

INTERNATIONAL CONFERENCE
ZOOSEMIOTICS
& ANIMAL REPRESENTATIONS

Tartu, Estonia, 4-8 April 2011



Abstracts



Estonian Semiotics Association

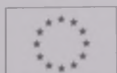
Department of Semiotics
at the University of Tartu
Estonian Semiotics Association

International conference Zoosemiotics and Animal Representations

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Plenary lectures

Umwelt or Umwelten? How Should Shared Representation be Understood Given Such Diversity?

Colin Allen

It is a truism among ethologists that one must not forget that animals perceive and represent the world differently from humans. Many animals have sensory access to inputs for which human sense organs are relatively or entirely unresponsive. Sometimes this caution is phrased in terms of von Uexküll's *Umwelt* concept. Yet it seems possible (perhaps even unavoidable) to adopt a common ontological framework when comparing different species of mind. For some purposes it seems sufficient to anchor comparative cognition in common-sense categories; bats echolocate *insects* (or a subset of them) after all. But for other purposes it seems necessary to find out more about how organisms organize their perceptions into biologically significant and perhaps cognitively meaningful states. Complex animals have high bandwidth sensory channels that feed into high-dimensional nerve networks with very complex dynamics. With the exception of simple animals having fixed numbers of neurons, the odds are very much against any two animals of the same species, let alone different species, having exactly the same couplings to the environment, the same dimensionality in their nervous systems, or the same dynamics. How, given such diversity (which von Uexküll himself recognized) should we think about shared representation, shared meaning, and cognitive similarity between individuals and species?

Colin Allen is Professor of History and Philosophy of Science and Professor of Cognitive Science in the College of Arts and Sciences at Indiana University, Bloomington, where he has been a faculty member since 2004. He also holds an adjunct appointment in the Department of Philosophy, and is a faculty member of IU's Center for the Integrative Study of Animal Behavior. His main area of research is on the philosophical foundations of cognitive science, particularly with respect to nonhuman animals. Allen has also published on various topics in the philosophy of mind, philosophy of biology, and artificial intelligence.

From Genetic to Semiotic Scaffolding

Jesper Hoffmeyer

Unlike lifeless systems, organisms do not passively sit (or flow) and wait for things to happen; instead, they actively search for the resources they need and actively protect themselves against a range of possible dangers. All of this presupposes some kind of anticipation where present cues are employed to tell about future conditions in some sense or other. In a fast-changing world anticipation is a risky business and failure of a species to interpret cues "correctly" (relative to the needs of the organism) may lead to extinction. Species that manage to interpret their surroundings well would have been favored by the process of evolution, thereby initiating an evolutionary dynamics leading to increasing semiotic freedom (Hoffmeyer 1996).

The appearance on our planet of biosemiosis thus opened a new agenda for the evolutionary process by providing entities with the agential property presupposed by Darwinian "striving" and thus for natural selection. For billions of years the semiotic freedom of agents remained low, and a bacterium, for instance, cannot by itself chose *not* to swim upstream in a nutrient gradient. Therefore, at this stage of evolution, semiotic agency is primarily exhibited at the level of the lineage (the species as an evolving unit). Only gradually a more advanced stage of biosemiosis would emerge, in which semiotic activity was no longer only a property of the lineage but also, and importantly so, a property of individual organisms.

This "individualization" of semiotic freedom, i.e., its displacement from the level of the species to the level of the individual initiated a change in the dynamics of the evolutionary process. Patterns of interactive behavior now became increasingly regulated or released by semiotic means, and this would have induced a new kind of flexibility upon inter- and intraspecific interactions. Innovations came to depend more and more on semiotically organized cooperative patterns at all levels, from single organisms and species to whole ecological settings. In fact, as I have suggested elsewhere, from now on natural selection would more and more follow the directions provided by ecosemiotic interaction patterns (called *eco-semiotic motifs* in (Hoffmeyer 1997). The better natural systems become scaffolded through semiotic interaction patterns (*semiotic scaffolding*) the less will be the role played by *genetic scaffolding*, and the more derivative will the role of natural selection become. Natural selection will now favor such genetic adjustments that might support already established semiotic interaction patterns, but will not itself mark out the direction of change to the same extent. As a consequence the individual, rather than its genes, becomes the main evolutionary agent,

and the concrete life history of individuals will increasingly determine their behavior. By implication, learning, interpretation and semiotic freedom will become increasingly important parameters in the games played out in the evolutionary theater.

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Jesper Hoffmeyer. Cand. Scient (biochemistry) and Dr. Phil. (semiotics), b. 1942. Professor emeritus at Biological Institute, University of Copenhagen. Did work in experimental biochemistry in the 1970s, but research interests gradually turned towards questions of theoretical biology. From 1988 work has focused on the developing field of biosemiotics. Recent publications include *A Legacy of Living Systems: Gregory Bateson as Precursor to Biosemiotics*, Springer 2008 (as editor) and *Biosemiotics. An Examination into the Signs of Life and the Life of Signs*, University of Scranton Press 2008.

Attenborough, Colonialism and the British Tradition of Nature Documentary Graham Huggan

Over more than half a century, Sir David Attenborough has become one of the most recognised faces – and voices – on television. One of the pioneers of TV natural history film, he is universally acknowledged as being one of the world's foremost science communicators, and he remains a leading figure at the BBC, for which, now well into his eighties, he still works. Attenborough has been described as quintessentially English, and his durable, simultaneously authoritative and self-effacing TV persona identifies him in the tradition of the slightly eccentric British gentleman-naturalist, combining amateur enthusiasm with professional scientific knowledge in a curious but undeniably charming mixture of nineteenth- and twentieth-century expository modes. Attenborough's natural history films are similarly modern yet oddly anachronistic, conveying the impression of an effortless mastery of the planet that is redolent of an earlier colonial era, and that seems at odds with their conservationist message about the need to reduce human ecological

impact and protect the world's wildlife. In this paper, I will look at the aesthetics of Attenborough's natural history films, especially their uses of the Darwinian sublime and evolutionary epic; I will also gauge the political implications of TV natural history film and 'blue chip' nature documentary, both of which have been criticised for an embellishment of nature that re-asserts the very patterns of human domination and cognitive mastery that makers of such programmes, such as Attenborough, vigorously contest.

Graham Huggan is Chair of Commonwealth and Postcolonial Literatures in the School of English at the University of Leeds. He is best known for his work in comparative postcolonial studies, including the books *Australian Literature* (OUP, 2007) and *The Postcolonial Exotic* (Routledge, 2001); however, much of his recent work is also in environmental and animal studies, including his most recent, co-authored book *Postcolonial Ecocriticism* (Routledge, 2010).

Animal Music, Animal Aesthetics

David Rothenberg

Music may be a better model for understanding the complex animal communication of songbirds, whales, and insects, because the most complex of the utterances of these creatures are not related to difference and complexity in the message, but more to the form of the performance. Thus a complex bird song, say that of a nightingale, is supposed to 'mean' the same thing as the simple song of the chaffinch: both are sung by male birds to defend their territory and attract mates during breeding season. Then why must one sing for hours throughout the night and the other be content with a simple 'sis sis siseeyou?' The difference is one of musical style, or of species aesthetic. Each species has evolved a specific aesthetic sense, and this is what defines the details of their evolved music. If one thinks of such performative animal communication as something closer to music than to language, whole new avenues of inquiry are opened up.

The songs of birds and of humpback whales are accurately called songs because their complexity consists of a series of repeated phrases in a clearly organized form, similar to the way human music is put together. It is not generally believed that each phrase or pattern signifies specific messages the way bird calls often do, or the way the waggle dance of the honeybee encodes specific useful information. Bird and humpback whale songs contain

a complexity akin to the complexity in instrumental music, where there is no precise meaning outside the form and presentation of the performance itself. There are certainly right and wrong animal songs, and it is the job of the zootaesthetics researcher to learn how to tell the difference. The musical aspect of animal communication is often overlooked, because scientists believe aesthetics to be too subjective a category to apply to species other than our own. But some scientists are starting to take the aesthetic approach seriously. I will present the work I am doing with Ofer Tchernichovski and Tina Roeske at CUNY, where we are using musical approaches to complement the statistical analysis in an attempt to make sense of the deep structure of complex bird songs, such as nightingales and mockingbirds. We are hoping to be able to quantify the specifically musical qualities of the sounds of these birds.

I will discuss the larger implications of this work, as it relates to the efforts of ecologist/ornithologist Richard Prum to bring aesthetics back into biology, which was a key part of the original idea of sexual selection as introduced by Darwin in *The Descent of Man*. Prum believes that animal aesthetic traits in males evolve together with their appreciation by females, so a natural “artworld” is evolved. This is why nature is beautiful, and why music can be an appropriate model for understanding the songs of birds, whales, insects, and maybe even humans.

Philosopher and musician **David Rothenberg** is the author of *Why Birds Sing*, also published in Italy, Spain, Taiwan, China, Korea, and Germany. It was turned into a feature length BBC TV documentary. His work has always been concerned with the relationship between humanity and nature and how music and philosophy might enhance our understanding of the world around us. Rothenberg has also written *Sudden Music*, *Blue Cliff Record*, *Hand’s End*, *Always the Mountains*, and *Is It Painful to Think? Conversations with Arne Naess*. Rothenberg is also a composer and jazz clarinetist, and he has seven CDs out under his own name, including *On the Cliffs of the Heart*, named one of the top ten CDs by Jazziz Magazine in 1995. His latest book is *Thousand Mile Song*, about making music with whales. It is currently being turned into three different documentary films. His first CD on ECM Records, with pianist Marilyn Crispell, *One Dark Night I Left My Silent House* was released in 2010 to wide international acclaim. Rothenberg is professor of philosophy and music at the New Jersey Institute of Technology.

Roundtables

Futures of Zoosemiotics

Chaired by Morten Tønnessen

Thomas Sebeok's role as a founding father of zoosemiotics is unquestioned. On what points should his views be challenged? What is the proper relation of zoosemiotics to biosemiotics, and to ecosemiotics – and how does it compare with cognitive ethology and anthrozoology? Should zoosemiotics be understood as a meta-scientific discipline, as a program for ethology or the animal life sciences, or as a scientific enterprise in its own right? A general aim of semiotics of nature (biosemiotics, zoosemiotics, ecosemiotics etc.) is to help bridging the nature/culture divide and counteract the related compartmentalisation of science and scholarly studies. To what extent should human behavior be included as a study object of zoosemiotics? In particular, how are human-animal relations to be treated? What is the role of the individual subject in biology today – and tomorrow? How well is today's zoosemiotics fitted to account for the changing global ecological reality?

Zoo as a Semiotic Environment

Chaired by Kalevi Kull

Communication between and with animals in captivity, and the design of Zoos from a point of view of animal umwelten – these topics were semiotically approached already by Heini Hediger, a former director of Zürich Zoo. We are going to discuss these problems from the points of view of, e.g. contemporary applied semiotic, interspecies communication, or designed umwelten. By one estimate, Zoos are visited by some 600 million people across the world each year. While there is a thriving field of zoological research (in the narrowest biological sense of this term), it is remarkable that, to date, so little research has been published about the human animality of Zoos, or indeed, about the relationship between that animality and the living, more-than-human objects of its gazes. In this context, semiotics would appear to constitute a particularly productive avenue for research about Zoos, one that might well offer a way of moving beyond the biologism and culturalism that still haunt many interpretations of Zoos. In this roundtable we will have a rare opportunity to explore the complexities of what is, quite literally, a Zoo-semiotics.

Animals in Ecocriticism

Chaired by Wendy Wheeler

Humanities Animal Studies and ecocriticism are often seen as distinct and different critical 'camps'. Animal Studies scholarship, with its origins in the Animal Liberation Movement, often seems more politically militant (and, some might say, more pietistic and proscriptive) than ecocriticism. Are ecocriticism and Animal Studies (as some Animal Studies scholars insist) fundamentally incompatible? Is this mainly a USA and UK perception? Are things otherwise in non-Anglophone cultures? Some Animal Studies scholars claim that ecocritical studies of animals are too disciplinarily narrow. For example, ecocritics often think that the attribution to animals of supposedly solely human competences (especially communicative ones) is anthropomorphic, whereas biosemiotics, zoosemiotics, ethology and humanities Animal Studies are all more inclined to the evolutionary argument which places humans back in nature. Animal Studies scholars seldom identify themselves with ecocriticism; is this because ecocriticism is over-focused on representation and under-focused on practical, ethical and political engagements? On the other hand, Animal Studies scholarship does not, in general, pay sufficient attention to the formative role of environment; is this a problem for Animal Studies? Animal Studies scholars often see their subject as embracing a posthumanism, whereas ecocritics (especially in the USA) have often championed humanism and the 'unmediated' human experience of nature, and resisted critical theory. Can ecocriticism also be a post-humanism? Does the study of animals in ecocriticism open up posthumanist questions? Claude Lévi-Strauss said "Animals are good to think with". In what ways are animals "good to think with"?

Presentations

What Is Common in Human and
Animal *Semantic* Communication?
Nataliya A. Abieva

Biosemiotics has extended the concept of communication to all living beings, no matter how complex or 'simple' they might be. The ability to perceive and generate signals in order to ensure existence distinguishes living from non-living matter. The urgent need for information encourages all forms of data exchange – intra-, inter- and trans-species, as well as interaction with the environment (Witzany 2005). The idea of life as an incessant semiotic process performed non-stop by all biological species allows one to view the evolutionary development as a result of multifaceted polylogue.

When speaking about human forms of communication, it has always been stressed that people's communicative acts are invariably intentional (Millikan 2004), the general aim being to send a message, i.e. to share some knowledge. Of the three compulsory constituents of the *sign*, semantics is probably the most important, for while the choice of the concrete piece of *knowledge / experience / information* depends on the pragmatics of the situation and the sign form on the type of communicative interaction, it is always semantics that justifies the communicative act itself.

By expanding the limits of communication beyond human societies, do we mean that animals also deal with semantics? We certainly do, but whether human semantics and animal semantics overlap, and to what extent, is not yet clear. Some believe that "the difference between humans and other animals in terms of their inventories of concepts is quantitative" (Hurford 2004, www.ling.ed.ac.uk/~jim/fitzdear.html), others find that the problem is more complicated and non-human intentionality as well as propositional behaviour should be viewed as gradational in different kingdoms of nature (Laurence, Margolis 1999).

In the paper it is proposed that the specificity of semantic communication depends primarily on the type of the communicative act and its mode – spontaneous interaction or distanced. The biological interpersonal communication *on-line* relies heavily on *concrete* semantics of the cognized objects of the environment. Admitting that the actions of animals are the result of some previous 'mental' computations with the concepts of those objects, we will have to accept that in this or that protoform (Rosch et al. 1978) similar concepts are shared by different species. More than that, it is plausible to admit that the roots of abstract semantics are common, too. All living systems must be aware of such oppositions as <DANGEROUS – SAFE>,

<EDIBLE – POISONOUS>, <COLD – WARM>, etc., otherwise their existence is under threat.

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The (Proto-)ethical Significance of Semiosis: When and How Does One Become Somebody Who Matters? Ralph R. Acampora

In this paper I would like to explore and assay the theoretical and experiential relevance of semiosis to animal ethics and to inter-species morality. Zoosemiotics is typically taken as a theory or inquiry about the meaning-structures found in the animal kingdom. From the vantage of disciplinary history, it has been associated with cognitive science and ethology as well as philosophy of language and philosophy of mind. Lately, as in the work of Jesper Hoffmeyer, a broader conception of biosemiotics has been developed, with affinities for somatic studies and philosophy of body. Animal ethics – at least in its first-wave instantiation among analytic/Anglophonic philosophers – has usually been understood to offer (or contest) criteria that widen the scope of moral standing to include (some/many/most/all) animals other than humans. Recently, a number of alternative (Continental

European, feminist, and postmodern) approaches to the field have tried to lay bare the axiological and/or ontological presuppositions for the intelligibility and practicality of relating to other animals as moral beings (patients mostly, but sometimes as agents too).

What I would like to propose – in an experimental vein, on a trial basis as it were – is that the fact or activity of semiosis may be taken normatively as a crucial element in the definitional framework of ethical considerability and/or that it may also be taken descriptively as a significant part of the proto-ethical ontology out of which inter-species morality arises. Elsewhere, against the psychocentric grain of most animal ethics, I have argued that (some state or property of) mental consciousness as such does *not* ground the concept of moral standing; rather, the presence of a live body (*Leib*) is an essential feature of any ethically considerable being. Yet I admit this feature, though necessary, is not by itself enough to establish moral standing – my gambit here would be that another state of affairs would also have to hold, namely some structure of (spontaneous) semiosis. On this view, then, meaning as such would (help to) make morality: when present along with a live body, the pairing is sufficient to ground standing.

Whether or not that hypothesis admits of validation in the context of contemporary analytic ethics, I would also like to venture the proposal that the phenomenon of semiosis set in somatic experience is at least a very helpful hint at (if not a definitive hallmark of) value-generation – and so it can be seen as a primary aspect of the phenomenological grammar peculiar to the evolution of ethics (as regards interspecific morality in particular). Demonstration of this could occur on two levels: a physico-ecological one, and following Cary Wolfe, one of communicative technics. From this dual perspective, finally, zoosemiotics would thus make inroads into (especially Continental) conversations about cross-species axiology and posthumanist ethics/politics.

Ralph R. Acampora, Associate Professor of Philosophy, Hofstra University, College of Liberal Arts & Science. Dr. Acampora teaches in the areas of applied ethics and history of (especially modern) philosophy. He conducts research in the fields of animal studies, environmental philosophy, bioethics. He is the author of *Corporal Compassion: Animal Ethics and Philosophy of Body* (University of Pittsburgh Press, 2006) and co-editor of *A Nietzschean Bestiary* (Rowman & Littlefield, 2003). He has published in a variety of books and journals, referees for *Environmental Ethics* and for the *Journal of Critical Animal Studies*, and is a member of the editorial board for *Society & Animals* as well as *Humanimalia*. Most recently, Dr. Acampora edited a book on post-

zoo forms of animal encounter entitled *Metamorphoses of the Zoo: Animal Encounter After Noah* (2010, Lexington Books of Rowman & Littlefield).

Toward a Zoosemiotic Approach to Animal Ethics Jonathan Beaver

Peirce's semiotic, the theoretical foundation of contemporary zoosemiotics, provides an ontological foundation for a naturalistic moral value theory. Within a Peircean framework, environmental ethics, widely construed, is the study of the moral relationships humans should have toward the environment, or the study of the moral status of their *ecological* relationships. Our ecological relationships are a matter of empirical research in ecology and zoosemiotics and, as such, are becoming more and more well-defined. Thus, the central problem in environmental ethics has been determining and defining the status, scope of, and justification for our moral relationships with the environment and the organisms that make up that environment. This involves questioning how and why should we consider individual organisms morally valuable? Is the common hare worthy of our moral consideration? What is the moral difference between the hare and the fox? Between the fox and the tick?

If the central problem in environmental ethics is to determine and define the moral value of environmental entities, our normative ethical theories must be able to explain on what basis and to what extent those entities have value. The naturalistic foundation of contemporary bio- and zoo- semiotic theory grounds a theory of moral value capable of addressing this problem. Namely, it suggests that what is morally relevant is the semiotic relationship: things either are morally significant because they signify or become significant because they are signified. On this account, things that signify have inherent value and things that are signified have instrumental value. Within this framework, semiosis is a morally relevant property of all living things, thereby offering us an *ecological*, as opposed to merely environmental, ethic.

A consequence of this semiotic theory is that living things are accorded inherent moral value based on their natural relational properties – their ability to signify. This consequence establishes a hierarchy of inherent moral value based on the scope of signification: the larger the *Umwelten*, the greater the value. I will argue that a robust semiotic moral theory can take into account a much wider scope of inherent value. A complex but conceivable calculus, totaling the inherent and instrumental value of the entity in

question, would then provide an account of the total moral value of that entity. These consequences have positive ramifications for environmental ethics in their recognition of the natural ecological networks in which each organism is bound.

