hardly interacted with the strangers and were not much more interested in trying to get the [food reward](#) than when this person was not there. The dogs were much more motivated only when their owner was present. The researchers concluded that the owner's presence is important for the animal to behave in a confident manner.

## **Why do adult dogs behave like human children?**

The study provides the first evidence for the similarity between the

"secure base effect" found in dog-owner and child-caregiver relationships. This striking parallel will be further investigated in direct comparative studies on dogs and children. As Horn says, "One of the things that really surprised us is, that adult dogs behave towards their [caregivers](#) like human children do. It will be really interesting to try to find out how this behaviour evolved in the dogs with direct comparisons."

"The importance of the Secure Base Effect for Domestic Dogs – Evidence from a Manipulative Problem-Solving Task", by Lisa Horn, Ludwig Huber and Friederike Range is published in the Journal *PLoS ONE* and is available online.

**More information:** [www.plosone.org/article/info:doi/10.1371/journal.pone.0065296](http://www.plosone.org/article/info:doi/10.1371/journal.pone.0065296)

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