

国際シンポジウム：  
異種間情報伝達から学ぶコミュニケーションの基礎  
**Essentials of informative communication;  
What we can learn from inter-species communication**

日時： 2016年 11月 27日 (日)

場所： 専修大学 神田キャンパス 神田キャンパス 7号館 731教室

定員： 150名程度

参加料： 無料、事前登録不要

**Program**

13:00 – 13:10 Introduction: Kazuyuki Samejima (Tamagawa Univ.)

What and how we can learn from human-animal interaction to design human-artificial agent interaction?

***I. Dog-Human communication***

13:10 – 13:55 Takefumi Kikusui & Miho Nagasawa (Azabu Univ)

Reciprocal communication and endocrine response in human-dog interactions

***II. Horse-Human Communication***

14:15 – 15:00 Midori Ohkita (Senshu Univ.)

What you really want to tell horse but sometimes fail; role and efficacy of human social signal on horse behaviors

15:10 – 15:55 Leanne Proops (U. Sussex)

Interspecific Communication: Human emotion perception in domestic horses.

***III. Monkey-Human Communication***

16:15 – 17:00 Kazuyuki Samejima & Mari Kumashiro (Tamagawa Univ.)

Manipulation of others attention: Pointing and joint attention in human-monkey interaction

17:00 – 17:10 Closing remarks: Kosuke Sawa (Senshu Univ.)

主催：科学研究費補助金 新学術領域研究「認知的インタラクシオンデザイン学」

# Reciprocal communication and endocrine response in human-dog interactions

Takefumi Kikusui and Miho Nagasawa

School of Veterinary Medicine, Azabu University

Animals developed sympathetic neural and behavioral systems, in which for example, weak and helpless member of individuals are protected and nurtured by other group members. This phenomenon is mostly clearly observed in mother-infant relationship, such as mother infant bonding. Neurochemically, oxytocin in the neural system plays a pivotal role in each side of the mother-infant bonding process, and there is a positive loop of attachment-parenting behavior via the oxytocin system on each side of infant-mother dyad. Humans bond emotionally as we gaze into each other's eyes and we discovered that such gaze-mediated bonding also exists between human and our closest animal companions, dogs. Mutual gazing increased oxytocin levels, and administration of oxytocin increased gazing in dogs, an effect that transferred to their owners. Wolves, who rarely engage in eye contact with their human handlers, seem resistant to this effect. These suggest the coevolution of human-dog bonding by engaging common modes of communicating social attachment.

# **What you really want to tell horse but sometimes fail; role and efficacy of human social signal on horse behaviors**

**Midori Ohkita**

**Senshu University**

Since horses (*Equus caballus*) were domesticated around about B.C. 3500, horses have been closely related to human. Athenian historian and soldier Xenophon described the “selection, care, and training of horses in general”. In recent years, horses are used for sports equitation, especially dressage, with roots as training method for war-horses, has progressed and been refined to its current status as an Olympic sport. In equitation, it is necessary that horses respond appropriately to human's command. Additionally, it is necessary that humans observe horse's behavior and give appropriately horses command. Therefore, equitation could be regarded as one of good example of the social interaction between humans and animals. In present presentation, I will report the first step that we reveal underlying processes of the social interaction between humans and horses.

Considering from the aspects of three-term contingency (prior stimuli: discriminative stimuli-response- posterior stimuli: reinforcer), appropriate prior and/or posterior stimuli are necessary for changing behavior. In equitation, human voice and neck patting could play some role as prior and posterior stimuli on changing horse behavior, respectively, and they are practically used in training situation. Accordingly, in order to reveal role of human voice as prior stimuli, we examined whether human voice changed horse gaits (walk and trot) in longeing training situation (basic training of equitation). Additionally, to reveal role of neck patting as posterior stimuli, simple operant conditioning situation was administered (horses were required to press a button by nose for food pellet or neck patting), and we examined whether the horse behavior was changed by neck patting as well as food. In present presentation, I will report role of efficacy of these human signals on changing horse behaviors.

## **Interspecific Communication: Human emotion perception in domestic horses.**

*Leanne Proops<sup>1,2</sup>, Kate Grounds<sup>1</sup>, Amy Victoria Smith<sup>1</sup>, Jen Wathan<sup>1</sup>  
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The ability to recognise and respond appropriately to the emotional signals of others has clear adaptive advantages. Recognition of such signals allows an individual to predict the positive or negative consequences of interacting with others, thus facilitating social cohesion and avoiding potentially costly conflict. In humans, emotional intelligence is believed to play a key role in society and has important effects on social competency. Darwin was the first to describe in detail widespread similarities between the emotional signals of humans and other species and for domestic animals, being able to respond in functionally relevant ways not only to conspecifics but also to the emotional signals of their human social partners is likely to be highly beneficial.

Using conspecific emotional expression and perception as a basis, I will discuss our recent research that explores the ability of domestic horses to respond appropriately to human facial, body and vocal cues of affect. We will also explore the salience of these cues and how they may be used successfully in social decision-making processes. The ability of horses to discriminate between human emotions raises interesting questions regarding the evolution of emotion signalling across species and the relative importance of lifetime experience.

**Manipulation of others attention:  
Pointing and joint attention in human-monkey interaction**

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(TBA)