A reevaluation of the basic problem of the moral value of environmental entities based on the theory and methodology of zoosemiotic analysis directs us toward an ecological ethic, founded on signification, the intentional sign or semiotic relationships between environmental entities. This presentation of a zoosemiotic model of value, stemming from Sebeok's research, offers an account of our contemporary moral intuitions concerning the representation of our semiotic/moral relationship with animals while also pushing our normative ethical boundaries.

Jonathan Beaver is a doctoral student in Philosophy at Purdue University in the United States. He works in applied ethics/bioethics and also has interests in continental philosophy, political philosophy, and biosemiotics. He is the co-founder of the Purdue Bioethics Seminar Series at Purdue University (www.purdue.edu/bioethics) and has written on a wide range of issues including ethical issues in contemporary genetic research, conflict of interest in medical decision-making, and the environmental politics of French post-modernist Jean Baudrillard. His dissertation argues for a unique approach to considerations of the scope of valuation in environmental ethics, including animal ethics, relying on Peircean biosemiotics.

**Constructing Leviathan:
The Domestic Manifestations and Transnational Ramifications
of Anthropomorphism in Japan and the United States**
Jesse Bia

This presentation examines how anthropomorphism, the mapping of human characteristics onto animals, is a cultural construct shaped by societal and historical catalysts. Modern whaling, a practice and controversy at the center of which are Japan and the United States, exemplifies the consequent ramifications anthropomorphism has on transnational debates. What goes into the creation of a cultural anthropomorphic identity? By juxtaposing the two countries' religious backgrounds and respective histories of environmentalism, it is possible illustrate how two divergent constructions of anthropomorphism arose and further propagated. In Japan, Shinto practices inspire

an intrinsic, indistinguishable link to the natural environment, resulting in the creation of human/nature/spiritual hybrids in traditional and popular culture (*kemono*). This also led to a subsequent history of environmental protection focused on *terra firma*, lacking an emphasis on animal safeguarding. In contrast, the United States inherited a rich history of Greek/Judeo-Christian animal symbolism and the ensuing environmentalism emphasizing the protection of animals, thus generating an anthropomorphism-centered culture which consistently maps human characteristics directly onto the animal. Manifestations within each respective society of these different anthropomorphic identities are plentiful.

How do unique anthropomorphic identities influence interactions on an increasingly globalized international stage? One of the most high-profile (yet chronically under-researched and misrepresented) case studies currently embodying this question in the world today is the modern whaling debate. Hostility revolving around the expatiating of differences on the part of cultural actors often borders on direct violence and consistently fails to adequately frame the obvious ramifications of such misunderstandings, let alone the underlying anthropomorphic origins and subtleties. In explaining the development, manifestations, and ramifications of the unique Japanese and American anthropomorphic identities, I hope to demonstrate how anthropomorphism is a malleable entity shaped by cultural history. As such, there are subtle, yet highly substantial, implications to the claim that anthropomorphism is a cultural construct, as is visible within the modern whaling debate.

Jesse Bia is currently pursuing his Master of Science in Social Anthropology at the University of Oxford in the United Kingdom as a member of St. Antony's College. His research concerns the myriad cultural issues surrounding modern whaling, including concepts of indigeneity, anthropomorphism, and media representation, involving but not limited to Norway, Iceland, the United States, Inuit communities, and upcoming fieldwork within Japan. Mr. Bia received his Bachelor of the Arts from the University of Rochester in New York, majoring in both Anthropology and Japanese, also earning a Certificate in Asian Studies.

Signs, Marks, Gestures:
New Art Examiner
Joanne Bristol

The field of contemporary art has witnessed a striking growth in inter-species creative production over the past decade. A large number of artists have developed projects in relation to animal agency, language and culture. The range of methods used by artists spans the framing and interpretation of works produced autonomously by animals to works created by (human) artists in conjunction with animals. In contemporary art the emphasis is currently on production; there is less discourse at this point on how animals read or respond to cultural works. In order to take up the potential for art criticism in an expanded field, I will examine, in this paper, instances and methods of animal responses and interpretations to artworks produced by humans. My central focus will be a video work (titled *New Art Examiner*) I recently created, documenting the response by a domestic feline to a reproduction of a drawing by the artist Raymond Pettibon. The cat's extraordinary and embodied response to the work leads me to hypothesize not only about some productive ambiguities between feline and human perception (the image itself, though relatively abstract, has been composed using extreme black-and-white contrasts, and oscillates rapidly between figure and ground), but also about the nature and limits, from human perspectives, of the forms of art criticism. My interpretation of both the cat's response and the video work will consider some of Elizabeth Grosz's theories in *Chaos, Territory, Art: Deleuze and the Framing of the Earth*, specifically pertaining to her conceptualization of the ontology of art as a singular category of activity involving the relation of the body (whether animal or human) to the earth. Within this singular field of creation and interpretation, ambiguity, sensation and affect are as important as understanding semiotic meaning. Questions I will address include: How can the 'misrecognition' of an artwork by an animal open space for new understandings of the role of art and the creative language of animals? How can the field of contemporary art be considered as a singular but rich space for understanding nuances of animal communication? How might the idea of 'animal-as-art-critic' de-territorialize ossifications in the field as practiced by humans, generating new critical gestures or choreographies?

Joanne Bristol is an artist and writer focusing on questions of inter-species communication and cohabitation in urban settings. She is currently conducting research for a practice-based PhD at the Bartlett School of Architect-

ture in London, UK. Her proposed thesis, titled 'Performance Spaces for Domestic Animals', combines research in spatial culture with the emergent field of critical animal studies.

Of the Colour of Snow or Milk

Sonja Britz

"Lichtenberg says that very few people have ever seen pure white"
(Wittgenstein 2007:2e)

White animals, whether represented or actual, have held a longstanding fascination for human beings. Often regarded as exceptional and rare, such animals have been associated with supernatural powers, purity and ancestry. According to John Berger animals were the first subject matter of painting (Berger 1991: 7), thereby establishing a link between images and living things as both metonymic and metaphoric signs. Although Berger does not specifically refer to white animals, this colour (or non-colour), when associated with an animal which is not genetically white or a white animal taken out of its naturally white surroundings, encourages a variety of associations across cultures.

Historically, 'white' has indexically signified fragility, or rarity as in the exceptional. These latter properties have evoked contradictory responses from the human animal; either to protect the white animal, or convert it into a trophy. A recent example of this phenomenon was the 'rare white deer controversy' that erupted in 2009 in Scotland. Animal activists condemned the trophy-seeking hunters who desired this rare animal, christened Pearl.

White zoo animals generate other controversies: the white gorilla Snowflake who lived out its life in the Barcelona Zoo served as a star attraction to the zoo and made it world-famous. However, such animals seldom live for long in the wild and primarily exist in a constructed world. Furthermore their presence epitomizes the most criticized aspects of zoo existence, namely the employment of animals as vehicles for entertainment and spectacle.

Sometimes this fascination is linked to a perceived similarity between the human and animal species, made possible through shared abnormalities. Such abnormalities in animals are not necessarily perceived as negative features by humans, but add to their enchantment. While in some contexts it is important to distinguish between animals that are naturally white – for example, polar bears and animals that are victims of gene mutations such as

albinism and Leucism – such differences do not invariably impact on the white animal's status as a signifier of wonder, rarity or desire.

Scientifically and historically, white colour has been difficult to pin down precisely, because of the conflicting opposites of additive and subtractive colour. Whereas white can be described as a receiver of colour rather than a colour in its own right, the Newtonian discovery that white is a combination of all colours was described by Goethe as an absurdity, since this mix stands in opposition to the evidence of one's senses (Jarman 1995: 11). It is therefore not strange that white has been attributed all sorts of aesthetic and mystical properties, ranging from ghostly to intense spirituality.

In this paper I wish to briefly trace the visual representation of white animals and consider how historic perceptions of them have shaped our present day attitudes toward them in contemporary society. I wish to argue that this fascination could point to a desire for "enchantment", a term chosen by Peter Mason to describe the early modern world in his book *Before Disenchantment*. He discusses a time in which "the aesthetic appeal of awe, wonder and enchantment" (Mason 2009: 222) stands in stark contrast to contemporary reductive, classificatory systems by which animals are perceived today.

The Semiotics of Insects and the Hive in Popular Culture Larissa Budde

The motif of the insect is widely used in the media and in popular culture, and the symbolic presence of insects, whether pictorial or linguistic, is surrounded by a complex web of semiotic representation. Especially the images of the predatory insect and its social structure, the hive, are often employed to convey different relationships between humans and their other-than-human surroundings. All these representations reveal a striking similarity in their semiotic production and their meaning: they all serve to underpin the alterity of the other-than-human, and the insect and the hive as sinister entities have become synonymous with nature-phobia. The insect creature commonly signifies not only the ultimate Other of the human, but also its abjection and downright negation. Insidiously, these perceptions are closely linked to what is perceived as the reality of the insect as a being, for the media-creation of insect and hive employ the biologically observed and confirmed structures of hives for the purpose of creating the ultimate adversary of the human. Thus the semiotics of insect and hive-representation in

popular culture reveal a double structure: the biologically observed formation of insect reality fuses with the human-imposed semiotic structures that depend on and perpetuate a dialectical relationship between insect others and human selves.

This binary opposition of self/other, human/animal, civilization/nature that still gives meaning and identity to modern humanity is especially obvious in the representation of the abject human/insect hybrids that form the most common enemy in popular culture media, such as the Aliens of the *Alien*-saga, the Wraith of *Stargate Atlantis*, and even the Borg of *Star Trek*. Far from merely signifying the undesirable collective of communism in socio-political terms, the semiotics of the insect determine the enemy's moral destitution and inhumanity and allow the equation of inhumanity and non-humanity, so that the statement becomes ethical rather than political.

Both ecofeminism and ecophenomenology, both of which bear on deep ecology's concern with the non-human as on par with the human, are useful for a methodological approach to the semiotics of insect- and hive-representation in popular culture. The organic other-than-human is equated with a hostile Other that threatens to devour the isolated human, and elements that constitute the insect and the hive are conveyed as distinctly gendered. By different processes the insects and those who bear their mark are excluded from personhood and selfhood, which is further emphasized by the hive's apparent denial of individual meaning. In the imagined ultra-technological future the insect becomes a representative of the organic, even the natural world itself, and the hive emerges as a synonym of the ecosystem: by the semiotics behind their construction both the organic in general and 'nature' as a system of other-than-human relations in particular are externalized, othered, objectified, and finally eliminated.

Larissa Budde studied English and German literature at the University of Siegen and graduated to Masters in 2009. She is currently working on her doctoral thesis, which will examine the representation and function of trans-species hybrids in popular culture. Her research interests are the various forms of animal representation, especially in fantastic literature from Tolkien onwards, as well as different 'eco'-related subjects (ecofeminism, ecophenomenology, environmental writing, and deep ecology).

**Reflection and Refraction:
Where the Airy and Aquatic Meet**
Jacob Bull

As light crosses the boundary between different media, such as air and water, it speeds up or slows down (depending on direction). As a consequence of this change in velocity, the light alters its path. This is refraction. When the angle at which the light strikes the second medium exceeds a critical value (depending on the substance), the light does not cross the boundary but is reflected back into the first medium. The refraction of light changes the perceived position of bodies in the different media, creating 'perceived' and 'actual' positions of the observer and observed; different depths. In addition the reflection of light creates 'windows' through which the observer and observed become aware of one another, and also 'mirrors' behind which they can be hidden.

It is this boundary, this surface between air and water and the windows and mirrors it creates, which anglers use, respond to and exploit when fishing. This paper examines the agency of the surface in shaping understandings of non-human animals. It uses the accounts of anglers to consider the ways that human and non-human perceptual worlds appear to meet and overlap in the thin film between the airy and aquatic. In this meeting place between air and water there appears to be a communication across the species divide. The angler recognises and responds to the trout's understanding of fly-as-food and echoes this in the form of fly-as-bait. The angler observes piscatorial semiotics, masters those meanings and then replicates them in ways to fool the fish. What this paper goes on to consider is the implications of the gap between 'perceived' and 'actual' positions of different bodies, and how the alternative axis, planes and positions which refraction creates, might affect how we contemplate humanimal encounters, and the communication across the species divide.

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Creative Intuition:
D. H. Lawrence and Humananimal Mind
Laura Byrne

This paper will explore the development of philosophical ideas concerning the animal dimension of human mindedness in the work of the writer D. H. Lawrence (1885–1930). Working from the rationale that mind be conceived in terms of an organism's responsive relations to the environment and, as such, is immanent to varying degrees in all living creatures – a view endorsed in Lawrence's thought – it follows, within an evolutionary framework, that humananimal mind be located in tacit, affective modes of human experience. In line with Polanyi's later theorization of this 'tacit dimension' to human mindedness, Lawrence argues that our most fundamental knowledge arises from pre-reflective modes of knowing and, consequently, that all thought is rooted in the body – as Polanyi suggests, we know more than we can tell. Access to this tacit realm of human knowing, Lawrence suggests, is gained via our intuitive awareness of and attendance to relationships of similarity and difference in the external world and involves a process whereby we attend from embodied knowledge to attend to the objects of consciousness, proceeding via intuitive 'guesses' or hunches. This process, Lawrence asserts, is the fundamental basis of all creativity across the sciences, philosophy and the arts. In positing the body as central to the process of knowing and grounding empirical and scientific modes of knowing in affective modes of human experience, Lawrence's thought refutes the Cartesian dualisms of body and mind, nature and culture and effects a reassessment of the complex relationship between reason and belief in human creative thought.

Acknowledging both Lawrence's roots in romanticism and his extensive engagement with the German philosophical tradition, the paper will initially draw out affiliations in Lawrence's thought with late-18th and 19th century German *Naturphilosophie*, notably with philosophical arguments proposed by Goethe, Schelling, von Humboldt and Haeckel. Considering Lawrence's development of these affiliations in the light of recent scholarship by Damasio and Bateson, the paper will ultimately seek to illuminate an implicit, biosemiotic impulse struggling for expression in Lawrence's work.

Laura Byrne is a graduate student in the Humanities, Arts & Languages Department at London Metropolitan University. She is currently undertaking PhD Research on the influence of the German philosophical tradition on D. H. Lawrence's thought.

**Sebeok, Hediger, Foucault: On Power and Communication
in Human-Animal Relations**
Matthew Chrulew

This paper will ask some questions of Thomas Sebeok's zoosemiotics from the perspective of Michel Foucault's theory of power/knowledge. Sebeok has worked over a number of decades to advance a semiotic perspective on animal behaviour and communication (Sebeok 1972). His cutting-edge interdisciplinary combination of ethology and semiotics offers great advances beyond the dogmas of mechanomorphism in our understanding of non-human animals as active, experiencing creatures. I will argue that this zoosemiotics ought to be supplemented with attention to power relationships between humans and animals.

Foucault's genealogical method offers a productive means for conceptualising interspecies relations of power (Chrulew 2010). Apparatuses such as zoological gardens and laboratories act upon the possible actions of animals so as to produce scientific knowledge. The work of Sebeok and his followers allows great insight into the multisensory modes of communication in such zones of interspecies contact. Yet to occlude the power dimension is to risk romanticising situations that should be analysed and problematized. Foucault broached this issue in "The Subject and Power":

It is necessary also to distinguish power relations from relationships of communication that transmit information by means of a language, a system of signs, or any other symbolic medium. No doubt, communicating is always a certain way of acting upon another person or persons [or animals, MC]. But the production and circulation of elements of meaning can have as their objective or as their consequence certain results in the realm of power; the latter are not simply an aspect of the former. Whether or not they pass through systems of communication, power relations have a specific nature. (Foucault 2002: 337)

A thorough understanding of the different modes of human-animal interaction demands the theorisation of power and communication together.

The intermediary in this encounter between Sebeok and Foucault will be the Swiss zoologist Heini Hediger, who directed Zurich zoo from the mid-twentieth century onward. His writings and practical interventions are foundational for the biopolitical reforms at the basis of modern welfare-centred zookeeping (Hediger 1964, 1966, 1968). Hediger was both an

observer of animals and a manager of their lives, and his combination of theory and practice situates him at the interface of power and communication. He was also a friend and colleague of Sebeok's, and the latter devoted a late, short book to him that approaches Hediger's work through the lens of semiotics (Sebeok 2001). Hediger thought expertly about how to communicate with animals; but he was also directly concerned with how best to govern their lives in thoroughly humanised surroundings. Sebeok's biosemiotic reading of Hediger's work, which privileges the question of human-animal communication, ought to be supplemented by attention to power-relations. Doing so, I argue, will open up zoosemiotics to innovative modes of understanding and intervention in the complex interweaving of human and animal lives.

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Codes, Coding, Communication and Semiotics

Paul Cogley

The concept of code has a long and varied history across the sciences, the social sciences and the humanities. In the interdisciplinary field of biosemiotics it has been foundational through the idea of code duality (Hoffmeyer, Emmeche 2007); yet it has not been free from controversy and questions of definition (see, for example, Barbieri 2010). One reason why code has been so central to modern semiotics is not simply a matter of the linguistic heritage of semiology and the work of Jakobson who straddled both semiology and semiotics. Rather, it has been the programmatic reconceptualization of code which is woven through the work of modern semiotics' founder, the father of both biosemiotics and zoosemiotics, Thomas A. Sebeok. A biologist *manqué*, a communication theorist influenced by cybernetics and a semiotician deriving from the 'major tradition' of Peirce, arguably Sebeok's most systematic considerations of code were offered in his essays on zoosemiotics from 1963 onwards. This paper principally revisits the 1972 collection of Sebeok's zoosemiotic essays and suggests that his particular observations in respect of analogue and digital codes and their relation to evolution in the world of animals harbours an opportunity to rethink and potentially resolve, through an ethological lens, current controversies regarding the status of code.

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Evolutionary Bodies of Knowledge; or, the Evolutionary Phenomenology of J. J. Audubon, Georges Bataille, Theodore Roethke, and Octavia Butler

W. John Coletta

By the phrase "evolutionary bodies of knowledge" of my title I mean three things: (1) the subject matter ("body" of knowledge) of evolutionary biology both in its present constitution and as a function of that discipline's historical sedimentation, (2) the human body as, itself, an evolutionary palimpsest of

its own animal (and plant and mineral) "infrastructure" – the "nonhuman animal" as "infrahuman" in Cary Wolfe's phrasing – that is, as a body that allows access to its own evolutionary constitution and, of course, that *erases most traces of that constitution*, and (3) the view of bodies as constituted through *performance* (the evolutionary play on the ecological stage; see Judith Butler), a view of Darwin's "sexual selection" as an anti-essentialist – and antihomophobic and antiracist (see Timothy Morton) – view of "being in the world," a much needed corrective to the essentializing, masculinist literary Darwinists, the still omnipresent social Darwinists, and the Creationists, whose abuses Donna Haraway captures when she writes: "teaching modern Christian creationism should be fought as a form of child abuse."

Evolutionists are losing ground to creationists, all the polls say. According to a recent Gallup poll, for example, a greater percentage of people in America *today* believes that "God created man in present form about 10,000 years ago" than believed this in 1982. Most scientists and humanists interested in evolution have failed in communicating to students and the public alike a sense of what it might *feel* like (1) to recover our bodies' evolutionary palimpsests – not an innocent recovery, however – and (2) to experience both the empowerment and the radical acceptance that a performative view of evolutionary embodiment would create when considering and accepting our own bodies, other bodies, and "nobodies": the bodies we make.

