Are Ancient-type dog breeds less communicative with humans?

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Abstract text (182 words):
Domestic dogs (*Canis familiaris*) have developed a close relationship with humans through a process of domestication. Eye-contact is a key aspect for initiating and maintaining dog-human interactions. Previous studies have suggested that canine gaze behavior at humans is influenced by domestication history from wolf to dogs, as well as by recent selection for working dogs. To test the impact of genetic basis on communicative performance in dogs, we examined dog's gaze behavior at humans using two types of behavioral experiments: i.e. the visual contact task and the unsolvable task. A total of 95 subject dogs participated in our study and they were classified into five breed groups (i.e. Ancient, Herding, Hunting, Retriever-Mastiff, and Working) based on the genetic relatedness among breeds. We found significant breed differences of gaze behavior in both behavioral experiments, with Ancient-type breeds gazing at humans for shorter periods of time than other breed groups. Our findings suggest that dog's spontaneous gaze responses to humans are associated with genetic similarity to wolves, and that cross-specific communicative skills in dogs have been altered by recent selection for modern European breeds.