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Classifying Dogs' Facial Expressions: Implications for Human Cognitive Social Evolution and Cross-Species Communication

Facial expressions have been considered outward expressions of internal behavioral states. There is evidence that both dogs and humans subscribe to the social learning theory to acquire contextual information from past experiences in connecting facial expressions to behaviors. Previous research has shown that people are able to read dog facial expressions; however, the research is inconsistent on whether this behavior is innate or learned, as well as if this ability extends to dogs of different facial morphologies. The goal of this study was to understand the extent of humans' ability to read facial expressions of dog breeds with different facial morphologies. Understanding how humans read dog facial expressions can provide insight into the evolution of human social communication, not just within our own species, but in other species as well. Additionally, this research can help individuals work more effectively with dogs in professions such as law enforcement, military operations, therapy, veterinary medicine, etc., and improve the human-animal bond. In the first phase of this study, photographs of dog facial expressions were obtained in positive, negative, and neutral conditions. In the second phase of this study, we recruited 138 college students, collected demographic data, and asked participants to identify positive and negative emotions in the dog facial expressions, as well as which physical features they used to identify the facial expressions. We will present correlational data on the relationship between the accuracy of responses and the following variables: experience level with dogs, level of attachment to dogs, level of empathy towards dogs, and knowledge of dog facial expressions. We will also present findings on participants' level of agreement on whether dogs experience certain emotions such as happiness, sadness, anger, etc., as well as participants' perceptions on how easy/difficult it was to rate the dog facial expressions. Keywords: dog, human-animal bond, facial expressions, emotions, cross-species communication