

## 3-year-olds get the point

April 6 2009

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Dogs and small children who share similar social environments appear to understand human gestures in comparable ways, according to Gabriella Lakatos from Eötvös University in Budapest, Hungary, and her team. Looking at how dogs and young children respond to adult pointing actions, Lakatos shows that 3-year-olds rely on the direction of the index finger to locate a hidden object, whereas 2-year-olds and dogs respond instead to the protruding body part, even if the index finger is pointing in the opposite direction. These findings<sup>1</sup> were just published online in Springer's journal *Animal Cognition*.

It is widely accepted that in the course of domestication, [dogs](#) became predisposed to read human communication signals, including pointing, head turning and gazing. Furthermore, the social environment of human infants is often shared by pet dogs in the family, and therefore there are likely to be similarities in the social stimulation of both young [children](#) and dogs.

The authors carried out two studies in which they compared the performance of adult dogs and 2- and 3-year-old children - the period of human development during which children and dogs respond in similar ways. They investigated whether dogs and human children are able to generalize from familiar pointing gestures to unfamiliar ones and whether they understand the unfamiliar pointing actions as directional signals.

A total of fifteen dogs and thirteen 2-year-old and eleven 3-year-old children took part in the two studies. In the first study, the researchers

used a combination of finger and elbow pointing gestures to help dogs locate hidden food and children a favorite toy. They found that dogs choose a direction for the reward on the basis of a body part that protrudes from the experimenter's silhouette, even when the index finger is pointing in a different direction. Like dogs, 2-year-olds did not understand the significance of the pointing index finger when it did not protrude from the silhouette. (In these cases, the elbow protruded in the opposite direction.) However, 3-year-olds responded successfully to all gestures.

In the second study, the researchers used unfamiliar pointing gestures with a combination of finger, leg and knee pointing. All children and the dogs understood the leg-pointing gestures but only 3-year-olds successfully responded to pointing with the knee.

The authors conclude that "protruding body parts provide the main cue for deducing directionality for 2-year-old children and dogs. The similar performance of these groups can be explained by parallels in their evolutionary history and their socialization in a human environment."

More information: Lakatos G et al (2009). A comparative approach to dogs' (*Canis familiaris*) and human infants' comprehension of various forms of pointing gestures. *Animal Cognition* DOI 10.1007/s10071-009-0221-4

Provided by Springer

Citation: 3-year-olds get the point (2009, April 6) retrieved 26 April 2024 from <https://phys.org/news/2009-04-year-olds.html>

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