Consider in these terms the following: vertebrates, writes Rene Thom, "replaced" the arthropod's exoskeleton "with a virtual shell of pain" – and pleasure. Thom also writes of "nervous system lateralization" as an evolutionary blueprint of the incorporation in vertebrates of the "predator-brain, prey-brain duality," the predator brain being located close to the mouth and the prey brain being located "along the cephalo-caudal axis, the spinal marrow." Keeping Thom's assertions in mind, I then argue for how the pictorial "dance of death" of predator and prey in John James Audubon's bird paintings featuring raptors (primarily the rapt intertwining of eagles and hawks with their prey) represents a single, emergent, or "third" (neither the predator's nor the prey's) body. This "third body" as I call it (the unintended but subject of Audubon's canvas) may be understood as Audubon's own unconscious reconstruction or recoding of his own body in terms of an (imagined) ontogenetic recapitulation of the phylogeny of a pre-human, neurologically lateralized, "other" (the raptor as rapture), the "infrahuman".

Then, starting from the preceding point of consideration of a human evolutionary palimpsest and its covert emergence in Audubon, I then move to a consideration of the "third-body" phenomenon more broadly through a

discussion of how the poet Theodore Roethke and the fiction writer Octavia Butler explicitly transform the standard person-in-the-street's social-Darwinist view of Darwinism into a postmodern, performative view of the constitution and emergence of bodies. Finally, I show that Georges Bataille's "base materialism" – and the subversion of political hierarchies and dualities that "base matter" can effect (even, say, "the big toe," in Bataille's essay of the same name) – helps further clarify the "antiessentialist performativity" (Morton) of Darwinian evolution – precisely the perspective on evolution that usually is missing from both sides of the debate and that frightens the fundamentalist on the one hand and is avoided, in the name of objective or departmentalized science, on the other.

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Entomological Rhetoric and the Fabrication of the Insect World Adam Dodd

Insects became subjects of dedicated study in Europe in the final quarter of the sixteenth century. Since this time, the field now known as entomology has developed a powerful set of representational conventions, literary and graphical, with which to formulate and communicate knowledge about insects, their habits, and their habitats. Central to modern understandings of insects is the term "insect world" – a curious hybrid of fantasy, science and fiction that ensures an 'otherworldly' status for insects in general. One of the earliest appearances of this term is found in Dru Drury's *Illustrations of Natural History* (1770), and it reappears in a number of other texts in the late eighteenth century. By the nineteenth century, with its surge in popular natural history and amateur microscopy, the term was appearing in countless books, increasingly illustrated with detailed plates, encouraging readers to embark on educational and edifying journeys into the strange, alien world of the insect.

In this paper, I trace the origins and effects of this enduring metaphor which, despite its ubiquity in scientific and popular discourse, has thus far

been subject to very little critical scrutiny. I argue that "the insect world" must be understood as a metaphor, rather than as a clearly delineated 'other' space framed by spatio-temporal parameters. The employment and popularization of the term is explained in relation to its cultural context, and through reference to a number of entomological texts (scientific and popular) produced since the late eighteenth century. I do so, I provide an overview of the term's cultural history, its rhetorical functions, and conclude by suggesting some approaches to evaluating its importance as an arbiter of human-insect relations.

Adam Dodd is Postdoctoral Research Fellow at the Department of Culture Studies and Oriental Languages, University of Oslo. His current project is titled 'Microfaunae and their World: The Explication of Subvisible Animals in Early Modern Europe' and forms part of the larger research project, 'Animals as Objects and Animals as Signs.' He is also currently working on *Beetle*, for Reaktion's ongoing Animal series.

How Dogs and Cats Explained What Data Could Not: Writing Neuroscience at its "Othermost"

Brianne Donaldson

This paper argues for a more rigorous account of animal signaling behavior in neuroscience studies. The past twenty-five years of behavioral neuroscience data involving companion animals rests on the premise that dogs and cats elicit positive changes in human action and well-being. I will argue, however, that the attempt to quantify and replicate these changes has failed. This approach has also truncated the potential contribution such data could make to broader investigations of life and meaning. Insofar as neuroscience studies ignore the means by which animals interpret and negotiate the demands of their changing surroundings from moment to moment (Markoš), they perpetuate a Cartesian machine-logic that posits other animals as automata, and neural response as fundamentally deterministic. In this paper I argue that we should instead examine the subjective biosemiotic freedom (Hoffmeyer) of animals as interpreting partners in interaction with human subjects.

Studies linking increased oxytocin with animal interaction are currently perpetuating this machine logic. Oxytocin (OT) is the neurochemical associated with trust and attachment, shown to play a key role in love, friend-

ship, families, organizations, as well as economic and political decisions (Ross, Young 2009; Heinrichs et al. 2009; Guastella et al. 2007; Zak et al. 2004; Kosfeld et al. 2003). This research has been extended to human-animal relations and numerous studies suggest benefits to humans and animals – many of them OT-induced – derived from such interactions (Stock, Uvnas-Moberg 2008; Nagasawa et al. 2008; Odendaal 2000; Odendaal, Meintjes 2003). These studies contribute to an increasingly seamless causal narrative between companion animals and increased human trust and well-being. But as Deborah Gordon asserts regarding the organization of ant colonies, “An ant does not respond the same way every time to the same stimulus; nor do colonies” (Gordon 1999: 139). And I would maintain, neither do dogs nor cats.

In a recent study at The Center for Neuroeconomics Studies in Claremont, California, dogs and cats defied existing expectations. Not only did OT decrease in over seventy-five percent of the human participants, but the behavioral videotapes showed socialized dogs rejecting toys, barking, pacing by the door, ignoring verbal and physical attempts to engage, and displaying other anxiety behavior such as whining, yawning, excessive sniffing and blinking. Cats, on the other hand, defied their capricious and independent reputations, at times crawling into the laps of participants, initiating and maintaining contact, sleeping contentedly, responding to their name, purring, and orienting consistently toward their human visitor.

Though the analysis for this study is not yet complete, I contend that an adequate interpretation of the data will require a non-reductionist approach that synthesizes the subjective experience of the canine/feline agent in this study along with neurochemical analyses. I derive the methodology for writing this analysis by connecting biosemiotic subjectivity with the political theory of Gayatri Spivak, the post-colonial theorist who also routes ethical relationships through the eyes of the other, a locus she refers to as “othermost” (Spivak 2003).

An adequate analysis of neurochemical change must take into account the unique subjective perspective of companion animals and the ways in which they contribute to these changes through their unique interpretive responses. By understanding the signs and signaling of animals on their own terms (Deacon) and in response to changing contexts and stimuli, neuroscience can make a more constructive contribution to the relational possibilities between organisms.

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Representation of Sheep in Modern Japanese Literature:
From Natsume Sôseki to Murakami Haruki
Maki Eguchi

This presentation examines the representation of sheep in modern Japanese literature and its relationship to Japan's modernization. The presentation shows the progress of two external influences on Japan: British and American's authoritative influences on Japan and Japan's colonization of Asia.

The importation of sheep into Japan reflects the country's modernization. Sheep were not indigenous animals. About 150 years ago, with the opening of the country and the beginning of the Meiji era (1868–1912), sheep were imported by the Meiji government to meet great demand for wool, which was necessary to supply military uniforms for the invasions of Russia and northern China. With wool imports from England increasing, the Meiji government encouraged the domestication of sheep and followed the British ways of raising the animals. Similar methods were applied to agricultural employment in Manchuria, which Japan colonized between 1932 and 1945.

After World War II, while Japan was occupied by the U.S. military, sheep became a vital provision. In fact, the number of domesticated sheep rose to its highest level 10 years after the end of the war, with many sheep being imported from America. However, as Japan's economic growth surged during the 1960s and 1970s, sheep herds began to diminish. Today, sheep are rare in Japan.

The Japanese images of sheep thus have a distinctive history. Added to the knowledge of sheep learned from Chinese or European cultures, local circumstances and social and cultural backgrounds established how the Japanese represented sheep in their literature.

One of my target texts for examining the representation of sheep in Japan is Natsume Sôseki's *Sanshiro* (1908). The author uses ambiguous images of sheep at the end of the Meiji era, when sheep were not yet well known. In the novel, wandering young people are compared with "stray sheep." Sôseki, who was not only a very productive writer but also a famous scholar of English literature, applied the pastoral image of sheep in English literature to his novel, and to Japanese society of that time. "Stray sheep" represented the great influence of the British Empire on Japan and the author's apprehension about Japan's expansionary invasions into Manchuria.

Another text, Murakami Haruki's *A Wild Sheep Chase* (1983), was written when sheep herds were still declining rapidly during surging post-war economic growth. The author describes a young man's adventure to find a legendary sheep in a story set against the history of sheep in Japan. The

image of "stray sheep" in *Sanshiro* is applied to inactive young people who lived in an era after the student movements against the Japan-U.S. Security Treaty in the 1960s. He directly points out that sheep are "the very image of modern Japan," looking back at Japanese modernization and the history of sheep. Murakami's interest in sheep and Japan's colonial history in this novel remain one of the main themes of his later works, such as *The Wind-up Bird Chronicle* (1994-1995).

By interpreting the representation of sheep in these two texts, it is possible to learn more about the history of Japan's modernization and how people have utilized the animal for the purpose of colonization.

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**Animals in Advertising: A Semiotic Study of Animal Representation
in the Facades of Commercial Establishments and Billboards in the City of
Feira de Santana, Bahia State, Northeastern Brazil**

Eliane Ramos Espírito Santo, Eraldo Medeiros Costa Neto

Advertising is a marketing practice of persuasion that aims at inducing consumers' behaviour towards a product or service by using texts and images with explicit and implicit meanings to be understood. Advertisings are elaborated in order to instigate and invoke pleasant emotions and desires. More specifically, they go around the brain's cognitive centres, communicating through our basic physical desires (oral, sexual) and our emotional needs (security, social status, control, potential profits). In doing that, advertising educates or inserts interpretations of the world that persist

in society. Considering animals, advertisers employ their images to attract people's attention toward a product or business. This paper records the presence of animals as symbols in commercial establishments and billboards in the city of Feira de Santana, Bahia State, Brazil, and attempts to analyse which symbols the ads use and how they are transmitted to the public. Eleven streets of downtown were covered on foot and the images of animals were photographed with a digital camera during five days in the months of May, June and July 2010. Images were analysed quali-quantitatively. A total of 58 different animals were recorded, including 53 found in the facades of stores and five on billboards, distributed in the following taxonomic groups: mammals (36%), birds (26%), insects (26%), fish (7%), reptiles (3%), and arachnids (1%). Among insects, butterflies were the most representative ($n = 12$), followed by the bee ($n = 6$). Butterflies are multicultural symbols of the beauty of nature, representing its positive traits. That is why these insects are often used in order to give a feminine touch to an art work, a product or business. On the other hand, those animals culturally described as bad or harmful were not found in the advertisements. The omission of certain animals due to their symbolic representation indicates why they have not been used in marketing campaigns. We conclude that advertising primarily uses the images of those animals that are aesthetically attractive, while those considered unpleasant are excluded or rarely used.

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The Reciprocal Gaze Between Human and Animal: An Inquiry Luanne Frank

The gaze has long been a topic of cultural interest due to influences emanating from such domains of thought as feminism, Freudian and Lacanian psychoanalysis, interpretation theory, and, not least, semiotics, among others. Inquiry into the mechanisms of the gaze, the meanings apparently inherent in given types of gaze, their influence, and their effects on their

objects or recipients have, however, focused in large part on the gaze of a subject *at* an object, such a gaze, whether accepting, rejecting, or benign, being familiarly described as reifying – and having varying effects (enhancement and/or diminishment of varying kinds and degrees) on the entity toward which the gaze is directed or on which it falls, as well as on the presumed originator of the gaze.

Relatively little attention, however, has been paid to the reciprocal gaze, as such, and to the possibility of its demonstrable semiotics and the semiotics of its immediately generating context. The present paper examines the possibilities for a semiotics of the reciprocal gaze between animals and humans, as such possibilities are suggested by those humans reporting human-animal encounters in which such a gaze has appeared to play an important, even a crucial, role.

Those among others of the arenas of human-animal encounter in which a reciprocal gaze has been recorded are those of human-and-horse, -ape, -dog, -wolf, -bear, and -cetacean (both whale and dolphin). Perhaps especially interesting because less familiar, are human encounters via the reciprocal gaze with animals in the wild.

Not limiting itself to those, however, this paper examines what has been apprehended of the mutual gaze in connection with human-horse, -ape, -dog, and -whale and -dolphin encounters, relying on theories about what appears to have been such a gaze in the familiar cases of the horses Clever Hans and Beautiful Jim Key; on reports of it with Washoe and other apes; with dogs as noted by Donna Haraway; with a given single whale as described by Captain Paul Watson in his encounter with the definitive whale of his experience; with a second whale as described by a whale-rescue team; and with reports of life with beluga whales and with dolphins by trainer Robyn Cox.

What these cases suggest is that something is “said” and sent to a receiver in a look (the term this paper will come to prefer); that “the message” is received; that it is interpreted; that it is sent back (reciprocated); that it is acted on, and that the act appears to yield given results (not necessarily though sometimes identical) for sender and receiver. What is most elusive is the precise nature, in any given case, of what is presumably the “sign” sent, received, sent back, and acted on – the core of semiotic inquiry.

But the paper suggests, nonetheless, how the often-positive outcome of such encounters might be explained by what has been theorized as the meaning of what is presumably the sign sent in the look, whether or not we yet know the precise character of that sign itself beyond the apparent fact that it is reciprocal.

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Jakob von Uexküll and Aldo Leopold in Dialog
Jean-Claude Gens

The aim of the paper is to confront two traditions that ignore one another: the one represented by Uexküll on the one hand, and Aldo Leopold, the most famous figure of environmental thought in America, on the other. I would like to investigate the possible complementarities of their almost contemporary thoughts, i.e. what each of them can learn from the other. Both of them are more or less inspired by Kantian philosophy; Uexküll shows, first of all, that an animal has to be thought of as a subjectivity whose essence is intersubjective – an idea that can be found in continental philosophy at least since Hegel –, and secondly that meaning should be the ruling category of biology. When Leopold invites us to think of each natural being as relational, i.e. as related to other species, he essentially ignores these notions of subjectivity and meaning, and as a result his land ethic remains alien to this European stream of thought.

The German and American concepts of *Umwelt* and *land* are quite different. But Leopold's famous word that in *A Sand County Almanac* invites us to "think like a mountain" is very close to Uexküll's notion of "Komposition". The word "mountain" has been frequently misunderstood: a mountain doesn't name an isolated geological entity, but the globality or the totality of the biotic community, including animals, such as wolves and deer, as well as the soil, the water and the wind, i.e. the totality that Uexküll calls a "Komposition" of Umwelten. The specificity of Leopold's land ethic is its awareness of the contemporary extinction of species and ecological problems more broadly; in other words, the Umwelt's and the Umwelt-komposition's fragility, i.e. its evanescence. In this respect, he questions Uexküll's concept of nature that seems to remain unaffected by temporality, and by the way the possibility to re-enact a dialog with Darwinism.

Bionote:

Co-editor of the journal *Le Cercle herméneutique*, and member of the editorial board of Presses Universitaires de Dijon and the phenomenological journal *Alter Éléments d'une herméneutique de la nature*, Paris, Éditions du Cerf, 2008 (330 p.)

Articles about animal and nature:

- « Die Ansätze der verstehenden Biologie des XX. Jahrhunderts in Diltheys Hermeneutik des Lebens », in *Dilthey und die hermeneutische Wende in der Philosophie*, F. Rodi ed., Vandenhoeck & Ruprecht, 2008, p. 297–312
- « L'animal dans la peinture de Roelandt Savery », in *Au risque de l'existence*, J.-C. Gens and P. Guenancia eds., Éditions Universitaires de Dijon, 2009, p. 209–219
- « Le fond animal de la vie sociale dans la phénoménologie husserlienne », in *Le Monde social*, *Alter* n° 17 / 2009, p. 11–27, chinese translation 学术研究 in *Academic Research*, Guangzhou, 2010
- « L'étrange "vie" des natures mortes », in *Bachelardiana* 4, 2009, Genova, p. 35–44
- « L'effroi de l'animal », in *L'Animal littéraire*, J. Poirier ed., Éditions Universitaires de Dijon, 2010, p. 15–23
- « L'interprétation comme mode d'être de l'animal et de l'homme », in *L'interprétation*, ed. P. David, Presses Universitaires de Rennes, 2010

"Only in the Application that a Living Being Makes":

Wittgenstein, Signs and Animal Minds

Ian Ground

Wittgenstein's emphasis on the internal relation between our experience and our conceptual capacities has been thought to imply that the attribution of cognitive states to non-linguistic animals must be not just false but nonsensical (Armstrong 1973; Davidson 2001; Leahy 1991; McDowell 1996).

Thus the still too widespread epistemological scepticism about other animal minds is thought bolstered or superseded by a semantic scepticism, supposedly owed to Wittgenstein. This paper argues, on the contrary, that the philosophy of Wittgenstein provides precisely the philosophical resources, diagnostic and constructive, needed to overcome both epistemic and semantic scepticism about other animal minds.

The diagnostic resources allow us to remove largely epistemological confusions. In particular, Wittgenstein's dissolution of the problem of other minds is of direct relevance to epistemic confusions about animal minds in

the psychological sciences both in their older form (Behaviourism) and in their contemporary form (The 'Theory' Theory of Mind).

The charge made by semantic scepticism is that the inability to offer an account of determinate but non-linguistic content – and so secure referential determinacy in the case of animal minds – renders the central zoosemiotic concept of an animal's *Umwelt* unsound.

Two constructive resources in the thought of Wittgenstein now come into play:

1. The foundational role of practice

The dominant paradigm in the cognitive sciences is that the referential determinacy of psychological states is secured by the articulate structure of a representational medium, whether linguistic, mental or neural, embedded in a causal nexus.

In the human case, Wittgenstein rejects this view in favour of an account in which meaning and world are connected not via inner representations but via the communal life of practice. (Wittgenstein 2001; Hanna, Harrison 2004)

So too, across the species-barrier, simian, leonine or wolverine concepts are realized and find their requisite determinacy in the practice of troop, pride and pack.

It follows that it is only in an environment where we are able to treat an animal's behaviour as relevant, appropriate and viable that the creature's life and its world comes into focus. In this way, Wittgenstein's thought provides a philosophical methodology for Cognitive Ethology, parallel to that offered by zoosemiotics.

2. The foundational role of expressive behaviour.

Wittgenstein's claim is that the enormous structural complexity of language is best understood as a luxuriant outgrowth from the modulatable character of expressive behaviour.

The role played by language in our own lives is therefore, in the lives of non-linguistic animals, played by expressive behaviour. As in our own case, the expressive behaviour of animals is intrinsically social. It is in and through con- and non-con-specific directed expressive behaviour that the possibility of living in worlds of meaning arises. The determinacy of the psychological state of an animal is fixed by the place of the characteristic expression of that state in the repertoire of expressive behaviour available to the animal and afforded by its *Umwelt*.

Such an approach is not merely of theoretical interest. The paper summarises developments in 'Qualitative Behaviour Assessment' (Wemelsfelder

2007), showing the scientific robustness and direct practical relevance to animal welfare of an expression based approach.

A final section of the paper briefly surveys the points of similarity (Calefato 1993) and tension between Wittgensteinian and zoosemiotic approaches. The paper concludes that a mutual rejection of the understanding of representation dominant in the contemporary cognitive sciences is key to a rapprochement between the Wittgensteinian and zoosemiotic traditions. Such a rapprochement would advance the central project of zoosemiotics by securing a foundation for the acknowledgment of meaning and minded animals as something other than either weirdly soft machines or strangely silent persons.

