WWTF Project CS11-026

The semantics of talking with the eyes and gestures: the hormonal and cognitive underpinnings of comprehending cooperative intentional communication in domestic dogs and wolves

Abstract

Human communication is unique because we have language and we have an exceptional motivation to share information with others. The precursors of this skill, however, can be found in other animals as well. If one does not understand what words refer to, following others' gaze is an alternative way to figure out what another individual's behaviour is directed to, and many animals are able to learn about the environment in this way. Humans, however, not only follow the line of others' gaze but they also recognize the cooperative communicative intention of a partner. Chimpanzees do not understand if someone is showing them where some food can be found, whereas humans and dogs can easily locate food in this way. It is a question, however, whether dogs rely on the same mechanisms as humans when doing so, and whether other animals, such as wolves, are really incapable of such communication. Using sophisticated technologies, such as eye-tracking and genotyping the oxytocin receptor gene of the subjects, this project investigates to what extent dogs and wolves rely on the same cognitive and motivational mechanisms as humans when following the gaze or pointing gesture of others. The results of the project will help to re-construct the evolution of human communication as well as to better understand how dogs communicate with people.

Keywords:

communication, cooperation, domestic dog, wolf, gaze-following, oxytocin

Principal Investigator:	Zsofia Viranyi
Institution:	University of Vienna
Further collaborators:	Friederike Range (Wolf Science Center) Zsolt Ronai (Semmelweis University)

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Further links about the involved persons and regarding the project you can find at

https://archiv.wwtf.at/programmes/cognitive_sciences/CS11-026