

DOG CONSCIOUSNESS: DOES HUMAN COMPANIONSHIP MAKE A DIFFERENCE?

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There is growing interest in exploring the cognitive abilities of animals, but the number of species studied is still very limited. Here, we would like to suggest that the domestic dog offers a very good example for investigating animal cognition.

The dog was the first animal to be domesticated (Vilá *et al* 1997) and, in contrast to other domesticated animals, it was selected mainly to be a companion of humans. Today, most dogs live in human families which represent the natural environment of the dog. Dogs represent an interesting subject from the point of view of consciousness research, since this species is the only one that has been artificially selected to live in an environment full of conscious beings. This raises the question of whether this selection process has led to the emergence of some form of consciousness in the dog, or whether no conscious thinking needs to be involved to explain dog behaviour. Our research strategy is to observe and analyse complex social skills in the dog and thereby come nearer to describing conscious processing in this species.

We have found that dogs are not only able to find food based on human cuing (Miklósi *et al* 1998), but also to understand referential components of human gestural communication (Soproni *et al* in press). Dogs are also able to engage in intentional referential communication ('showing'; Miklósi *et al* in press). In recent studies we have found that dogs show evidence of both interspecific social mimicry and social learning. After long exposure, dogs have been able to adopt human habits, and they seem to be able to modify their attempts to get a ball from a closed box after having observed a human demonstrator.

We think that, in the course of domestication, dogs gained a sophisticated communication and social learning system which, through the process of ontogenic ritualization, has enabled them to develop complex forms of information transfer with humans.

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References

- Miklósi Á, Polgárdi R, Topál J and Csányi V 1998 Use of experimenter-given cues in dogs. *Animal Cognition* 1: 113-121
- Miklósi Á, Polgárdi R, Topál J and Csányi V Intentional behaviour in dog-human communication: an experimental analysis of 'showing' behaviour in the dog. *Animal Cognition* (in press)
- Soproni K, Miklósi Á, Topál J and Csányi V Comprehension of human communicative signs in pet dogs. *Journal of Comparative Psychology* (in press)
- Vilá C, Savolainen P, Maldonado J E, Amorim I R, Rice J E, Homeycutt R L, Crandall K A, Lundeberg J and Wayne R K 1997 Multiple and ancient origins of the domestic dog. *Science* 276: 1687-1689