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**Animal Representation and Attitudes
of Humans Toward Non-Humans in Fantasy Literature**
Sandra Grötsch

Fantasy literature potentially offers a common ground for animals and humans to form relations and share social space. Often this opportunity is not without obstacles and problems. Both parties may lack the ability or will to engage in an interaction with other species. Based on examples drawn from different texts, with a focus on the *Harry Potter*-series by J. K. Rowling, this paper will analyse whether the semiotic actions described in the examples include animals or whether the perspective used for telling the story is entirely human. Does fantasy literature offer a similar way for humans and non-humans to understand and share signs? Is there a true possibility of communication between different species? In addition to these intriguing questions, attitudes of humans toward animals and their relations to each other are examined. Zoosemiotics is used as a tool for literature analysis.

This paper would like to underline the importance of examining animals in literature as animals and not just as characters in a text. The reason for this approach is to show how texts of the genre of the fantastic struggle with the differences and separation of non-humans and humans, and their attempt to bridge the gap between the camps. Contemporary fantasy literature reveals a need to reflect on the position and history of humans in their environment and the effect their activities may have. Attitudes of humans toward non-humans are diverse and may also mirror human attitudes outside of literary works.

The animals examined in this paper include natural species as well as fantastic creatures. The latter are especially interesting for an analysis of the value of myth and folklore on which the attitude of humans is likely based. With the analysis of semiosis, interpretation of others, sharing place and power, as well as of attitudes of humans in the texts this paper will aim at determining whether animals in fantasy literature have the power to decide over their own fate and whether an opportunity to be part of the social and physical environment shared with humans is provided. The results will make clear whether the texts chosen as examples provide a critical construction of social fabric and self-understanding.

Sandra Grötsch (b. 1971) is a post-graduate student at the University of Oulu, Finland, where she received her Master's degree in 2001, and of the Master's Degree Programme in Semiotics at the University of Helsinki. Her research

focuses on literature and myth, with a special interest in animals and mythological creatures. The basis of her studies, which she started at the Johann Wolfgang Goethe-University in Frankfurt/Main, is Scandinavian Studies and Children's Literature. The Internet as a multimedia place of cultural activities and audio books are additional points of interest.

Semiotics of Colonial and Post-Colonial Displaying of Indigenous Animals in South African Zoos

Mark Haywood

Zoological gardens were a nineteenth century product of modernity that appeared contemporaneously with other civic institutions such as public museums, art galleries and libraries. In recent decades much has been written on the history of zoos, but emphasis has almost exclusively been on those of the former imperial European powers, or the United States, with little attention paid to zoos in colonial cultures. However, much can be learned from the semiotics and architectural rhetoric of the latter. As a visual artist I have studied the presentation of indigenous animals in South African zoos, and during this work I have become aware of the conflicting cultural histories reflected in the architecture used to frame animal displays.

The account consists of two pairs of case studies that consider the historical and contemporary semiotic aspects of South African zoos. Elsewhere, the early architectural history of zoological gardens contain much that might be uncritically described as whimsical display spaces for animals, but in South Africa it reflects the shifting narratives of power that illustrate the strong relationship between post-colonial theory and the emergent field of critical animal studies. Both disciplines are employed to demonstrate how that country's contested histories are reflected in the cultural interplay of zoo displays of its indigenous animals.

Two calculatedly self-conscious semiotic uses of the lion in a South African context are considered: the first is historical, the second contemporary. The history of South African zoos began high above Cape Town on Table Mountain, the site of a private menagerie that belonged to a British Empire builder, Cecil Rhodes. In September 1899, a month before the start of the Second Anglo-Boer War, a Dutchman, Dr Jan Gunning, visited Rhodes' menagerie to study it with a view to establishing a zoo in Pretoria (at the time, the capital of the independent Boer republic). Rhodes, the self-styled 'Lion of Africa' unexpectedly offered to the fledgling 'enemy' zoo a lioness from his private collection. However, when Gunning and the lioness returned

to Pretoria, he discovered that his new acquisition was already being referred to as the 'British Lion'. Shortly afterward Gunning received a telegram from the Boer President Paul Kruger, ordering the lion to be returned to Cape Town. Three years later, with the Boers defeated and Kruger in exile, Rhodes' lion was sent back to Pretoria, and housed in an English military style, rusticated stone lion house.

The complementary contemporary study concerns the new, post-Apartheid lion house at Johannesburg Zoo. The enclosure has a viewing station whose form evokes that of a traditional Zulu hut, or *rondavel*, and bears the logo of its sponsor, the multi-national mining conglomerate Anglo-Gold Ashanti (formerly AngloGold American). The company has not only rebranded itself (and by implication become "African" with its Ghanaian suffix), but has created a powerfully succinct semiotic association between itself, the 'king of the beasts', gold and Johannesburg, a city that began as a gold-rush town and whose present-day African name is 'eGoli' ('place of gold').

A second pair of studies considers the contrasting architectural rhetoric of the old and new Elephant Houses at Pretoria's National Zoological Gardens. The former, dating from the early twentieth century, is in the traditional eighteenth century Afrikaner style, known as 'Cape Dutch', whereas the latter is a modernist structure dating from the Apartheid era. In the 1950s and 60s the Apartheid government employed modernist architecture as an expression of national (i.e. Afrikaner) identity. Although evocative of a vast military silo, the building is in fact based on the world's first modernist elephant house, designed in 1935 by Betholdt Lubetkin for England's Whipsnade Zoo. The building's dimensions and circular format were a product of modernist rationalism and research indicating that confined elephants continually walk in small circles.

Mark Haywood is a writer on visual culture and a practising artist. In both capacities his work reflects a fascination with the historical and other factors that have shaped the construction of aesthetic values. Haywood has an MFA from the University of Northumbria and a PhD from the Royal College of Art. His academic career has included several years in post-Apartheid South Africa as Professor of Fine Art at Rhodes University and he currently works at the University of Cumbria's Centre for Landscape & Environmental Arts Research.

**Communicating with the Cow:
Human-Animal Interaction in Written Narratives**
Taija Kaarlenkaski

The cow can be perceived as a culturally significant animal in Finland. When the Finnish Literature Society and the Union of Rural Education and Culture arranged a writing competition about cows in 2004, they received nearly 3000 submissions. This is approximately ten times more than for an average writing competition in this decade. The respondents were asked to write either in the category of recollection or the category of fiction, an unusual feature compared to other writing competitions organized by the Finnish Literature Society. Usually people are asked to write autobiographically and to recount their own experiences. In my doctoral dissertation I analyse the materials of this writing competition. The study has two main aims: first, to discover which modes of narration and what kinds of textual strategies the writers use when they construct narratives about the cow, and secondly, to discuss how the cow is represented in the narratives. The texts sent to the writing competition are read as narratives in which the writers process their personal experiences, but also use cultural models of narrating and create fictional worlds. The main premise is that narratives construct and interpret reality, instead of merely reflecting and describing it.

This paper discusses the representations of communication between human beings and cows in the writing competition materials. It is commonly stated in the texts that cows learn to know their keepers, and that they may even understand human speech. In the same way, proficient cattle tenders are reported to be able to comprehend the messages of the cows: what they mean with their gestures, movements and behaviour. Occasionally the mutual understanding between the human being and the animal is represented as almost telepathic. In many cases this communication seems to be gendered, that is, female cattle tenders communicate better with the animals. The inclusion of the category of fiction in the writing competition also enabled the respondents to write from the cow's point of view. Adopting the cow's position gives an opportunity to view human activity from the outside, and humans are frequently seen in an ironic or critical light. In these narratives, the cows typically understand human speech, whereas human beings are not able to understand what the cows would like to tell them.

Taija Kaarlenkaski received her Master's degree in Folklore Studies in April 2005 at the University of Joensuu. Currently she is a Ph.D. candidate in Folklore Studies at the University of Eastern Finland, Joensuu campus. She

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**Geometric Morphometrics –
A Possible Method for Zoosemiotics
Karel Kleisner**

The modern application of multivariate statistics and graphics to the study of form variation, known as geometric morphometrics (e.g. Mitteroecker, Gunz 2009), provides a possibility to study how shapes are perceived by different human and nonhuman subjects. The same approach has been already proposed for assessment of the perception of facial shape (Schaeffer et al. 2009). Here I suggest that this framework is general enough to be a useful method for zoosemiotics. In principle, any set of shapes could be presented to a human (or animal) being and rated on a given scale for a particular factor. Then the shape can be described by the configuration of landmarks corresponding to homologous points found in each specimen in the series and semi-landmarks to denote the curves. To detect the shape variation associated with the human rating (or animal's reactions), shape coordinates after a procrustean fit can be regressed onto reported ratings (reaction) using shape regression in which shape coordinates are the dependent variable and reported rating the independent variable. Shape regressions can be displayed by thin-plate splines as deformation from the overall mean configuration (the consensus) of landmarks. Thin-plate spline representations of shape regressions show which aspects of the shape are affected by the interpreter's judgment. For example, when we let a number of subjects to judge different shapes for dangerousness we will be able to estimate the shape traits responsible for the perception of danger and compare the notion of danger in *Umwelten* of different interpreters.

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Volucella bombylans – The Mimicry Puzzle

Stanislav Komárek

The hoverfly *Volucella bombylans* is the earliest creature in literature referred to as an example of true mimicry, mentioned in an entomological work by British clergymen Kirby and Spence as early as 1817, with the presumption that its distinct similarity to the bumble bee enables it to penetrate more easily into its hosts' nests, where their larvae live – a phenomenon later to be called Peckhamian or aggressive mimicry. Considering that another possibility, that of a typical Batesian mimicry may be involved instead, aimed at insectivorous birds as potential predators (bumble bees, fitted with stings, represent a protected group), there is still no clarity about the issue and many discussions in literature have followed. A large number of parasite flies mimic their hymenopteran hosts (for instance, the asilid genus *Hyperechia* mimics the carpenter bees, genus *Xylocopa*); on the other hand, the closely related species *Volucella pellucens*, parasiting in the form of a larva, does not mimic its host (true wasps, genus *Vespa*) when imago.

Stanislav Komárek, born in Jindřichův Hradec, 1958, graduated in 1982 from the Charles University, Prague – masters' program majoring in zoology; 1983–1990 – lived in exile in Austria – research worker at Museum of Natural History, Ministry of Agriculture and Forestry and Zoological Institute of Vienna University; 1990 – Returned to Charles University, Prague, assistant professor (1990–1994), associated professor (1994–2001), since 2001 professor of Philosophy and History of Science; 1996–2002 – head of the Dept. of Philosophy and History of Science.

Topics of interest: aesthetics of nature according to Adolf Portmann, history of biology, especially history of research on mimicry and related phenomena, and the relation of nature and culture.

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**Preschool Children's Understanding
of Dogs' Body Language**
Małgorzata Zofia Kozłowska

The aim of this paper is to present a recent research on preschool children's understanding dogs' body language. A group of Polish preschool children were interviewed about their experiences and attitudes towards dogs. Next, a set of illustrations showing particular characteristic body postures of dogs was presented to them. The children were asked to describe each pose and to interpret it. The results show that the interviewed children have difficulties in understanding the body language of dogs. The easiest to understand and recognize was the aggressive pose. Most of the children paid attention to dogs' "facial" expressions, and a few of them also attempted to interpret tail positions. The children tended to read dogs' communication in human categories, often interpreting the dogs' moods as good or bad. The results also indicate that good contacts with dogs help to understand the dogs' behavior better. Children who have dogs and spend time with, play and take care of them tend to have more knowledge about how dogs communicate. However, the research demonstrates that children should be educated about dogs' behavior to enable better communication between human beings and animals, and also to decrease the number of people's accidents with dogs.

Małgorzata Zofia Kozłowska (M.A.), philologist and psychologist, graduated at the University of Wrocław in Poland. She works as a researcher for PERENNITAS Foundation in Wrocław, as a psychological and language consultant and as a Polish language and English language teacher. She is interested in psychological aspects of language, text, narrations and literature.

Zoosemiotics is the Study of Animal Knowledge
Kalevi Kull

It is appropriate to define zoosemiotics as the study of *animal semiosis*. Here, 'animal semiosis' is not the same as 'semiosis in animals', since the latter would also include vegetative semiosis that takes place in each animal body (on the cellular and tissue levels), which is not a study area for zoosemiotics. In addition, cultural semiosis is excluded as the specific type of semiosis in humans (Kull 2009).

Animal communication and animal behaviour (i.e., the central zoo-semiotic topics) can effectively be approached and described on the basis of entirely non-semiotic models, as a large part of recent ethology and behavioural ecology does.

A characteristic feature of semiotic approach can be formulated as the study of knowledge; accordingly, in case of zoosemiotics – of knowledge in animals.

This follows the views of G. Bateson, who claimed that epistemology is a part of biology, what he called “the science of knowing” (Bateson 1991: 232). As Bateson says, “There is a special form of “knowing” which is usually regarded as adaptation rather than information” (Bateson 2000: 134). For H. Maturana, too, biology is a science of knowing.

Ernest Sosa has distinguished between animal and reflective knowledge. According to him, “animal knowledge that p does not require that the knower have an epistemic perspective on his belief that p , a perspective from which he endorses the source of that belief” (Sosa 2001: 193). This describes the difference between human and animal knowing. But in addition to this limitation of animal knowledge from above, it is also important to describe its limitation from below, i.e., its difference from vegetative knowledge. (This difference has described, e.g., in Bennett 1951: 94–95.)

It can be argued that central to Peirce’s writings was his theory of knowledge. According to Peirce, “all human knowledge, up to the highest flights of science, is but the development of our inborn animal instincts” [CP 2.754], i.e. is based on animal knowledge.

Thus the task of zoosemiotics is to know what animals know. My task here is to demonstrate the importance of development of zoosemiotic models as the models that characterise various types of knowledge acquisition, and knowledge application. These types can obviously be related to different types of learning and heritance (memory) (Kull 2009).

In addition to directly semiotic studies (Favareau 2007), zoosemiotics can then use the models that have been developed as models of knowing (Candland 2005; Kummer 1995; Zwart 2008). “Specifically, how researchers describe the *mechanism of knowing* in an insect must be integrally related to how they describe the known environment” (Clancey 1997: 251) – a thought expressed already by Uexküll.

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Representation of Humans in Tradition of Animal Fantasy

Maria Laakso

In research on the representation of animals it is a well known fact that language does not constitute a disinterested mirror to reflect an objective reality. In every level of communication – vocabulary, grammar or discourse – the way we communicate about animal shapes influences the way we think about them and how we experience them. Theorists like Joan Dunayer or Arran Stibbe have demonstrated that such linguistic devices as using the pronoun “it” for most animals or the use of “mass substantives” for animals erases their uniqueness, subjectivity and gender, and groups animals as lifeless objects. Latent ideology behind language makes speciesism part of our common-sense thinking.

In animal fantasy (narratives about anthropomorphized animals), language is often consciously modulated to be less speciesist, especially by using proper nouns for animals. However, what has long gone unnoticed is that at the same time humans are represented more animal-like by all the narrative or linguistic devices usually used to represent animals. This is why I try to adopt a new approach to animal fantasy – the representation of humans as animal-like.

In literature, animals are commonly represented as being part of the surrounding landscape, as objects of the human gaze, but in works such as Colin Dann's *Animals of Farthing Wood* (1981) the composition is turned upside down: humans are constantly being watched by animals. Particularly ecologically aware animal fantasies such as Richard Adams' *Watership Down* (1972) have turned speciesist language into a rhetorical tool for describing humans. By “defamiliarising” human life and values they enable us to evaluate the world in a new light: from the point of view of an animal. In my paper I wish to explore the representation of humans and its political implications in the genre of animal fantasy. I will do this by comparing certain famous works, from Waldemar Bonsel's *Maya the Bee* (1912) and George Orwell's *Animal Farm* (1945) to Barbara Gowdy's *The White Bone* (1999).

Maria Laakso is a researcher and teacher of Finnish literature in the University of Tampere. Her doctoral thesis in progress is on humour and strategies of addressing the reader in children's books of the Finnish author Kari Hotakainen. She has also published several papers on children's literature, including two ecocritical articles about ecologically oriented Finnish children's novels. She is one of the editors of an anthology about nature in Finnish children's literature, to be published in 2011.

Dog in the Worldview of the Komi Hunters

Art Leete

In traditional ethnographies, animals were treated as part of other material objects. Animals were included in descriptions and analyses mostly as a purpose for culture (they influence the design of agricultural tools, organisation of food production).

Similarly, ethnographies that explore hunting among the Komi people (a Finno-Ugric ethnic group, inhabiting areas 1500 km north-east from Moscow, near the Ural Mountains in the northern part of European Russia) include only marginal notes on the dog-hunter relationship. Ethnographers acknowledge the extraordinary importance of the hunting dog, but besides to this notion there can be found scarce published data concerning the Komi hunters' understanding of their dogs.

I have conducted fieldwork among the Komis annually since 1996. Gradually I have become acquainted with the Komi hunters' attitudes towards their dogs. I have recorded numerous stories that reveal hunters' ideas concerning the characteristics that determine a good or a bad dog, and rules for proper treatment of a dog by a hunter. Also, some details of communicative peculiarities between a dog and a hunter have been negotiated.

During our joint hunting trips, I have had a few chances to observe dogs and hunters in their active environment. By observation I have tried to learn something about the interaction between dogs and their hunters. I have recorded conversations concerning dogs both during hunting trips and away from the forest – in villages and towns. My dominant approach has been to remain inactive. I have tried not to push hunters to talk about hunting in general and dogs in particular. But usually there is no special need to put any pressure on the hunters, because there is a rule among the Komis that one must talk about hunting, anyway. In general, I try to keep the situation of narrating as natural as possible.

I have become intrigued by the context of vernacular beliefs and ethics that somehow frames the Komi hunters' way of treating their dogs. Data concerning dog-related mythological beliefs (a dog participating in the Creation of the World) can be found randomly in texts of a few Komi researchers. Contemporary Komi hunters have also told stories that contain hints about the relationship between dogs and the so-called supernatural (dogs being mediators between a hunter and forest spirits or messengers from the Other World).

I will attempt to discuss how and to what extent the few vernacular religious ideas are reflected in actual hunting practices of modern Komis.

There is a certain knowledge circulating among the Komi hunters about the proper characteristics of a hunting dog, and rules that constitute the relationships between dogs and hunters. These everyday rules are somehow framed or mixed with understanding a dog as an extraordinary animal. Contemporary Komi hunters seem to treat the dog as a fragmentarily sacred companion.

Art Leete, Professor of Ethnology, University of Tartu, has studied the Khanty, Nenets and Komi people in Western Siberia and Russian North. His main research topics have been related to the northern peoples' history of descriptions, adaptation to political and social changes, development of new religious movements, hunting, vernacular religion and modes of narrating.

**Bird-like Poetry? Sauli Sarkanen's "In the Morning"
and Timothy Morton's Ecomimesis
Karoliina Lummaa**

We tend to read some bird poems as more realistic than others. But how does this impression of realism or "bird-likeness" occur? In addition to thematical (birds as motifs) and rhetorical (*enargeia*, *ekphrasis*) means, it can be argued that a poem might be able to communicate or represent non-human life, or more accurately, bird life, with its rhythmical structures, visual make-up and other non-lexical traits.

In my paper I will do a close-reading of one bird poem, "In the morning", written by the Finnish poet Sauli Sarkanen. "In the morning" is a peculiar poem that describes the "nerve-wrecking life" of small birds, constantly eating, and escaping from predators. The poem is full of commas, creating a sense of breathlessness, and appears to have two "holes" in its visual form. I analyze the poem in the light of Timothy Morton's idea of ecomimesis, introduced in his book *Ecology without Nature* (2007). Ecomimesis consists of a collection of devices with which environmental art simulates non-human nature and convokes a sense of natural, yet (culturally) meaningful surroundings. I am particularly interested in his concept of re-mark, a poetic device that establishes the difference between foreground and background, and also between what is inside culture and what is outside culture. I suggest that Morton's re-mark could be utilised in conceptualising literature's ability to represent nonhuman life in its unfamiliarity and openness of meaning.

