

## **Zoosemiotics: Umwelt and animal communication (FLSE.00.260)**

**Spring 2012**

Department of Semiotics. Institute of Philosophy and Semiotics. University of Tartu

Lecturers: PhD Timo Maran, Senior Research Fellow,  
Silver Rattasepp, PhD student.

Credit points: 4 AP / 6 ECTS

Class meeting time: from February 8th to Mai 9th, 2012, Wednesday 12.15-14.00 (seminars in every other Wednesday 10.15 - 12.00, see time schedule below)

Location: Lossi 3 - 307

Office hours: after lecture and by appointment

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**Target group:** The course is a part of International Master's Programme in Semiotics. However, other interested graduate students, 3rd year bachelor students, and international students of equivalent status are also welcome.

### **Brief course description**

The course gives a systematic overview of semiotic communication in the animal world. It introduces the theoretical foundations of zoosemiotics and the history of animal communication studies. Attention will be paid to the prerequisites, elements and types of communication in animals as well as its properties in different environments. The importance of animal's personal experience (Umwelten) for the perception and communication will be emphasised. By analysing examples from many animal groups (invertebrates, fish, reptiles and amphibians, birds, and mammals), the role of communication and semiotic processes in the social, territorial, and sexual behaviour of animals will be discussed. The course provides basic knowledge of animal communication for a non-biologist that is necessary to understand human semiotic behaviour and communication. Closer attention will be paid to communication between human beings and animals, as well as to the resemblances between animals that forms a basis for depicting animals in mythology, folklore, and literature.

### **Course objectives and learning outcomes**

The general objective of the course is to provide an overview of communication and sign systems in the animal world.

After completing the course, the student:

- 1) knows the theoretical foundations and major authors of zoosemiotics;
- 2) is capable of orienting in standpoints and basic concepts of various disciplines that study animal communication;
- 3) has acquired an overview of major communication strategies and sign systems used by different animal groups;
- 4) has learned the basics of conducting zoosemiotic analysis.

### **Course requirements and grading**

There are no specific prerequisites for taking the course. Basic English is expected for participating in seminars and writing a research paper. Participation in lectures is encouraged as most of study materials are presented in class. Graded activities are:

- Active participation in seminars: 30% of the final grade.
- Research paper: 40% of the final grade.
- Written exam: 30% of the final grade.

Active participation in seminars – there are six seminars altogether, five of them for reading and discussing selected texts in zoosemiotics (available through the Study Information Systems of the University of Tartu) and the last one for discussing research papers written by students. Every student should work through one text and present the review of this in class. Based on reviewed texts research questions (RQ, see the time schedule below) will be discussed in seminars. Students are expected to come to class fully prepared. Participation in the seminars is checked and graded.

Research paper – research paper is a short independent study on some topic of the theory, history or methodology of zoosemiotics; on some general topic of animal communication; or on some specific communication problem or animal group. Students are encouraged to suggest their own topics according to their research interests and academic background. The length of the research paper should be 8-10 pages (spacing 1.5; font Times New Roman 12) and it should follow general principles of academic research. In bibliography and formatting stylesheet of Sign Systems Studies should be followed [www.ut.ee/SOSE/sss/instructions.htm](http://www.ut.ee/SOSE/sss/instructions.htm). All sources, including internet sources, must be properly cited as plagiarism is not tolerated at the University of Tartu. Research paper should be submitted for 25. April. Grading criteria include general quality and logic of research, soundness of key arguments, originality of the selected topic, personal input of the student, relevance and amount of used materials.

Written exam – exam is a compound test with different types of questions (discussion points, interpretation of images, choice based questions, true/false questions) that cover the basic knowledge discussed in lectures and seminars. Exam will be taken in class during one and a half hour without using auxiliary materials.

