

Wolves outperform dogs in following human social cues

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Domestic dogs, *Canis familiaris*, have been shown capable of finding hidden food by following pointing gestures made with different parts of the human body. However, previous studies have reported that hand-reared wolves, *C. lupus*, fail to locate hidden food in response to similar points in the absence of extensive training. The failure of wolves to perform this task has led to the proposal that the ability to understand others' intentions is a derived character in dogs, not present in the ancestral population (wolves). Here we show that wolves, given the right rearing environment and daily interaction with humans, can use momentary distal human pointing cues to find food without training, whereas dogs tested outdoors and dogs at an animal shelter do not follow the same human points. In line with past studies, pet dogs tested indoors were successful in following these points. We also show that the reported failure of wolves in some past studies may be due to differences in the testing environment. Our findings indicate that domestication is not a prerequisite for human-like social cognition in canids, and show the need for additional research on the role of rearing conditions and environmental factors in the development of higher-level cognitive abilities.