Although Morton's theory is actually a criticism of ecomimesis, I argue that Morton's thinking is in fact helpful in analyzing the impression of

realism in nature poetry. Connecting materialities of language with materialities of life, ecomimesis points to poetry's ability to represent the approachable otherness of nonhumans. Sauli Sarkanen's "In the morning" creates bird-likeness by imitating the behavior, movement and bodily features of birds with its rhythm and structure. At the same time, however, the poem tells two different stories, one about bird life and the other about human observation. Moreover, the holes in the poem are situated so as to symbolize the limits of linguistic representation. The key to bird-likeness in poetry is this undecidability of meaning and uncertainty in representing and understanding nonhuman life, and further, the play with material and semiotic/semantic distances between birds and humans.

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Karoliina Lummaa studies Finnish literature at the University of Turku, Finland. She is currently waiting for the reviews of her doctoral thesis, which she is planning to defend before Christmas. Her research interests include contemporary Finnish nature poetry, ecocriticism and posthumanist theory. In her thesis she analyses environmental bird poetry as a means of representing (speaking for) non-humans and negotiating their positions outside and inside culture.

Speaking Marmots, Deaf Hunters: Animal-Human Semiotic Breakdown as the Cause of the Manchurian Pneumonic Plague of 1910–11 Christos Lynteris

The great Manchurian pneumonic plague of 1910–1911 claimed the life of more than 100,000 people, with a 100% mortality rate for people infected. The natural vector of the plague was the marmot, or what the Russians called the *tarabagan*, which roams the Manchurian and Mongolian steppes. In 1908, urged by increasing international market demands, the Chinese Empire had allowed the migration of hundreds of thousands of dispossessed workers from the Shandong Peninsula to the north, to hunt for marmot fur. Unlike the traditional Mongol, Manchu and Buryat arrow hunters, the Shangong migrants hunted marmots by means of traps, and did this indiscriminately,

failing to tell infected plague vectors and healthy animals apart. Epidemiological exegesis at the time placed immense importance on the inability of the Shandong migrant workers to understand signals of health and illness transmitted by sick animals, amongst which the most conspicuous was the utterance of 'bu pa' or 'don't be afraid' by healthy animals basking in the sun, a semiotic ability lacking in ill animals. This paper aims to investigate the semiotic breakdown between marmots and their human hunters as perceived by Chinese epidemiologists at the time. More than simply a lack of hunting skill, what was believed to have led to the most devastating epidemic of the 20th century in China was the rupture of the traditional animal-human semiotic interchange. Drawing on archival material retrieved in Beijing, my paper will, for the first time, illuminate this unique case of animal-human semiotic interaction, arguing that its representation and problematisation within medical discourse created the space for an ambivalent yet highly significant interphase between traditional Chinese and modern scientific semiotic universes.

Christos Lynteris is trained as a Social Anthropologist (MA, St Andrews, PhD St Andrews) and has conducted fieldwork by means of epidemiological internship at the Haidien Centre of Disease Control and Prevention (CDC) in Beijing, my research focuses on the management of epidemic crises in modern China. In particular I have conducted extensive archival research in Beijing regarding the great Manchurian pneumonic plague of 1910-1911 and the alleged biological warfare crisis of 1952. My ethnographic fieldwork research focused on the legacy of the 2003 SARS outbreak in China. My current research is on the Barefoot Doctors movement in China.

**Training Guide-Dogs of the Blind With
the "Dog-Carriage" Method:
Historic Background and Semiotic Footing**
Riin Magnus

In the 1930s, Jakob von Uexküll, Emmanuel Sarris and their colleagues at the Umwelt research institute in Hamburg developed a specific method for training the guide-dogs of blind people (cf. Uexküll, Sarris 1931, 1932; Uexküll 1933). The method was a practical derivation of the semiotic and philosophical core of Uexküll's *Umwelt*-theory. In comparison with the other methods used at the time, the so called "dog-carriage" method laid stress on the independence of the animal in learning and using new meanings in its

environment (i.e. those important for the blind person). Instead of relying on the commands of the trainer (or any other seeing person), the animal himself was to find out and discover those new meaningful relations (e.g. that the meaning of the ditch is not “a thing to be jumped over”, but instead “an obstruction that can’t be crossed”).

According to Uexküll’s *Umwelt*-theory, all forms of meaning that the animal finds in its *Umwelt* depend heavily on his specific building-plan (*Bauplan*). Thus also a change in the *Umwelt* of the animal that would allow him to recognise the objects significant for the blind person, could be initiated only via a change in his building-plan and a corresponding shift in the perception of the self. For changing the body plan of the dog, special carriages were constructed, which, when attached behind the dog during the training process, were supposed to imitate a human being. While dragging the carriage behind him, the dog could no longer respond to the same objects and meanings as it had done without the carriage and had to start looking for new solutions instead.

My presentation will further explicate the semiotic and philosophical implications of the method as well as trace its later developments and modern usage.

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Riin Magnus is a PhD student and researcher at the Department of Semiotics, University of Tartu, and head of the board of Jakob von Uexküll Centre in Tartu. Her research interests include bio- and ecosemiotics, biophilosophy and environmental history.

The Sound of Music – A Hypothesis on Heterospecific Cooperation in Songbirds Rachele Malavasi, Almo Farina

Apes, social carnivores, and songbirds are known to use coordinated vocalizations within species to threaten potential intruders. In birds, coordinated

duets in a pair act as a new signal by itself (a meta-parameter), perceived as more threatening than solo vocalizations. The coyness hypothesis supports the enforcement of the bond among individuals through coordinated behaviours, and therefore coordinate vocalizations mirror the bond between male and female who jointly defend a shared territory.

By recording bird songs from a long-term (LTE) and a short-term established (STE) community, we found that only in case of LTE, birds of different species tend to box up each other's vocalizations in short time plots of about three seconds, without frequency overlap. Mitigating signal masking in such a short temporal plot is apparently not functional and requires a complex short-term timing behaviour. Thus, an explanation in evolutionary terms is required. We postulate that territorial neighbours of different species living in the same LTE community may learn to sing at the same time as a somewhat choral warning to potential intruders. Indeed, the longer the individuals share resources in the same environment, the more their fitness interests overlap to a considerable degree. Cooperation is obtained in LTE because individuals are not anonymous (Dear Enemy effect, Iterated Prisoner's Dilemma), while in STE the time to distinguish between cooperative and defective neighbours was lacking.

The choral message would act as a hypertext, with a *parà ten dóxan* (unexpected) aesthetic structure. This unusual pattern would catch the attention of a potential intruder, forced to further decode the message. The coordination among vocalizations of different species would signal their common intention to jointly defend a shared territory, thus deterring the intruder to have access to local resources.

These findings suggest that joint territoriality among neighbouring bird species could be achieved through vocal coordination. Experiments are needed to prove this hypothesis, but this appears as a plausible explanation to the pattern observed, with a strong theoretical basis.

Rachele Malavasi is a researcher in animal communication, with a special focus on songbirds. She took an MSc in Biology at RomaTre University and a PhD in Environmental Science at Urbino University, on heterospecific cooperation in songbirds. She co-writes, with Dario Martinelli, a zoomusicology blog. Her interests are particularly in the field of cognitive ethology and human-animal relationships, and she has followed workshops and courses in Animal Minds, Zoosemiotics, Philosophy and Human ethology, Zooanthropology.

Almo Farina. Professor of ecology, Department of Mathematics, Physics and Informatics. Urbino University. almo.farina@uniurb.it

My principal interests are in understanding how complexity operates across a range for ecological scales, affecting the organisation of communities, ecosystems and landscapes.

In particular, I am interested in studying the organization of landscapes and how organisms perceive the surrounding complexity. Specific attention is directed to the study of the mechanisms involved in the communication between the internal world of organisms and their interpreted *Umwelt*. Recently I have incorporated the principles of biosemiotics into the ecological domain in order to develop the eco-field hypothesis, and in addition I have elaborated a new theory on resources (General Theory of Resources). Resources have been defined and some axioms have been presented and discussed as basis for a new ecological perspective for investigating the complexity of the life.

In addition, I have investigated the soundscape of birds as an energetic, informative dimension utilized by these species to maintain contact with vital resources. I am working on the development a of new metrics (Acoustic Complexity Index, ACI) to evaluate the complexity of bird sounds inside communities.

Appointments in Ubino University: Vice-Director of the Department of Mathematics, Physics and Informatics, Coordinator of the PhD course in Environmental Sciences, chair of the Working Group in Theoretical Ecology (GLET) in the Urbino University. <http://www.uniurb.it/glet>

Publications: more than 200 reports, papers and books on zoology, eco-ethology, bird community ecology, landscape ecology, landscape changes, rural landscape modification, eco-semiotics and ecological theories.

Zoo-Aesthetics: A Natural Step After Darwin

Katya Mandoki

I have a black bantam cock and hen. [...]. I have tried him several times with the mirror he being handsome & having a very pretty rose-comb. He never once pecked at his shadow there but walked mincingly & slowly before it on his toes or drew up a foot as he does when one speaks coaxingly to him. (Letter 5060 – Shaw, James to Darwin, C. R., 19 Apr 1866.)

As Aristotle was to Poetics, Darwin was to zoo-aesthetics. The first serious analysis on animal aesthetics was published in 1871 and, without any philosophical inferiority complex, Darwin entitled it "The Sense of Beauty" (Darwin 1882). He was inspired by J. Shaw, author of the brief text "Feeling of Beauty Among Animals" published five years earlier (Shaw 1866). And as Tragedy was the paradigmatic example for the understanding of Poetics, the aesthetic behavior of bower birds was equally so for zoo-aesthetics. Shaw emphasized the amazing behavior of bower birds, who construct nests in the form of arches for sexual selection and decorate them with shells, shining objects, feathers, glass and ceramic pieces. The preposterous idea of zoo-aesthetics was questioned by diverse authors, beginning with his colleague Wallace, who criticized Darwin for attributing high human emotions to supposedly lower creatures.

In this paper I will side with Darwin on the fact that we can certainly consider such a thing as zoo-aesthetics. There is plenty of empirical evidence to demonstrate it, so here I will focus on its theoretical underpinning as a direct consequence of a zoo-semiotic approach. Following Jakob von Uexküll *Funktionskreis* model (Uexküll 1982), we can go one step further and consider two levels for semio-aesthetics: 1) the perceptor-effector of the sign vehicle that is the basic survival condition of any organism, where the perceptor receives stimuli and the effector propels motility from pseudopodia (or cell's false feet) to the jumping leopard; 2) The second level implies an intersubjective or social context, where the organism not only detects but interacts deliberately with others, and the effector becomes actor by orienting the semiotic acts towards a reactor. Zoo-semiosis unfolds at two levels, at the perceptor-effector cycle and at the actor-reactor relation.

Zoo-semiosis has a crucial role in the recognition of offspring by the mother, such as spots on the heads of gull chicks. The *Lasioglossum zephyrum* bees, who make tunnels in the ground, only admit in their relatives who they detect by their scent. One step further comes zoo-aesthetics, as in young chimpanzees who over-dramatize emotional moods to draw their mother's attention and to manipulate her. It has been observed that a baby chimpanzee "may furtively watch its mother or nursemaid in the middle of a temper tantrum to make sure that they are attracting her attention". Whales' songs, bird displays, chest drumming by gorillas and the noisy "carnivals" of chimpanzees, who shout, scandalize, hit trees with their hands, strike plants and trunks or shake branches, not only communicate but present dramatic displays to enhance their presence. These behaviors are designed to convey meaning as well as to impress or fascinate their addressees.

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Performative Acts Among Animals? Considering Zoo-Pragmatics Katya Mandoki

If, as Thomas Sebeok claimed, "semiotics covers the whole oikoumene, our entire planetary biosphere", we should be able to find various levels of communication beyond the purely linguistic, verbal scope. In fact, semiotic processes have been found to be operating among the simplest living creatures, namely unicellular beings such as bacteria, to the most complex social organisms. Thus, in every communicative course of action, we may trace the three classical dimensions proposed by Morris: the syntactic in the particular form of organizing the elements of communication (as in the molecular structure in ants' pheromones), the semantic in the orientation of specific signs or syntagms (a monkey's or bird's alarm call), and the pragmatic in the context, use and interpretative targeting. Accordingly, pragmatic analyses can be extended not only across various cultural communities but, as I will argue, it is possible to apply its analytic tools also to both intra and inter-communication among non-human species. Searle has proposed a taxonomy of illocutionary acts: expressives, representatives or assertives, directives, commissives and declarations. In this paper I will discuss some instances in which these categories could be considered in zoosemiotics and examine the possibility of tracing illocutionary acts beyond anthropocentric and glottocentric approaches.

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Katya Mandoki has published six books: *Everyday Aesthetics* (2007), *Estética cotidiana y juegos de la cultura*; *Prácticas estéticas e identidades sociales*; *La construcción estética del Estado*; *Estética y comunicación*; *Prosaica*. She is full time professor of aesthetics and semiotics at Universidad Autónoma Metropolitana, where she heads the Postgraduate research area of Aesthetics, Culture and Semiotics of Design. She is Vice-president of the International Association for Aesthetics, President of Asociación Mexicana de Estudios en Estética, member of the International Advisory Board of International Institute of Applied Aesthetics, Lahti, and of the International Editorial Board of academic journals on aesthetics, culture and semiotics.

A Search for the Identity of Zoosemiotics: Communication and Semiosis

Timo Maran

This presentation makes an attempt to interrelate the history of zoosemiotics, terminological foundations and practical applications by discussing the relationship between two concepts: 'communication' and 'semiosis'. Thomas A. Sebeok's intellectual background in founding the zoosemiotic paradigm in the early 1960s was comparative studies of animal communication. Early zoosemiotics rested heavily on the paradigm of communication theory and many discussions in early zoosemiotics were related to animal communication, even though the name of the discipline suggests a different approach. In fact, the concepts of communication and semiosis were often used as synonyms in Sebeok's early zoosemiotic writings, and it is possible to demonstrate a gradual shift toward semiosis-based views in his later works.

I will argue that many foundational statements of zoosemiotics are influenced by these peculiarities of the history of the discipline, including the often repeated maxim of biosemiotics, first formulated by Thomas A. Sebeok, that the ability for semiosis is the indispensable and criterial property of living organisms. This "central dogma" of biosemiotics seems reasonable as long as we focus on communicative interactions. However, once we attempt to analyze this claim from the perspective of Peircean understanding of

semiosis, the difference between the species-specificity of communication and the relationality of semiosis becomes clearly noticeable.

On the other hand, it seems that the common understanding of communication that mostly stems from the humanities or technical sciences is too narrow for studying the semiotic relations of animals. On this background, zoosemiotics has made an attempt to widen the concept of communication up to Sebeok's claim that *communication should be considered as transmission of any influence from one part of a living system to another part*. Most cases of semiotic relations in animals actually seem to lie somewhere between the common understanding of communication, and semiosis. Semiotic relations of animals correspond rather to the description of *cyclical semiosis* or mutually coupled perception-action-cycles that can be considered a derivative of Jakob von Uexküll's *Funktionskreis*.

The need for such an explanatory concept can be illustrated with many examples of interspecific communication, such as mimicry, in which case there is no ground to talk about a common code or vocabulary shared between the participating species.

Timo Maran is a senior research fellow at the Department of Semiotics, University of Tartu. He holds a B.Sc. in zoology and a Ph.D. in semiotics and culture studies. His main publications are *Estonian Culture of Nature* (2005, ed. with K. Tüür), *Semiotics of Mimicry* (2008), Why was Thomas A. Sebeok not a cognitive ethologist? From "animal mind" to "semiotic self" (2010), Towards an integrated methodology of ecosemiotics: The concept of nature-text (2007), Semiotic interpretations of biological mimicry (2007). His research interests include semiotics of biological mimicry, theory and history of zoosemiotics, semiotic relations of nature and culture, and Estonian nature writing.

Georgic Semiosphere Tobias Menely

My essay examines the strategies for representing biosemiosis developed in James Thomson's long georgic poem *The Seasons* (1726–1746), the opening lines of which discern the return of spring in the calls of the plovers and the piping of the bittern. Following Virgil's *Georgics*, eighteenth-century poets like Thomson taught their readers to interpret nature's signs (*signa* in the *Georgics*), to see in the natural world, and particularly in nonhuman animals, a robust semiology. Animals in *The Seasons* are sentient and expressive; as

signifying subjects, they testify to their pain and pleasure, desire and volition. They deceive and cajole, express assent and refusal. They signal to one another and to us. Even vegetable life signifies, revealing seasonal and atmospheric changes, signaling fecundity and barrenness, health and disease. Thomson understands the natural world not only as a book whose marks refer back to its creator but also, in more immanent terms, as a semiosphere wherein the production and interpretation of signs facilitates a complex economy of biological and agricultural relationships. My essay seeks to invigorate our conception of Thomson as a descriptive nature poet and also to expand the horizon of green criticism and theory. On this note, I will conclude by speculating about the interpretative possibilities created when we see in nature not only system and sentience but also signification. Bio-semiotics challenges two of the foundational, if unspoken, axioms of humanism (and, to a large extent, of the Humanities): that to be a speaking subject is to be a human and that communication is a characteristic of culture rather than nature.

Tobias Menely is an assistant professor of English at Miami University of Ohio. He is currently completing a book titled *Sympathy's Kingdom: Animal Rights in the Age of Sensibility*. Relevant publications include "Sovereign Violence and the Figure of the Animal, from *Leviathan* to *Windsor-Forest*," forthcoming in *Journal for Eighteenth-Century Studies*, special issue "Representing Animals" (2010); "Zoöphilpsychosis: Why Animals Are What's Wrong With Sentimentality," *sympleke* 15.1/2 (Dec. 2007): 244-67; "Animal Signs and Ethical Significance: Expressive Creatures in the British Georgic," *Mosaic* 39.4 (Dec. 2006): 111-27; "Traveling in Place: Gilbert White's Cosmopolitan Parochialism," *Eighteenth-Century Life* 28.3 (Fall 2004): 46-65.

**Feral Signs: Eighteenth-Century British Poets and
the Marginal Animal**
Anne Milne

Then from their lord the rude deserters fly,
And, grinning back, his fruitless rage defy;

Full of new life, the untamed coursers run,
And roll and wanton in the cheerful sun;

Mary Leapor "Man the Monarch" 1746, lines 9-10; 15-16.

In this paper, I look for positive signs of the feral animal as they appear in a selection of eighteenth-century British poems and literary texts. For me, the feral animal in its very disruptiveness and its refusal of submission and domestication "supports and embodies processes that engender multiplicities and lateral flows in perspectives and perceptions" (Milne n.p.). In this way, the feral animal is reimagined as integral to place functioning, as Nicholas Garside suggests, to democratize by creating "discursive moments" that can reorient communities (Garside 64–65). The feral animal never makes things easier. Rather, the feral animal tells a deeper truth about the communities to which it is aligned.

In literary texts, the feral animal has been utilized as a powerful ally for marginal, oppressed or feral humans. As well, it has been enlisted in support of feral causes. Paradoxically though, the very process of converting animal agents into linguistic agents, figures, and tropes constitutes a kind of domestication at the level of language in which the feral animal appears to participate. As a result, the feral human or feral cause may ascend at the expense of the animal. I consider the implications of this by citing examples from several poems such as Mary Whateley's "On the Author's Husband Desiring Her to Write Verses" (1780) and Helen Maria Williams' "Elegy on a Young Thrush" (1791) to show that the imperative of formal or ideological balance can limit the positive flow of the feral animal's interventions and that it is often in the comic mode that the feral animal is able to enjoy and express its most satisfying potential. Satisfying as well, is the way in which several authors adroitly interpellate wild animals into the feral in order for these animals to speak from a site of experience against their own trajectory towards domestication. Mary Leapor's "Man the Monarch" (1746) and several animal poems by both John Clare and William Cowper provide potent examples of these positive signs of the feral and I conclude the paper by analyzing some of the formal properties and characteristics of these constructions as well as suggest implications for twenty-first century conceptualizations of the feral and feral animals.