### Time schedule

Date / Time	No	Content
8. February 2012. WE 12.15-14.00	1. Lecture	Introduction to semiotics and zoology. Semiotic approaches to animals. Zoosemiotics as a synthesis between humanities and natural sciences.
15. February 2012. WE 12.15-14.00	2. Lecture	Different approaches to animal communication: medieval ideas, views in ethology, socio-biology, behavioural ecology, comparative psychology and cognitive ethology. Emphasis is put on the works of Ch. Darwin, J. V. Uexküll, K. Lorenz, N. Tinbergen and D. Griffin.
22. February 2012. WE 12.15-14.00	3. Lecture	Zoosemiotic paradigm. Concept of zoosemiotics. Position of zoosemiotics among other branches of semiotics (phytosemiotics, anthroposemiotics). History, representatives (T. A. Sebeok, H. Hediger, G. Tembrock, P. Marler), and main sources in zoosemiotics.
22. February 2012. WE 10.15-12.00	1. Seminar	Prehistory of zoosemiotics. Selected readings by C. Osborne and Ch. Darwin. RQ: Is difference between humans and animals quantitative or qualitative? Do animals have mind?
7. March 2012. WE 12.15-14.00	4. Lecture	Basic concepts in zoosemiotics: Appearances in animals. Semiosis in animals. Type of signs: icon, index and symbol. Categorical perception. Associations and conditioning and animal cognition.
14. March 2012. WE 12.15-14.00	5. Lecture	Defining communication. Autocommunication, different types of feedback. Unidirectional and bidirectional communication. Communication in and between species. Social relations in biocommunication. Semiotic aspects of biocommunication.
14. March 2012. WE 10.15-12.00	2. Seminar	Essentials in zoosemiotics. Selected readings by Th. A. Sebeok. RQ: Can we use humanities' methodologies to study animal communication? What are strengths and weaknesses in this?
21. March 2012. WE 12.15-14.00	6. Lecture	Communication in relation to body, physiology and ecology of the animals. Body types of animals. Different sensory organs and properties of communication channels (visual, tactile, auditory, chemical). Preferences in communication channels by different animal groups.

28. March 2012. WE 12.15-14.00	7. Lecture	Communication of invertebrates. Biology of invertebrates as a basis for communication. Cognitive and sensory capacities of insects. Intraspecific communication in solitary and collective insects. Interspecific communication in symbiotic relations.
28. March 2012. WE 10.15-12.00	3. Seminar	Chapters from animal communication studies. Selected readings by A. Wenner, H. Hediger. RQ: How can we classify animal communication? Why to do this?
4. April 2012. WE 12.15-14.00	8. Lecture	Communication of fish, amphibians and reptiles. Biology and sensory organs of fish, amphibians and reptiles. Intra- and interspecific communication mechanisms.
11. April 2012. WE 12.15-14.00	9. Lecture	Communication of birds. Biology, life strategies and communication organs of birds. Song as an intraspecific communication mechanism. Communication in flocks and colonies. Interspecific communication in birds.
11. April 2012. WE 10.15-12.00	4. Seminar	Theoretical and metatheoretical perspectives. Selected readings by G. Bateson, C. Wolfe. RQ: Can we avoid anthropomorphism in science? Should we?
18. April 2012. WE 12.15-14.00	10. Lecture	Communication of mammals. Biology, life strategies and communication organs of mammals. Tactile communication and social relations in mammals. Ritual communication for solving conflicts. Communication between parents and offspring.
25. April 2012. WE 12.15-14.00	11. Lecture	Different approaches to the evolution of communication. Phylogenetic prerequisites of communication. Communication as evolutionary adaptation. Communication as a precursor of human language. Activity of an individual and evolutionary processes. Semiosis and communication as factors in evolution.
25. April 2012. WE 10.15-12.00	5. Seminar	Humanities, animals and contemporary zoosemiotics. Selected readings by D. Griffin, T. Ingold. RQ: What studies of animal communication can provide to humanities? Are we animals?
2. Mai 2012. WE 12.15-14.00	12. Lecture	Deceptive resemblances in nature. Camouflage, mimesis, warning colouration and mimicry as zoosemiotic phenomena. Batesian mimicry, Müllerian mimicry and other mimicry types. Structure and semiotics of biological mimicry.
9. Mai 2012. WE 12.15-14.00	13. Lecture	Communication between humans and animals. Domestication and communicative abilities of domesticated animals. Human influence on communicative abilities of wild animals. Nonverbal communication in humans and its role in relations with animals. Language studies in apes, dolphins, parrots and other animals.
9. Mai 2012. WE 10.15-12.00	6. Seminar	Final seminar, short presentations and discussions on research papers.

