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## **Social cognition and social learning in horses**

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In comparison to other social animals it appears to be far more difficult to show social learning in horses, although the social background of the animals prompts the prediction that social learning should be verifiable. This demands for a thorough analysis of conditions, context and effects of social learning which might not be as obvious in horses than in other social animals. Moreover, the horse's social cognition in general, i.e. the processing, encoding, storage, retrieval, and application of social information, needs to be examined. In previous studies we addressed the horse's perception of its social environment. Our results indicate that domestic horses are not only capable of distinguishing between familiar and unfamiliar horses but also of recognizing the social status of familiar horses relative to their own. Furthermore, they extract information from observing interactions between a familiar horse and a human experimenter, and adjust their behaviour according to the observed horse's reaction and relative dominance status when they are themselves later confronted with the experimenter in a similar situation. Additionally, we showed in pilot experiments that horses paid more attention to the gaze of dominant horses from their own social group than to that of unknown or subordinate horses. In another study we suggested that horses of both sexes are capable of determining the social affiliation, the sex and, for their own group members, the identity of individuals, by sniffing their faeces. Hence, social affiliation and dominance relationships seemed to have a major influence on the horses, motivation to pay attention to their conspecifics. In the future we will take another step towards linking the horse's social cognitive capacities with its social ecology, social structure, and individuality. In the context of comparative cognition research on the socially complex primates, or on a range of carnivores such as corvids, canids or dolphins, horses are particularly interesting, because they are highly social, but do not rely on social hunting or cooperative raising of offspring. Also foraging is simple for horses, predator avoidance is demanding and this may be the main reason for the horse's complex social lives and their choice of learning tactics. Hence, we will investigate the horse's investigative behaviour towards neutral, fear-eliciting and food related novel objects. We propose that, as in other species, sociality and distinct personalities are key features for the understanding of cognitive capacities and the choice of learning strategies.

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