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Anne Milne teaches at the University of Guelph in Guelph, Ontario, Canada. Milne's research and published work focuses on representations of animals, labouring-class poets, as well as labour, agrarian, and women's studies in Restoration and Eighteenth-Century British texts. She published *'Lactilla Tends her Fav'rite Cow': Ecocritical Readings of Animals and Women in Eighteenth-Century British Labouring-Class Women's Poetry* with Bucknell University Press in 2008. Milne's current ecocritical work explores notions of feral bioregionalism and the feral-local (specifically in the work of Mary Leapor and Mary Robinson). She is a 2010–2011 Carson Fellow at the Rachel Carson Center in Munich, Germany.

Portraying Purpose in the Lives of Nonhumans

Les Mitchell

Nonhuman animals are oppressed in many ways by humans, although this may not always be apparent, since the oppression has been practiced over such a long period of time that it has become common sense. In the non-human farming industry, for example, fifty five thousand million nonhumans are killed worldwide each year, with most of these being confined as well as abused in a range of ways before their untimely deaths. However, this arouses little disquiet from society in general.

The power of language in the construction and reinforcement of social identity and ideology is well recognized and has been investigated in fields ranging from feminism to genocide to apartheid. In this paper I focus on a corpus of writing in a popular South African farming magazine and examine, using Critical Discourse Analysis (CDA), linguistic constructions concerning farmed nonhumans that imply that they have an anthropocentric purpose for their lives. These "purposes" support the ideology, which goes back at least to the time of Aristotle, that the world is composed of greater and lesser beings, with the lesser beings existing for the purposes and use of the greater beings. It thus condones and excuses the use of nonhumans for such things as food, traction, skins, entertainment, and scientific experiments. This hierarchical point of view may not always be explicitly stated today, although it may be something which is simply taken for granted.

The texts exhibit widespread use of metonymy, where a particular use for a nonhuman, one which has been assigned by humans, is nominated as the nonhuman's purpose for existence. In other parts of the texts nonhumans are portrayed as needing to achieve various things and as if they are willing

participants in some form of competition. Such constructions are not confined to texts concerning farming but are present in other contexts as well.

It is suggested that an increased awareness of such constructions and their implied ideological implications, combined with a deliberate resistance in linguistic practice, may contribute towards a change in how some people view nonhumans and their exploitation.

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Publications: Animals and the discourse of farming in Southern Africa. *Society and Animals* 14 (1), 38–59; Review for the *Oxford Journal of Animal Ethics* of Prisoned Chickens, Poisoned Eggs (forthcoming); Moral disengagement and support for nonhuman farming. *Society and Animals* (forthcoming); Chapter Animal Protection (Africa) in *Animal Protection Worldwide* (forthcoming).

Research interests: Critical realism, non-human animals, discourses and critical discourse analysis, power in society, genocide, moral disengagement, and alternatives to violence facilitation.

Some Perspectives on Animal Representation in the Light of Human Masking Practice

Anna Mossolova

Studies of the origins and traditions of human masking have led to the assumption that disguise, and the use of masks in particular, can be considered to be a universal human practice, known in almost every society from the archaic period onward. The following phenomenon is considered under the notion of masking: the transfiguration of outward appearance for the purpose of inward transformation; the mental practice of being-not-me facilitated by visual changes.

In order to illustrate this definition, two distinctive examples of disguise are provided, related to archaic ritual hunt – considered to be the original background of human masking practice. A man wants to remain unrecognized during a hunt for small cattle and therefore makes use of the fell of a sheep or goat – the animal he is hunting for. This can be perceived as a

kind of outward mimetic masking. However, what if the man puts on the fell of a wolf while going to the same hunt? The purpose of such masking must be entirely different, since it will not be possible to hide oneself within the flock. In this instance, it will be a matter of faith: it is believed that the fell of the wolf has magic qualities and is able to strengthen and empower its wearer. The precise investigation of the second type of masking, implying certain mental transformations, is of great interest for semiotic studies, including both zoosemiotic and cultural perspectives.

Apparently, human beings have an inner intention toward sociocultural transformations and toward multi-personality in a broad perspective. It can nevertheless also be assumed that outward transformation practice is initially a consequence of man's nature-coping behaviour; according to common knowledge, many species have the ability of mimicry, imitation, and other kinds of transformation that are possible due to primarily inherent qualities of the organisms (the pattern on butterfly wings, the changing colours of chameleon's skin, etc.). Despite the fact that human beings lack these inborn abilities for transformation internally, humans use external objects to undergo certain changes: s/he paints the face, creates masks and costumes, tattoos and scarifies the body, etc. However, the outward and inward sides of a human (should) always stay in a constant correlation.

For animals, mimicry, imitation, and other familiar phenomena are particular ways of communication; for a human being, masking is also the contact-making means of establishing a dialogue and/or relation, in particular with nature. Current research tends to focus on the zoosemiotic components of human masking practices and on the communication of humans and nature through this practice. It would thus be of interest to investigate the visual representation of zoomorphic disguise and to see animal features in a masked human. The present report provides some remarkable examples of human masking practices related to the interaction between culture and nature, and evaluates the hypothetical origins of masking phenomenon in general.

Anna Mossolova is a Master's student in the Department of Semiotics, University of Tartu. For the past four years she has been actively researching the issue of ritual masking, its origins and traditions. Her master's thesis is primarily focused on interdisciplinary perspectives on origins and practices of ritual masking in archaic societies.

**Human Animal in the Zoo –
Trying to Help Zoo Biology With Semiotics**
Nelly Mäekivi

Zoo biology is a borderline subject, concerned with questions extending from zoology to human psychology; it touches on every relevant branch of science, in order to reconcile the demands of the public with the requirements of other animals. For example, already H. Hediger, the father of zoo biology, tried to find means for retaining wild animals and their behaviour in the most natural form possible; yet the process of making zoos less overtly custodial and more natural is arguably as much for the benefit of human visitors' sensibilities as a response to animals' needs.

Although one of the main focuses of zoo biology is to concentrate on interspecific relationships between humans and other animals, this presentation instead has an aim to investigate intraspecific communication – what is the message that people managing a modern zoo hope and try to convey (the aims of an accredited zoo) and what are the attitudes and knowledge of the receiving audience (outcomes of the aims).

While for a visitor the zoo's most visible facet is recreation, it is in fact education, conservation and research that are its fundamental commitments – but saving the wildlife is fundamentally a social process, where protecting species from extinction, trying to save their habitats, getting to know more about animals' social and physical needs, reintroducing them to the wild – all of this is dependent on making people care. Answering questions such as “why should people care about wildlife?” and “how to make people care?” are the purpose of *zoo education*, which is seen as a major conservation activity that has a potential to influence people's beliefs, attitudes and most importantly – behaviour.

This presentation attempts to provide a semiotic analysis of the efficiency of zoo education and hopes to point out some areas in need of development, taking into consideration the complicated nature of zoo as a free-learning facility, where balance has to be maintained between keeping visitors interested and fulfilling the zoo's goals. A visitors' study, conducted in Tallinn Zoo in the summer of 2010, is used as illustrative material to support certain points.

Nelly Mäekivi is a Master's student in semiotics at the University of Tartu. She is currently working on her thesis that analyses zoos as multifaceted semiotic environments, taking into account zoosemiotics, ecosemiotics and

cultural semiotics. Her interest lies in intra- and interspecies communication, ethology, anthropology, and human representation of other species.

**Minding Signs: The Semiotics
of Chauncey Wright's Psychozoology**
Gerald Ostdiek

As an approach to the study of living things, Semiotics takes a deliberately heterarchical tack; it focuses on the tangling together of multiple scales and argues that the tangling itself makes the bank, such that the greater the tangle the healthier the bank. This follows the realization that living structures are necessarily scale thick – and that any attempt to postulate a 'true' level or source from which life is determined, around and from which it is 'constructed', is as absurd as any claim to an absolute progression, or 'point' to life. But it also points to the notion that across the broad range of scales of being, it is the minding of an environment that is definitive of life. And so, the study of animal communication must involve a discussion of animal consciousness – with the opposite also being true, and humanity included.

All these are early realizations of Chauncey Wright. Together with a flat rejection of the pretense that consciousness exists as some kind of pre-constructed entity (and therefore must have evolved naturally), they express the Pragmatic dismissal of the hoary mind/body problem, as exemplified by the semiotic ontology of Charles Peirce and the whole-body psychology of William James, both of which are developments of the proto-semiotics of Chauncey Wright, and the semiotic structure of his proposed psychozoology.

Following upon Wright's methodology in "Evolution of self-consciousness", this essay focuses on the origination of knowing beings (human and not) as exemplary of the semiotic 'thickness' of evolutionary process – and hence, of a broad zoosemiotic approach. The intent of this essay is to clarify the importance Wright's work in the origination of Semiotics, as well as the importance of Semiotics to evolutionary biology and life itself, but also to epistemology and the 'animal' (i.e. both natural and scale thick) quality of human knowing. The conclusion will point towards a methodological synthesis competent to explore consciousness alien to our own.

Gerald Ostdiek teaches English and American Philosophy, and recently defended his dissertation "Darwin's Ontology", both at Charles University in Prague. He originated in the American Mid-West, did his undergraduate work in California, and has spent much of his adult life on other continents.

His first love was theatre, and he worked as an actor/director before succumbing to his second love, furniture making and design, which also succored him for a while. He also taught English for several years before returning to philosophy. His MA is in Philosophy of Religion, and his PhD in Philosophy of Science.

Significance in Animal Communication

Stephen Pain

This paper will explore the problem of qualitative analysis in animal communication studies. The author will argue, based on case studies and the latest research and literature, that animal communication entails significance and this occurs mostly in the higher processing of animals (the so-called "black box") and is found across taxa. In the classical communication act/event, there are two agents, a sender and a receiver. The vehicle of information is the signal (sometimes, as in chemical communication, it is the message itself). One bird sings or calls, while another bird hears this and responds to it. The exchange involves feed-back and behavioural responses. Everything is measurable. There is quantitative elegance in the information theory models that draw on mathematics; and the value of the message can be measured using optimal decision making models. Risk can be evaluated using game theory models – allowing for predictions of behaviours in an evolutionary and ecological context. However, communication involves more than amount, value and risk; it also involves significance. Significance (signal association/relation) takes place in the neurobiological processes that integrate and modulate sensory signals that have been filtered and sent on from the periphery. In animals with established communication systems they affect other cognitive processes and general perception. It will be argued that animals have evolved qualitative and richer systems of communication that confer additional benefits than the switch on and off models of communication. Recent research in neurobiology and animal cognition studies has shown that animals that hitherto had been thought to have only instinctive systems of communication in fact have additional sophisticated, almost emergent systems of communication: e.g., the "tutor" song system in song birds. Moreover, animals traditionally considered less "plastic" in their behaviours have now been reassessed (for example, suffering in fish). The author will draw on this research to present a cogent argument for placing significance and its primary component, the sign, once more at the centre of animal communication studies.

Stephen Pain is an independent researcher and writer based in Odense, Denmark. He has published several papers on animal communication and behaviour, focusing in the past on invertebrates (i.e., sponge, jellyfish, barnacle, moth, ant and bee). His principal concern has been with how qualitative information evolved and how animals represent their world semiotically. On top of his interests in biosemiotics and zoosemiotics, he has edited several American classics, written poetry, drama, and short fiction.

**A New Method for Evaluating the Complexity
of Animal Behavioural Patterns Based
on the Notion of Kolmogorov Complexity**

Sofia Panteleeva, Zhargal Danzanov, Zhanna Reznikova

We suggest a method for evaluating the complexity of animal behavioural patterns based on the notion of Kolmogorov complexity, with ants' hunting behaviour as an example. The concept of Kolmogorov complexity is widely applied in different fields of science, including linguistic and semiotic (Ivanov 1978; Li, Vytanyi 2008). However, although many authors have tried to apply ideas of information theory to animal communication (a review in: McCowan et al. 2002), an experimental study of ant "language", that is, ants' ability to "compress" messages based on the "alphabet" consisting of two letters R (right) and L (left), still remains the sole application of this concept to animal behaviour (Ryabko, Reznikova 1996).

Informally, Kolmogorov complexity is the length of a minimal program (expressed in an alphabet) generating this sequence (a formal exposition in: Kolmogorov 1965). In our case the alphabet is a whole set of species-specific behavioural units, and a sequence of letters corresponds to a displayed behaviour. Intuitively, Kolmogorov complexity of a text is the length of this text compressed by an "ideal" data compressor; an ideal data compressor is a compressor that finds every possible regularity in the data. As ideal compressors do not exist, we use real ones. Real data compressors can find many regularities that commonly occur in textual data.

We analysed a hunting stereotype of *Myrmica rubra* ants towards jumping springtails and compared complete (successful) and incomplete hunting stereotypes in members of a natural ant colony ("wild" ants) and naïve laboratory-reared ants. We represent behavioural sequences as "texts", and compress them using a data compressor. Behavioural units (10 in total), singled out from video records and denoted by letters, served as an alphabet. To analyse ethograms from video records, we used the Observer XT 7.0

(version: 7.0.214, Noldus Information Technology). Using an "alphabet" of 10 behavioural units, we expressed the hunting stereotypes as text files. We obtained 4 files which included: 19 complete and 20 incomplete hunting stereotypes in "wild" ants and, correspondingly, 20 and 31 stereotypes in "naïve" ants. Then we reduced files to equal initial length, compressed them with the use of KGB Archiver (v.1.2) and compared ratios of compression in different stereotypes. The length of a compressed "text" can be thought of as an estimate of its Kolmogorov complexity. Successful hunting stereotypes appeared to be characterized by smaller complexity than incomplete ones. A few naïve "born hunters" which enjoy "at once and entirely" complete hunting stereotypes are characterized by a lower level of complexity of hunting behaviour. We conclude that innate complete stereotypes have less redundancy and are more predictable.

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Animals, Nature, and Empire
in *A Voyage Round the World*
Killian Quigley

A Voyage Round the World, Richard Walter's account of Commodore George Anson's epic and ignominious voyage from England to China between the years 1740 and 1744, has, despite the various disasters that attended it, been credited for "continuing interest in the Pacific" that "bore a different fruit in the voyages of Cook and his contemporaries" (Williams, Glyn. *The Prize of All the Oceans*. New York: Viking, 2000: xx). I propose that *Voyage* makes a profound contribution to the British imperial imaginary of the mid-18th

century in its representations of the flora and fauna which Anson and his crew observe and with which they interact. Remarkably, *Voyage* relies on animals – crucially, *wild* animals – and nature as semiotic loci of imperial identification and representation. The text, then, is a testing ground for a developing British imperial imaginary, one in which wild animals and the land become points of identification, through military and anatomical anthropomorphism, as well as evidence of the inferiority of the non-British (specifically, the Spanish and Chinese), and proof of providential intercession on behalf of the British Empire.

The tradition of according “livestock a symbolic role equal to their practical contributions toward the establishment of an English empire” in order to carry out empire-builders’ “collective mission” to “confer the blessings of civilization on a savage land” is well-documented (DeJohn Anderson, Virginia. *Creatures of Empire*. New York: Oxford University Press, 2004: 76–77). However, Walter takes a more complicated approach in bringing *wild* animals and untouched nature under the wing of the British imperial imaginary, even making an argument for their *membership* in the British imperial project, as though nature and its denizens were only waiting to be identified as fighters for the British cause. Animals, in *Voyage*, become the location of imperial representation and conflict, as agents of military and aesthetic superiority and of reason. Traditional conceptualizations of man at the head of earthly nature, with everything else far below, do not hold much water here; instead, with nationalistic and imperial sensibilities in mind, goats can stand in for British humans when the latter are absent, and other humans can be reduced, on a semiotic level, to carrion. This is not to say that humanism goes untouched; through animals, Anson’s men can be seen to be engaging in the “carnivorous sacrifice” that Derrida describes as “essential to the structure of subjectivity” and “the basis of our culture and our law.” Still, the complication of “hierarchy of subjects and values” (Wolfe, Cary. *Animal Rites*. Chicago and London: The University of Chicago Press, 2003: 100), in the name of the imperial project, is the primary thrust of *Voyage’s* treatment of the animals at Juan Fernandes.

Voyage, I argue, is not about the conquest – or occupation – of land in the traditional sense; rather, Walter’s narrative illustrates a conquering British imperial imaginary, one that appropriates the wild into the imperial project. The animals of *Voyage*, and the landscapes they inhabit, become closely linked to the sustenance, literal and figurative, of the British Empire’s project in the Pacific Ocean, and with them Walter wages symbolic warfare upon the Spanish Empire and the Chinese people. *Voyage’s* contributions to eighteenth-century natural history and imperial representation have been

largely overlooked, and many of Walter's gestures stand in stark – and important – contrast to the popular intellectual trends of his day.

Killian Quigley is a first-year MA/PhD student in the department of English at Vanderbilt University in Nashville, Tennessee. In 2009, he earned a B.A. in English at Cornell University in Ithaca, New York. Primary among his research interests are natural history, animal studies, ecocriticism, maritime literature, 18th century English literature, and literature of empire. Killian was awarded the University Fellowship upon being admitted to Vanderbilt, and works as a research assistant to Jonathan Lamb, Andrew W. Mellon Professor of the Humanities.

A Posthumanist View on Humans and Animals Silver Rattasepp

In our culture, human beings have always been articulated as a conjunction or separation of a body and a mind, of a living being and a *logos*, of a natural or animal element and a social or cultural element. Proceeding from this, when the philosopher's gaze turns toward the rest of the living world, it will be assessed and judged in a rather peculiar manner. The separation of living beings into "Man" and "Animal" first proceeds by humans discovering, in themselves, certain properties or characteristics that they consider to be precisely those that separate the animal from the human, the mind from body or the cultural from the biological; once this conclusion has been drawn, an attempt is made to discover whether other animals also possess these very same characteristics to a certain degree, or whether said characteristics are uniquely human.

Thus the two most common solutions to the question of relations between humans and nonhuman animals are either to propose a fundamental dividing line that marks human beings off from everyone else, or to propose a (usually biological, evolutionary) continuum between humans and (certain) other species. But in fact both solutions are answers to the same question, since, as noted, both proceed from some property or characteristic first discovered in humans, a trait that is then used to measure the distance or closeness, or complete separation, of humans from nonhuman animals.

The tactic of difference and the tactic of similitude are thus nearly indistinguishable in form, since they refer back to nothing but man as the measure of all things. What must be problematized, first, is the underlying premise, the structure of the issue being addressed, of using the

distinguishing characteristics that separate Man from Animal as the judge and measure of the characteristics of nonhuman animals. Second, and more importantly, what must be emphatically problematized is the ease and casualness that humans attribute to themselves these very characteristics that they, with the very same movement, deny to all others.

The problem to be analysed is thus twofold: First, the basis for asking whether some nonhuman animals possess certain characteristics is nearly inevitably something that is first recognised in humans only, and then projected to other animals, and never the other way around; and second, what should be asked is not just whether certain nonhuman animals possess this or that human characteristic, but also whether attributing that characteristic to humans is as simple, clear and easy as is usually assumed.

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**An Information-Theoretic Approach for Analysis
of Animal Communication, with Ant "Language" as a Model**
Zhanna Reznikova, Boris Ryabko

We compare three approaches for studying animal language behaviour: (1) direct decoding of animals' communication, (2) the use of intermediary languages to communicate with animals and (3) application of ideas and methods of Information Theory for studying quantitative characteristics of animal communication.

