06: Dog-Human Cooperation – A Comparative Approach

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Involved subjects: Comparative Psychology, Animal Cognition, Communication, Cooperation, Domestic Dogs

Number of positions requested: 1

Abstract:

Cooperation, defined as a behaviour that is beneficial to another individual or to several individuals involved in a task, is characteristic for humans, but also for domestic dogs. Indeed, dogs were likely selected by humans through domestication to be good cooperative partners and have evolved human-like skills for functioning efficiently in human societies. The success of cooperative activities depends to a large extent on communication via a range of deictic cues such as speech, pointing, or gaze. The aim of this project is to study dog-human cooperation and prosocial behaviour, considering both members of the dog-human dyad. In particular, we will explore communicative, cognitive, motivational and developmental aspects of dog cooperation. We want to (1) describe in detail how dogs and humans communicate with each other in order to cooperate successfully; (2) investigate the degree to which dogs understand others' intentions and are actually motivated to support humans through cooperative behaviour and (3) examine the influence of ontogeny and domestication on cooperative and prosocial behaviour, by comparing performance of family dogs with specially trained dogs, and of dogs with wolves.

To reach these aims we will use two set-ups that we have previously shown to be effective. Here, dogs cooperate with humans or conspecifics in order to solve a problem that is beneficial for either both (study 1) or just one of the two individuals involved (study 2). In study 1, we examine how dyads coordinate their actions to solve a problem, using an apparatus that simulates a hunting situation in which prey defends itself from the subjects' advances. In study 2, we use a set-up in which a dog can help a human to enter a target room in order to retrieve a key. The results of this project will (1) help to better understand dog-human cooperation – and how it is influenced by communicative abilities of the dog-human dyad. (2) We will shed light on the question how domestication and ontogeny influenced the cooperative skills of dogs.

The ideal applicant should have a background in Comparative Psychology, thus, the applicant should have some experience in conducting experimental psychology studies with non-human animals. Knowledge in Experimental Psychology and Behavioral Biology would also be desirable.