### Seminar reader\*

#### 1. Seminar

Osborne, Catherine 2007. *Dumb Beasts and Dead Philosophers: Humanity and the Humane in Ancient Philosophy and Literature*. Ch. IV. On language, concepts, and automata: rational and irrational animals in Aristotle and Descartes. Oxford: Oxford University Press, pp. 63-87.

Darwin, Charles 1873. *The Expression of the Emotions in Man and Animals*. Ch. II. General principles of expression, cont., London: John Murray, pp. 50–65.

#### 2. Seminar

Sebeok, Thomas A. 1990. *Zoosemiotics: At the intersection of nature and culture*. In: Thomas A. Sebeok. *Essays in Zoosemiotics (Monograph Series of the TSC 5)*. Toronto: Toronto Semiotic Circle; Victoria College in the University of Toronto, pp. 37-47.

Sebeok, Thomas A. 1990. 'Talking' with animals: Zoosemiotics explained. In: Thomas A. Sebeok. *Essays in Zoosemiotics* (Monograph Series of the TSC 5). Toronto: Toronto Semiotic Circle; Victoria College in the University of Toronto, 105-113.

### 3. Seminar

Wenner, Adrian 1969. The study of animal communication: An overview. In: Sebeok, Thomas A. and Ramsay, Alexandra (Eds.). *Approaches to Animal Communication*. The Hague: Mouton, pp. 232-243.

Hediger, Heini. 1968. The animal's expression. In: *The Psychology and Behaviour of Animals in Zoos and Circuses*. Trans. Geoffrey Sircom. New York: Dover Publications, pp. 141-153.

### 4. Seminar

Bateson, Gregory 1999 [1972]. Problems in Cetacean and other mammalian communication. In: Gregory Bateson. *Steps to an Ecology of Mind*. Chicago, London: University of Chicago Press, pp. 364-378.

Wolfe, Cary 2010. What is Posthumanism 2. Ch. Language, representation, and species: cognitive science versus deconstruction. Minneapolis, London: University of Minnesota Press, pp. 31-47.

### 5. seminar

Griffin, Donald R. 1981. The Question of Animal Awareness: Evolutionary Continuity of Mental Experience. Ch. Is man language. New York: Rockefeller University Press, pp. 73-85.

Ingold, Tim 1988. The animal in the study of humanity? In: Ingold, Tim (Ed.). *What is an Animal? (One World Archaeology 1)*. London, Boston: Unwin Hyman, pp. 84-99.

\* Full texts are available for download in Study Information System (SIS/ÕIS) of the University of Tartu.

### **Basic sources in Zoosemiotics**

Allen, Colin; Bekoff, Marc 1997. *Species of Mind. The Philosophy and Biology of Cognitive Ethology*. Cambridge, MA: The MIT Press.

Hediger, Heini 1968. *The Psychology and Behaviour of Animals in Zoos and Circuses*. New York: Dover Publications.

Ingold, Tim (Ed.) 1988. *What is an Animal?* London: Unwin Hyman.

Rogers, Lesley J.; Kaplan, Gisela 1998. *Songs, Roars, and Rituals. Communication in Birds, Mammals, and Other Animals*. Cambridge, MA: Harvard University Press.

Maran, Timo; Martinelli, Dario; Turovski, Aleksei (Eds.) 2011. *Readings in Zoosemiotics. (Semiotics, Communication and Cognition 8)*. Berlin: DeGruyter Mouton.

Martinelli, Dario 2007. *Zoosemiotics. Proposal for a Handbook*. Helsinki: Acta Semiotica Fennica 26. Imatra: International Semiotics Institute at Imatra.

Martinelli, Dario (Ed.) 2009. *Zoosemiotics. Special issue. Sign Systems Studies 37(3/4)*.

Sebeok, Thomas A. 1972. *Perspectives in Zoosemiotics. Janua Linguarum. Series Minor 122*. The Hague: Mouton de Gruyter.

Sebeok, Thomas A. 1990. *Essays in Zoosemiotics (= Monograph Series of the TSC 5)*. Toronto: Toronto Semiotic Circle; Victoria College in the University of Toronto.

Uexküll, Jakob v. 1982. *The Theory of Meaning. Semiotica 42(1): 25-82*.