Each of the three methodological approaches has its specific power and specific limitations. Deciphering animals' signals reveals a complex, yet only fragmentary picture of natural communication in its evolutionary perspective, because of many methodological barriers, among which low repeatability of standard living situations seems to be a bottleneck. Language-training experiments are of great help for discovering potentials of animal language behaviour, but leaves characteristics of their natural communications unclear. The use of the methods of Information Theory is based on measuring the time duration that animals spend on transmitting messages of definite information content and complexity. This approach, although it does not reveal the nature of animals' signals, provides a new dimension for

studying important characteristics of natural communication systems that has not been available before. First of all, this approach enables the explorers of animal language behaviour to obtain knowledge just about the ability of subjects for transferring meaningful messages. In addition, the important properties of animal communication and intelligence can be evaluated, such as the rate of information transmission, the complexity of transferred information and potential flexibility of communication systems.

Focusing on the Information-Theoretic approach, we integrate results of long term experimental study on ant "language" and intelligence which was fully based on fundamental ideas of Information Theory, such as Shannon entropy, Kolmogorov complexity, and Shannon's equation connecting the length of a message (l) and its frequency (p), i.e., $l = -\log p$ for rational communication systems. This approach enabled us to obtain the following important results on ants' communication and intelligence: (i) to reveal "distant homing" in ants, that is, their ability to transfer information about remote events; (ii) to estimate the rate of information transmission; (iii) to reveal that ants are able to grasp regularities and to use them for "compression" of information; (iv) to reveal that ants are able to transfer to each other the information about the number of objects; (v) to discover that ants can add and subtract small numbers. The obtained results show that Information Theory is not only an excellent mathematical theory, but many of its results may be considered as Nature's laws.

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**Predators, Locusts, and Stupid Cows.
Animal Names as Swear Words
Dagmar Schmauks**

The attitude of men towards animals is complex and very contradictory. We showcase individual animals, such as the polar bear Knut, as media stars and

treat many pets as family members, whereas billions of domestic animals live in substandard conditions and the habitat of wild animals is constantly shrinking due to human influences.

The same contradictions show up in representations of animals, e.g., in texts, pictures, and films. For example, picture books show idealized pre-industrial farms with a mixed animal population living under free-range conditions, although present livestock breeding is specialized and highly industrialized. A linguistic piece of evidence for these contradictions is the many names of animals that we use for characterizing and insulting others. On the one hand, we draw a clear dividing line between mankind and animal kingdom. Terms like "beastly", "bestial", and "animal" denote only the most serious criminals, thus positioning the offender outside of humanity. On the other hand, we see numerous similarities across species and coin expressions like "eagle eyes", "crocodile tears", and "ostrich policy".

A treasure trove for such comparisons are our swear words. To give just simple examples, we mock the appearance of others with expressions such as "bunny teeth", "calf eyes", or "elephant ears". Some groups of animals render very negative metaphors due to their manner of food acquisition, namely predators ("predatory capitalism"), food competitors ("financial locusts"), parasites ("social parasites"), and scavengers ("vulture funds"). Furthermore, other human shortcomings like stupidity, cowardice, and impurity are often criticized with respect to certain animals. It has to be noted, however, that some swear words like "stupid donkey" or "filthy swine" are based on the fact that we misunderstand the actually meaningful animal behavior.

For gender-specific insults, we prefer the names of pets or livestock of the same sex, such as "chicken" and "cow" for women, "cock" and "bull" for men. The bases of such comparisons are clear differences in appearance ("dimorphism") or in behavior ("domesticated" cats vs. "stray" tomcats). The species-specific courtship behavior is particularly productive for rendering terms such as "horny boar" and "bitch". Doubly offensive are "ox" or "wether", because the names of castrated animals also deny masculinity.

Equally interesting is the reverse direction of insulting, namely evaluating animal behavior with human moral concepts. Behaviors such as parental care, pair bonding and friendship arose very late in evolution. In human history, it took many thousands of years until certain behaviors were defined as virtues or vices. From the viewpoint of ethology, it is therefore misguided to apply evaluative terms such as "murder", "rape", and "incest" to animals.

Prof. Dr. Dagmar Schmauks (b. 1950) studied philosophy, linguistics, and cognitive psychology in Germany and Austria. Since 2004, she is associate professor of semiotics at the Technical University of Berlin. Her most important publications are: *Deixis in der Mensch-Maschine-Interaktion* (1991), *Multimediale Informationspräsentation am Beispiel von Wetterberichten* (1996), *Geschlechtswechsel* (1999, together with Friedemann Pfäfflin), *Orientierung im Raum* (2002), *Der tote Mensch als Zeichen* (2005), *Semiotische Streifzüge* (2007), and *Denkdiäten, Flachflieger und geistige Stromsparlampen* (2009). She has published more than 100 papers on applied semiotics, mainly on pictorial communication, sign-driven orientation in space, strategies of deception, and on man-animal relationship.

Dialogue with Kishtta: A Semiotic Revelation of the Paradox of Life and Death

Farouk Y. Seif

This paper utilizes the dialogue between two “semiotic animals,” exploring the notion of life and death. The concept of *dialogue with Kishtta* was triggered by an actual life-transforming encounter. The first voice in this dialogue is Kishtta, my 14-year-old, who was experiencing the transition between surviving and passing away, and the second voice belongs to me struggling with that experience. The encounter took place between Kishtta and me on the evening of Friday, November 28, 2008, and has since been a cathartic and therapeutic experience. Not only does the dialogue reveal an insight into the semioethics of the ritualization of life and death but it also exposes the disingenuous separation between the realms of zoosemiotics and anthroposemiotics.

Death is not an absolute end for anyone or anything. In this dialogue, death is not perceived as an inevitable aspect of life; rather, it is perceived as an integral part of the semiotic process, like a door opening out on another transcending world. Although the existence of consciousness after death remains speculative, sign of life and sign of death are integrated in circular reciprocity. This reciprocal and, in some ways, paradoxical relationship between life and death is at the core of semiotic process. In a sense, the sign of life or the sign of death is perceived and represented autonomously only as a relatively invariant sign of an undivided semiotic process in flowing movement.

In conclusion, the dialogue makes a case that, on ontological and epistemological levels, both zoosemiotics and anthroposemiotics are integrated reality that invariably cannot exist without one or the other. Zoosemiotics is

implicit in anthroposemiotics and vice versa in mutually transparent co-evolutionary semiotic processes purposefully oriented toward meaning making. The integration of zoosemiotics and anthroposemiotics triggered a judgmental challenge about life and death that brought unpredictable outcomes. The dialogical exchange points at the need for semioethics for the recovery of the primordial relationship between human and more-than-human systems. Thus this integration has the potential to foster cultural transformation and environmental renewal in a world we as semiotic animals co-inhabit and co-interpret.

The dialogue reached its peak when I caressed Kishtta's head and offered a final indulgence; she responded by licking my hand. Kishtta was my golden retriever.

Farouk Y. Seif, Ph.D. is Professor Emeritus of Whole Systems Design Graduate Program, Center for Creative Change at Antioch University, Seattle, and a visiting faculty at Seattle University, Washington, USA. He teaches design for meaningful social change. He is the founder and director of Isis Institute, where he leads the cross-cultural program in Egypt, *Journey into the Dawn of Time*. His areas of interest include metaphysics of design, wholeness, socio-cultural change, and semiotic communication. He can be contacted at: fseif@antioch.edu

Origin of the Composition With Heraldic Treated by
Feline Predators in Medieval Islamic Art: Fragment From the Cope
of St. Mesme of Chinon (National Museum of the Middle Ages -
The Roman Baths of Cluny, Paris)
Anna Sharibzhanova

Actually the composition on the fragment from the cope of St. Mesme of the Church of St. Stephen in Chinon (France) with heraldic animals treated by the sides of the tree does not indicate on Hispano-Moresque fabric, as A. Erlande-Brandenburg wrote about it. This composition was typical for Syrian textile between 11th and 13th centuries. Heraldic images of animals and birds are also frequent in the Iranian textile between 8th and 13th centuries. Found that these compositions, typical for Islamic medieval textiles, date back to the Syrian-Mesopotamian traditions of 7th-8th centuries, inheriting the stylistic traditions of the Byzantine and Sassanian textiles (B.V. Veimarn). Sassanian traditions evolved under the influence range of crops of so-called Eastern antiquity (3rd century BC - 3rd century AD). In turn, the Greco-

Bactrian, Parthian and Kushan art form with the culture of the nomads of the Eurasian steppes, the carrier Animal style.

On the eve of the Arab conquest, the culture of Kydarites, Chionites and Hephthalites (4th–5th c.), as well as the culture of ancient Turks (3rd – mid. 9th c., immediate successors of Animal art) influenced the Sassanian pictorial tradition.

The composition on the Chinon fragment is interesting in the context of examining the forms of expression of “animal” art of the ancient nomads of the Eurasian steppe in the fine traditions of the sedentary peoples. In particular, we are talking about the process of entering several zoomorphic images of Animal style in medieval Islamic art, a change in their symbols and semantic content. Study of the genesis of the composition from Chinon fragment will outline the scope of the initial images of this composition and semantic relations in it, as well as the causes and nature of changes occurring to her.

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“But Ask the Animals, and They Will Teach You”.

Domestication as a Zoosemiotic Problem

Marco Stella

It can be shown that domesticated organisms form a communicative union based on morphological, behavioral, cognitive, and immunological resemblances (Kleisner, Stella 2010). Domestic animals live under particular conditions that substantially differ from the original (“natural”) settings of their wild relatives. Here we focus on the fact that many parallel characters have appeared in various domestic forms that had been selected for different purposes. Those parallel similarities appear in different groups in response to their interaction with the *Umwelt* of a particular host. In zoosemiotic sense, the process of domestication represents a kind of interaction in which

both sides are affected and eventually transformed in such a way that one is more integrated with the other than in the time of initial encounter. One of the key topics and problems of Thomas Sebeok's zoosemiotics, the case of the "miracle horse" Clever Hans (and other "intelligent" animals), which, to a certain extent, was crucial for the constitution of zoosemiotic theory, may therefore have an alternative explanation. The standard explanation, namely that Hans responded to unwitting cues given by his trainer (or another person present to the session), explains only one part of this manifold phenomena. The fact that a phylogenetically remote organism (as the horse is), even without long-term co-evolution with humans, is able to read, interpret and answer to minute human movements (or other cues) is not less fascinating than the first option. The "domestication union" mentioned above is in fact a union of anthropomorphous creatures as well – Clever Hans, and other "intelligent" animals are as domesticates its members too. The strict anti-anthropomorphism present in Sebeok's zoosemiotics should be re-examined, at least in the case of domesticates. The study of domestication hasn't been considered as an integral part of zoosemiotics. Nevertheless, as communication shows up to be an important aspect of this process, and as the cases "clever" (mainly domestic) animals was an important topic for the very founder of this discipline, my aim is to show that a zoosemiotic insight in this matter could be to some extent relevant or even interesting.

Marco Stella is an anthropologist interested in non-humans, the process of domestication and history of biology.

Practical Anthropomorphism and Its Limits Artis Svece

Debates about the role of human-animal analogies in the interpretation of animal behaviour have continued at least since Descartes introduced his animal-machine hypothesis. Concern about the dangers of anthropomorphism for animal related research was voiced by C. Lloyd Morgan, the behaviourists, and J. S. Kennedy, just to name a few prominent examples. The validity of human-animal analogies has recently been defended in ethology (D. Griffin, G. M. Burghardt, F. B. M. de Waal, J. A. Fisher) and animal ethics (P. Singer, T. Regan, M. Midgley, M. Nussbaum). Nevertheless, a tolerant attitude toward anthropomorphism does not really mean that doubts about human capability to understand animals are dispersed. In ethology, supporters of analogical thinking perceive anthropomorphism as a practical tool that can

help to predict animal behaviour and produce new scientific hypothesis that have to be thoroughly scrutinized in light of empirical evidence (for example, Burghardt's "critical anthropomorphism"). In this way, it's possible to challenge methodological assumptions of the animal-machine hypothesis and Morgan's Canon (methodological parsimony), but not their ontological implications (ontological parsimony). Thus one can still be wrong when one ascribes certain (for example, conscious) mental states to animals.

On the other hand, the critical stance towards anthropomorphism must also be considered as practical. Critics of analogical thinking, like Descartes and Kennedy, acknowledge that they cannot rule out analogies between human and animal minds, so their criticism functions first of all as a cautionary reminder about the possibility of misinterpretation of animal behaviour and not as a positive ontological theory of animal minds. Similarly, their approach to the problem of the interpretation of animal behaviour must be characterized not so much as a manifestation of agnosticism and scepticism, but as an attempt to consider alternative explanations seriously. Criticism of anthropomorphism nevertheless has a certain sceptical aspect to it. This aspect is important because it indicates fundamental uncertainty and limitations of human understanding of animals. This uncertainty has methodological, ethical and political implications.

Artis Svece, a lecturer at the Faculty of History and Philosophy at the University of Latvia, Department of Practical Philosophy. Education: MPhil, University of Latvia (1994), MA, Memorial University of Newfoundland, Canada (1996), just finished his PhD thesis "Ethical Status of Animals and the Problem of Anthropomorphization". Main interests: animal studies, the philosophy of mind, ethics.

From Repelling to Killing: Human-Insect Relationships in Estonian Folk Tradition

Renata Sõukand, Raivo Kalle, Ingvar Svanberg

No matter how many new chemical insecticides have been developed during the last century, insects are still continuing to be part of everyday life, irritating us with their presence, bites and sound, while some even invade human territory and make use of our homes, bodies, food, hair, blood, etc. There has always been close communication between these insects and human beings. Nowadays we are aware that the use of synthetic insecticides may lead to several environmental problems, such as disruption of natural

biological control, destruction of wildlife, and the development of resistance by parasites to pesticides, as well as direct toxicity in humans, cattle and pets, including groundwater contamination. Hence our growing preference for using botanical insecticides as protection against insects. Human history is full of records of successful use of many plant taxa as repellents and insecticides.

The biocultural domains that have developed in the interaction between various kinds of parasites and human societies are probably the most intimate 'activity contexts' that exist. Ectoparasitic insect species have always cohabitated with human beings and their domestic animals and thus have played an important role in cultural history. Once, in the pre-modern North, it was considered healthy to have fleas and lice, but the individuals living in contemporary industrially developed and post-industrial countries prefer to be insect-free, as insects are more commonly associated with poor sanitary conditions and untidiness of the inhabitants. This reflects on different cultural attitudes toward cohabitation with insects and through that on relations between humans and insects.

This paper presents an interpretation of changes in human-insect relationships within a historical perspective, comparing insect-repelling strategies used in nineteenth and twentieth century Estonia, taking the discovery of synthetic chemical insecticides in the 1930s as a turning point in evaluation of cohabitation. Historically, insects were just a part of everyday life that humans had learned to live with and share the territory and stocks. For example, the earlier folk tradition mostly relied on repelling plants with strong odours and thorough house-cleaning, creating by these means an unfavourable conditions for home-insects; often nothing or extremely little was done to get rid of seasonal insects like mosquitoes and horseflies, accepting them as temporary discomforts not worth bothering with; moreover, insects were used as weather or fortune forecasters: painfully biting flies predicted rain, *Gryllidae* was believed to assist in the growth of teeth etc. Later, stronger insecticides were developed, with the purpose of killing all insects inconvenient to humans, giving no choice for insects either to leave or stay in unfavourable conditions.

Pre-modern attitudes indicate a shift in thinking: the less there is competition, the better it is for the stronger. The resulting decrease in biodiversity decreases the chances for survival for all species in the longer run. The post-modernist approach, the drive to use more natural and ecologically safe insecticides, promises to be less damaging to biodiversity and returns us to a more intimate relationship between human beings and their surroundings.

Renata Sõukand graduated with BSc in pharmacy (1999) and MSc in environmental technology (2003), now she is PhD candidate in semiotics at the University of Tartu, Estonia. Her main area of competence is Estonian herbal folk medicine, with strong focus on the interdisciplinary research. She is an initiator and leader of the team working on digitizing Estonian folk herbal heritage (HERBA) at the Estonian Literary Museum. She has also developed several educational exhibitions and tools that focus on environmental and health issues, taught courses on medicine as culture (University of Tartu) and cultural heritage (Estonian University of Life Sciences).

Raivo Kalle graduated with BSc in natural resources and protection (2004) and MSc in botany and mycology (2008) in Estonian University of Life Sciences. Now he is a research assistant at Estonian Literary Museum, working on HERBA. His main area of competence is Estonian ethnobotany, with a strong focus on the use of alien plants and the concept of herbal landscape. He has also developed several educational tools that focus on environmental issues, and taught a course on cultural heritage (Estonian University of Life Sciences).

Ingvar Svanberg is an ethnobiologist at Uppsala University and Södertörn University. His main interest is cultural zoology, companion animals, history of aviculture, and local knowledge about animals and plants in pre-industrial peasant societies and hunting/fishing and gathering societies in Eurasia. He has fieldwork experiences from the Faroe Islands, Sweden, Xinjiang and Turkey. He has published many books and articles in Swedish and English.

**The *Umwelt* Trajectories
of Wolves, Sheep and People
Morten Tønnessen**

This paper contributes to developing *Umwelt* terminology, and simultaneously offers an analysis of past and current interrelations of wolves, sheep and people, thus providing an application of the notation suggested.

The starting point for the author's terminology is the concept of an *Umwelt transition*, which is in effect an Uexküllian notion of environmental change. An *Umwelt* transition can be defined as a lasting, systematic change within the life cycle of a being, considered from an ontogenetic (individual), phylogenetic (population-, species-) or cultural perspective, from one typical

appearance of its *Umwelt* (i.e., organism-specific phenomenal world) to another. An *Umwelt trajectory*, the author proposes, can be characterized as the course through evolutionary (and cultural) time taken by the *Umwelt* of a creature, as defined by its changing relations with the *Umwelten* of other creatures. Thus defined, it represents an evolutionary and mass equivalent of Jakob von Uexküll's notion of the *Umwelt-tunnel* of a single individual creature.

As we can see, the *Umwelt* trajectory of a creature is the historical path of its perceptual and behavioral dispositions considered from an ecological and phenomenological point of view. As such, it is intimately tied to this creature's *ontological niche*, i.e. the set of contrapuntal relations that a being takes part in at a given point of natural history. Like the *Umwelt-tunnel* and the ontological niche, the *Umwelt* trajectory of a creature can be regarded as a specification of the *Umwelt* concept which situates it in terms of temporal perspective.

Taken as a whole, the *Umwelten* of wolves, sheep and people represent an *Umwelt triad* of sorts, given that they have been and remain intertwined and codependent. This triple *Umwelt* is telling of both ecological and cultural developments. In cultural terms, hardly any animals are as loaded with symbolic value as the wolf and the sheep. And the shared importance is no coincidence, as the symbolism of the two animals has developed in explicit opposition to each other. Altogether, the wolf-sheep duet, the human-sheep duet and the human-wolf duet – to speak with Uexküll – constitute a highly coordinated triple duet in the great symphony of nature.

The most enlivening aspect of this narrative concerns the *semiotic and phenomenological interplay* that takes place amid wolves, sheep and people. While the most relevant long-term process of change varies from creature to creature – *evolution* for wolves, *breeding* for sheep and *cultural development* for people (all of which represent broad categories of *Umwelt* transitions) – there are several common factors at play as well. In this paper, the author will touch upon a) the geographical range and overlap, b) the sensory range and overlap, and c) the functional range and overlap of wolves, sheep and people. The most crucial arena for semiotic interplay (and thus *semiotic causation*) is that of *functional interrelations*, particularly with regard to *companionship* and *enmity*. In our current ecological situation, where the human species has emerged as a *global species* in charge of an ecological empire wherein the sheep, among other species, has been given a privileged position, even the wolf has entered into a *dependency relation* with our kind. For better or worse, our *Umwelt* trajectories have (once again) aligned.

