

BSCS

Data of courses form

Lecturer's name: Adam Miklósi

Position: professor

Organisation: Dept. of Ethology, Eötvös University

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Title of the course: Cognitive Ethology

Detailed syllabus of the course, with topics addressed in each 90 minutes lecture (less than 2 pages):

DAY 1. Introduction to cognitive ethology

Darwinian evolution, Epigenesis
Ethology, innateness, behavioural models
Tinbergen's 4 questions, Cognitive ethology
Comparative cognition

DAY 2. Ecological and Social Cognition (Problem solving)

Approaches to learning and cognition, measuring intelligence
Forms of associative learning, Operant conditioning
Spatial cognition and orientation
Cognitive maps, causal understanding, tool use
Social cognition, Intentionality, Attention

DAY 3. Ethology of communication

Definition, ethological approach
Levels of communication
Adaptation and communication, evolution of communicative signals
Mating signals, bird song
Alarm signals, functional referentiality
Manipulation of information, communication networks
Language training with animals, evolution of language

DAY 4. Social learning, traditions, teaching

Definitions and categories
Adaptivity and social learning
Laboratory models of social learning, mechanisms in social learning
Neuronal mechanisms, mirror neurons
Evolutionary aspects, teaching,
Traditions and culture

DAY 5. Consultation, written exam

Background information on the web (optional):
<https://familydogproject.elte.hu/>

Short CV (less than half page):

Personal information:

Name: MIKLÓSI, Ádám
Place and date of Birth: Budapest, 25 September, 1962
Nationality: Hungarian
Profession: Biologist

Positions:

1981-1986 Eötvös L. University (Budapest, Hungary)
MSc degree in Biology
1986-1989 Research scholarship of the Hungarian Academy of Sciences,
work at the Dep. of Ethology
1989-1996 Research assistant at the Department of Ethology
1996-2000 Postdoctoral Research Fellow at the Dept. of Ethology
2000- Associate professor
2006- Professor and Head of Department

Education:

M.Sc. at Eötvös University of Budapest (1983)
Thesis: Quantitative analysis of predator avoidance in the paradise fish
(*Macropodus opercularis*).
Candidate of Biology (PhD), Hungarian Academy of Sciences (1995)
Thesis: Analysis of learning in the paradise fish
Doctor of Science (DSc), Hungarian Academy of Sciences (2005)
Thesis: Representational models of the living environment:
An ethological approach

Research grants:

1991-1994 research grant "For the study of the use of ethological and psychological methods in behavioural genetics" (principal investigator)
1994-1998 The dog as a model for social evolution (participant)
1999-2002 Investigation of social intelligence in dogs, (participant)
2003-2006 The dog as a model for human personality
2005-2008 EU FP-6-NEST: Evolution of referential communication (participant)
2005-2008 Social learning in dogs (principal investigator)
2008-2012 EU FP 7 Living with Interactive Companions
2012-2022 Comparative Ethology Research Group

Important publications (5-10):

Miklósi, Á. 1999. The ethological analysis of imitation. *Biological Review*, 74, 347-374.
Pongrácz, P., Miklósi, Á., Kubinyi, E., Gurobi, K., Topál, J., Csányi, V. 2001. Social learning in dogs I. The effect of a human demonstrator on the performance of dogs (*Canis familiaris*) in a detour task. *Animal Behaviour*, 62, 1109-1117.
Miklósi, A, Kubinyi E, Topál, J, Gácsi, M., Virányi, Zs., Csányi, V. 2003. A simple reason for a big difference: wolves do not look back at humans but dogs do. *Current Biology*, 13, 763-766.
Topál, J., Miklósi, Á., Gácsi, M., Dóka, A., Pongrácz, P., Kubinyi, E., Virányi Zs., Csányi, V. 2009. The dog as a model for understanding human social behavior. *Advances in the Study of Animal Behaviour*, 39: 71-116.
Andics, A., Gácsi, M., Faragó, T., Kis, A., Miklósi, Á. 2014. Voice-sensitive regions in the dog and human brain are revealed by comparative fMRI. *Current Biology*, 24: 574-578.
Konok, V., Nagy, K., Miklósi, Á. 2015. How do humans represent the emotions of dogs? The resemblance between the human representation of the canine and the human affective space. *Applied Animal Behaviour Science*, 162: 37-46.
Petró, E., Abdai, J., Topál, J., Miklósi, Á. 2016. Dogs (*Canis familiaris*) adjust their social behaviour

to the differential role of inanimate interactive agents. *Animal Cogn*, 19: 367-374. doi: 10.1007/s10071-015-0939-0

Fugazza, C., Pogány, Á., Miklósi, Á. 2016. Recall of Others' actions after incidental encoding reveals episodic-like memory in dogs. *Current Biology*, S0960-9822 (16)31142-3. doi: 10.1016/j.cub.2016.09.057

Andics, A., Gábor, A., Gácsi, M., Faragó, T., Szabó, D., Miklósi, Á. 2016. Neural mechanisms for lexical processing in dogs. *Science*, 353: 1030-1032. doi: 10.1126/science.aaf3777

Miklósi, Á., Korondi, P., Matellán, V., Gácsi, M. 2017. Ethorobotics: A new approach to human-robot Rrlationship. *Frontiers in Psychology*, doi: 10.3389/fpsyg.2017.00958

Anything else (course requirements, readings list, etc):

The course material will be provided in form of Power Point print outs.

Topics are based on chapters in: Shettleworth, S. 2010. *Cognition, Evolution and Behaviour* (chapters will be provided)

Suggested further reading:

Byrne R. 1985. *The thinking ape*

Davey, *Ecological learning theory*

Miklósi, Á 2014. *Dog behaviour, evolution, cognition*. Oxford University Press.