Morten Tønnessen (born 1976) is a Norwegian PhD student at the University of Tartu's Department of Semiotics, since 2007. The title of his thesis is *Umwelt Transition: Uexküllian Phenomenology: An Ecosemiotic Analysis of Norwegian Wolf Management*. He is a member of the editorial board of *Biosemiotics*, and has co-guest-edited the special issues 'Semiotics of Perception' (*Biosemiotics*) and 'Semiotics of Nature' (*Hortus Semioticus*). Tønnessen is a main researcher in the research project Dynamical Zoosemiotics and Animal Representations, and has recently published in *Humanimalia* and *new formations*, and more specifically on zoosemiotics in *Semiotica* and *Sign Systems Studies*. Academic blog: <http://UtopianRealism.blogspot.com>.

**This is Fun: A Basis for the Criteria and
Categorization of Play**
Arlene Tucker

In order to fully understand concepts one must always probe, question, and research all possible perspectives. In this paper, establishing a platform for the elusive notion of play is sought. This paper juxtaposes the speculation of whether fish play or not as well as the more concrete studies of non-fish play, and answers questions of who plays, what constitutes play, and why animals play. In looking towards an array of disciplines and seminal ethologists and theorists such as Gordon M. Burghardt, Robert Fagen, Johan Huizinga, and Niko Tinbergen, the borders, if any, which lie between play and non-play will be clarified. Awareness of these borders will thus allow for better grounds to conduct research and implement interdisciplinary applications.

For starters, one can look philosophically towards Gregory Bateson as a metaphor for the research process, for play is "an onion-skin system – a set of rules of communication – with an extra degree of freedom" (Bateson 1956, in Fagen 1981: 500). Prior to peeling, it is necessary for one to define communication in order to understand the rules of play. The 'degree of freedom' can pertain to several different aspects, such as emotion or the physical act of play, which will not be explored in this paper. With that said, communication, in this paper, refers to the transference of information from one entity to another. Regardless of situation and context, this act always requires a sender, a message, and a receiver. So how can communication be measured, observed, and then properly categorized in animals? Looking at a span of historical perspectives, play and criteria attributed to play will be discussed. This retrospective attempt will hopefully help researchers and

ethologists inch their way towards a more concise and productive methodology for studying and assessing animal play.

It is apparent that the presence of play is found in most species in the animal kingdom. The task lies in proving observation with substantial data, and developing a set of standard criteria that will help to attain order and a consensus amongst scientists and theorists. Play is a qualifiable activity as much as it is a necessity and an apparent part of all animal lives. "Play behaviors represent structural transformations and functional rehearsals or generalizations of behaviors or behavioral sequences" (Fagen 1981: 4-5). One should look towards the commonalities and the differences that shall rise. As seen with the study of fish, despite the unanswered questions to whether they play or not are challenged with a battle of opposing thoughts. The necessity for standards will help analyze these commonalities and differences in species so that one can better approach this phenomenon of play. Either way, it should be approached playfully.

Arlene Tucker is currently working towards a Masters in Semiotics at the University of Tartu. Her thesis approaches play motivation from a zoo-semiotics perspective. Arlene's BFA in film and painting from the Savannah College of Art and Design, work experience in children toy production, and interest in communication will support her quest at creating things for people whilst looking towards non-human animals for inspiration.

**Teaching Zoosemiotics: Discourse About and Representations
of Animals and the Nonhuman World in College Humanities Classrooms**
Rita Turner

The concepts of animal representations, animal communication, and the discursive construction of attitudes toward the nonhuman world have been, and continue to be, explored in the specialized fields of zoosemiotics, biosemiotics, and ecocriticism. Still, these topics are rarely incorporated into secondary and post-secondary curricula in the United States, despite their significance in the cultivation of environmental consciousness. In this paper, I suggest that an understanding of zoosemiotics should be incorporated into humanities-based interdisciplinary classroom curricula, and I provide evidence from my analysis of the outcomes of an introductory college-level humanities course I taught using a curriculum on critical ecoliteracy.

As part of my PhD dissertation research, I have developed a set of secondary and post-secondary curriculum materials on critical ecoliteracy, which

incorporates elements of zoosemiotics. This curriculum encourages critical analysis of culture, text, and discourse and is designed to cultivate key qualities, including empathy, mutuality, imagination, and ethical consciousness, for the purpose of fostering critical environmental awareness in students. Poetry, short fiction, academic essays, linguistic analysis, film, visual art, documentary television footage, and print and internet news and editorials are employed to aid students in examining belief systems about nonhumans and the relationship between humans and the more-than-human world. Students are also encouraged to incorporate concepts of environmental discourse, animal representation, ecolinguistics, and conceptual metaphor to explore the social construction of attitudes toward nonhumans and the cultural and discursive representation of the nonhuman world.

I used these curriculum materials in a 2010 seminar with 20 first and second year college students at the University of Maryland, Baltimore County. To study the effects of the curriculum on the students' attitudes about animals and the nonhuman world, I gathered and analyzed observations, survey data, and reflective and creative writing samples submitted by my students throughout this semester. I also use these data to evaluate the curriculum and identify potential improvements.

The data from this course suggest that many students are eager to explore the possibilities of forging understanding, empathy, and connection between species. When encouraged through classroom activities, students often discover that seeking to relate to the perspective and experience of a nonhuman animal is a gratifying and valuable pursuit. Reading and viewing personal and poetic descriptions of positive human interactions with nonhumans, stories of childhood memories and family bonds linked to experiences in the nonhuman world, and detailed visual and verbal depictions of nonhuman communication can evoke strong emotional responses for students. These materials, combined with creative and reflective writing assignments and activities, can encourage students to make connections between human and nonhuman behavior, and can spark critical analysis of human assumptions about nonhumans. At the same time, these materials and activities can raise associations with personal memories about students' own families and about bonds they've formed with nonhumans, and can provide the opportunity to imagine life through a nonhuman perspective.

The results of my study offer insights into effective materials and strategies used to foster students' critical ecoliteracy. They further suggest the value of incorporating an understanding of zoosemiotics – specifically, topics of animal communication, animal representations, and discourse about the

nonhuman world – not only into the course I taught but also into a range of curricula in secondary and post-secondary classrooms.

Rita Turner is a PhD candidate in the Language, Literacy, and Culture Program at the University of Maryland, Baltimore County. Her research area is critical ecoliteracy. She studies the value of critical interdisciplinary education, with a focus on analysis of discourse and culture, as a tool for cultivating environmental consciousness. Topics incorporated into her research include environmental discourse, conceptual metaphor, critical pedagogy, ecolinguistics, and ecoliteracy. She has published articles in *Environmental Ethics* and *Sustainability*, and she currently teaches courses at the University of Maryland, Baltimore County, using materials she has designed through her research.

**An Attempt at a Semiotic Approach to Charismatic
Leadership in Eusocial Animal Species**
Alekssei Turovski

Apparently, in all functionally diverse social structures in homothermic vertebrates (birds and mammals) the decisive feature in alpha specimens as leaders is the highest level of charisma in a given social group. To support the above statement I propose to define animal charisma as an ability to serve and fulfill the need for impression of group members by individual habitual, behavioral, and other characteristics, whereas the mentioned ability is relevant to the impression comprised of species, gender, age, and other specific signs. The most important issue, however, is the continuity of this ability of a leader. On no occasion must the leader fail to impress his group. Such an individual, a true leader, apparently has to be emotionally very mature. That means declaring of having reached an adult level of emotional development and never displaying emotional patterns appropriate to juvenile members of the group. Emotional maturity certainly implies a high level of emotional control. The emotional pattern in the behavior of a leader is characterized by a set of behavioral peripheral, visceral responses associated with a given emotion in all kinds of social situations due to adult standards (zoological norms) in the particular species. In a zoosemiotical context, where the process of semiosis is definitively associated with manipulation of attention, emotion could be defined as a set of processes/mechanisms for arousing and channeling behavioral energy (activity) based on the intrinsic system of motivation (drives).

The charismatic behavior of an alpha specimen in a leadership position must in no cases or situations display any signs of hesitation. All impulses for intentional movements, ambivalent behavior, vacuum or displaced activity must be subdued. The animal must display, in all situations, maximum signs of self-confidence, great fitness and maximum readiness to act. It is essential for a charismatic leader to maintain optimal distance from the group, and for every member of the group that distance must be optimal for noticing the aforementioned signs the leader must display. It is also very important for a leader, and subsequently for the group, that the former keeps displaying the aforementioned powerful signs as a part of its comfort behavior, as this form of behavior is one of the most obviously continuous in animal life. For instance, the alpha male wolf, when in fit condition, chooses very special locations for his daily naps, such as the tops of great boulders on a hilltop, where his magnificent fitness is on permanent display for all the members of the pack. It is likewise when it comes to the corresponding behavior of an alpha male lion in a pride. Similar rules of leaders' behavior are important in self-cleaning, grooming, and other forms of comfort behavior. On the other hand, a leader less fit must conceal his condition by all means necessary. For many years in my zoo practice as a parasitologist I've been using as a means of etodiagnosis such shifts in leadership behavior. For instance, an alpha male European bison, when in a very fit condition, is always first to approach the vitamin premixes box in full view of his respectfully waiting herd. On rare occasions, when he was mildly affected by fungal disease (*Trichophytosis*), the leader approached the box via a very unusual route on which he was concealed from the view of the heard by thick bushes.

All in all we can phrase the main difference of leader versus subject behavior as maximally "bio-experienced" and dominantly adult versus straightforwardly juvenile and "bio-logical".

Aleksei Turovski (b. 1946) is an Estonian zoologist and ethologist, specialising in parasitology and zoosemiotics. In 1973, he graduated from Tartu University with a degree in zoology; since 1972 he has been working in the Tallinn Zoo. In 1976–2001, Turovski worked at the Estonian Marine Institute. He has been lecturing at the University of Tartu and at Tallinn University. Turovski has been recognised as the Guardian of Estonian Life Science in 2007 for his work in popularising cultures of animals.

Like Fish Out of Water:
Literary Representations of Fish
Kadri Tüür

Literary representations of fish, as well as their analyses, are scarce in current ecocriticism. In the preface to *The Norton Book of Nature Writing* (2002), its compilers revise the topics touched upon in the Anglo-American tradition of nature writing and conclude that "fish are virtually ignored". In the seminal anthology *The Ecocriticism Reader* (1996), Dana Phillips uses examples of fishing fiction in order to illustrate the postmodern understanding of 'nature' and 'naturalness'. In the introductory book *Ecocriticism* (2004), Greg Garrard discusses evil fish and ocean documentaries under the topic 'Animals'. One of the most outstanding recent analyses of human-fish interaction comes from a Finnish ecocritic Vesa Haapala in the essay collection *Äänekäs kevät* (2008), focusing on the ethical dimension of fishing in Juhani Aho's writings.

It is definitely problematic to approach the descriptions of a class of vertebrates as distant from humans as fish with the tools of literary criticism due to the danger of falling into the trap of anthropomorphism, of forcing the features of human *Umwelt* upon that of the fish. In the presentation, the premises of biosemiotic criticism as proposed by Timo Maran (2010) are explored in search of analytical tools for modelling fish-human inter-relations.

Interspecies' relations and the possibilities for mutual communication are the key issues to be discussed in the presentation. What are the sensory channels that the *Umwelt* of fish is based on, in comparison with the *Umwelt* of humans: is there an overlap to the degree that would theoretically enable mutual communication and understanding, or are such possibilities merely a literary construction? We can find eloquent passages from European nature writing, especially from the tradition of the so-called fish-and-stream literature, where fish are described as having their own agency, including the capability of deceiving a human subject. In such a case, who is the observer and who is the observed? Can we consider, then, angling as a form of communication?

The interaction of the *Umwelt* of fish and that of humans poses one more important question, that of intentional *versus* unintentional signs. As some previous semiotic analyses have demonstrated, it is characteristic of humans that inter-species communication in the form of mere signals is often over-interpreted so that it acquires the traits of symbolic communication. On the one hand, such an approach helps to bring our fellow creatures closer to

common readers and helps in inducing empathy. On the other hand, it colonises, as it were, the *Umwelt* of non-human species and superimposes the logic of human agency on other species.

The question of non-human agency implies serious moral issues, but it also has to do with the ecological balance of the biosphere, as well as of the semiosphere, of which fish are an indispensable part.

Kadri Tüür (b. 1975) is a doctoral student in the Department of Semiotics, Institute of Philosophy and Semiotics, University of Tartu. She has studied literary history and theory in the universities of Tartu and Turku. She is a member of the European Association for the Study of Literature, Culture and Environment. Main research interests: ecocriticism, Estonian nature writing, ecosemiotics.

Animal Minds and Minding the Animal in Contemporary Art Jessica Ullrich

My paper discusses various artistic practices by which humans attempt to adopt the standpoint or perspective of animals and to make them accessible to others. I focus on six international contemporary works.

I am interested in the question of what an empathic approach on the part of an artist can contribute to aesthetics, ethics and efforts, whether futile or promising, to adopt non-human ways of looking at the world.

The main strategies artists use in order to get closer to the mind of animals are observation, imitation, identification and empathy.

The video installation *Vigia* by the Brazilian Hugo Fortes seeks to explore the mental states of a dog by taking its point of view. The film *Time after Time* by the Albanian Anri Sala seeks to anticipate the imagined emotional state of a horse and to do so literally loses focus. The Austrian Arnulf Rainer held parallel painting sessions with a chimpanzee, imitating its every movement and brush stroke with the aim of entering into its creative mind-set. The German Katharina Meldner created drawings that trace with great accuracy the movements of ants in order to discern their secret meaning and attain insight into the insects as agents. Bruce Nauman from the United States turns the viewer into a kind of lab rat with his installation *Learned Helplessness in Rats* in order to provoke identification with the animal other. Sam Easterson equips wild animals with helmet cameras for his on-going

project *Animal Plant Video* so as to replicate as directly as possible the way a non-human animal sees the world.

What all these attempts to access the mind of an animal through art have in common is that they focus on the sense of sight and ignore the others, such as smell. That is one reason why these projects are, each in its own way, condemned to failure. Nonetheless there is an emancipatory potential in the attempt to "give voice" to animals as individuals and thus to open up as yet uncharted channels to their minds.

These works of art are new and radical in refusing to deploy representations of animals as a screen upon which to project all manner of human issues; they accord animals their own point of view.

My paper asks whether and in what way a heterophenomenological experience of the inner world of an animal can succeed in art – and whether art is even a suitable means to achieve that goal.

Jessica Ullrich studied Art History, Fine Arts and German Literature in Frankfurt, Germany and Arts Administration in Berlin, Germany. She is assistant Professor at the Faculty of Fine Arts at the University of Arts in Berlin (Art History and Aesthetics department), and a founding member of the animal studies research group in Berlin. Various publications, exhibitions and conference papers on contemporary art and animals in art.

**Captivation and Ecstasy:
Animal Immersion and Human Enchantment**
Wendy Wheeler

Drawing on the work of Martin Heidegger and Giorgio Agamben, this paper will argue that, while the animal mind may be 'magically captivated' (Heidegger) in its *Umwelt*, the animal mind *in* the human-animal is the source of the creative and enchanted musement which C.S. Peirce describes as abductive knowing. In this paper, I shall discuss the mythic and literary trope of "the helpful animal" as an ancient and continuing figuration of human zoosemiotic abductive knowing. Noting Gillian Beer's observation that nineteenth-century scientists drew much inspiration from literary metaphor – and from metaphor's importance in the making of scientific discovery – I shall discuss A. S. Byatt's proto-biosemiotic and proto-zoosemiotic meditations in the 1992 novel *Angels and Insects*. I will argue that these are deployed as a model of abductive human-animal meaning making in both aesthetic *and* scientific experience.

Consisting of two lightly linked novellas, *Angels and Insects* itself has the structure of a metaphor: we are asked to learn something significant about science by reading about poetry, narrative, and mediumship. The 'light link' between the two novellas is an Atlantic sea-passage between two continents. We might think of these (as the great nineteenth-century scientists did not) as the two now separate 'continents' of Science and Art.

In the first novella, 'Morpho Eugenia', a mid-nineteenth-century Darwinian naturalist is urged to understand the metaphoric and narrative life underpinning his attempted scientific classifications. Through a discussion of the lives of social insects, and also a fairy-tale allegory about the power of mythic naming in the order of *Lepidoptera*, the naturalist is slowly brought to some sense of the abductive, poetically-linked and metaphoric substrate of all emergent scientific imagining.

In the second novella, 'The Conjugal Angel' (named for Swedenborg, scientist-turned-mystic imager of 'correspondences'), abductive knowing is explored through the Victorian interest in mediumship, Swedenborgian metaphysics, and Tennyson's epic elegy *In Memoriam*. Here, poetic knowledge is implicitly linked to mediumship. Reading retrospectively, scientific knowing is, thus, linked to the kinds of ideas expressed in Michael Polanyi's idea of scientific 'foreknowledge', or abductive knowing, as a form of mediumship between past and future. Noting that "the helpful animal" of folklore is precisely such a medium, I shall conclude with the suggestion that the mythic truth in "helpful animal" folklore lies in reminding us, *contra* Enlightenment, of the enchanted animal knowing which supports the rational animal.

Wendy Wheeler is Professor of English Literature and Cultural Inquiry at London Metropolitan University where, with Paul Cobley, she supports research in semiotic and biosemiotic systems from a humanities, arts, and cultural studies perspective. She is the author of *A New Modernity: Change in Science, Literature and Politics* (1999); *The Political Subject: Essays on the Self from Art, Politics and Science* (2001); and *The Whole Creature: Complexity, Biosemiotics and the Evolution of Culture* (2006), and has published widely in journals and book collections. Since 2006, and focussing on biosemiotics and culture, the latter include 'The Biosemiotic Turn: Abduction, or, the Nature of Creative Reason in Nature and Culture', in A. Goodbody and K. Rigby, eds. *Ecocritical Theory: New European Approaches*, Virginia University Press, (forthcoming 2011); 'The Fundamental Reality of Metaphor: Biosemiotics and Animal Mind' in a special issue on *Semiotics of Perception*, in the *Journal of Biosemiotics* vol. 3, no. 3, 2010; 'Creative Evolution: A

Theory of Cultural Sustainability', *Communications, Politics and Culture*, Vol. 42, No. 1 (2009); and 'Postscript on Biosemiotics: Reading Beyond Words – and Ecocriticism' in *New Formations*, 64, Spring 2008, special issue *Earthographies: Ecocriticism and Culture*. She is joint Editor (with Jeremy Gilbert) of *New Formations: a journal of culture/theory/politics* and is on the Editorial Board of *Green Letters: journal of the Association for the Study and Literature and the Environment*. She currently has six PhD students researching in biosemiotics and culture.

The Language of Sound: Exploring
the Interaction Between People and Birds
Andrew Whitehouse

This paper is based on research conducted through the 'Listening to Birds' project, an anthropological study of how and why people listen to birds and respond to their sounds. It explores what happens when people and birds interact, particularly through sound. How are the actions of birds in response to people interpreted and explained? What assumptions about birds and their relations to humans do these reveal?

Encounters explored include the interactions between skilled bird imitators and birds, birders who use 'pishing' to attract birds closer, and scientists and birders who use playback to elicit responses. The way that such interactions are explained in part reflects hypotheses about the relative intelligence of birds and their ability to understand what the encounter with a human is about. For example, it might be assumed that birds have no ability to appreciate the difference between a wink and a twitch in a human, to borrow from Clifford Geertz. But explanation is also grounded in ideas that people have about the sounds that birds make, for example whether these are analogous to language or music or if they are an expression of an emotional state, such as alarm. Assumptions are made about what can most readily be communicated between species.

Underpinning these explanations are assumptions about framing: that is, how participants communicate what they consider the interaction to be about. Most studies of framing in communication involve interactions between members of the same or very similar species, and within humans the same 'culture'. But what are the possibilities for framing in encounters between humans and birds? This paper speculates on the possibilities and offers a comparative analysis of interpretations of human-bird interactions, taking in a range of ethnographic and ethological material. It is broadly

concerned with the semiotics of human-animal relations and the ideas that humans have about how these proceed.

Andrew Whitehouse is an anthropologist with a lifelong interest in birds. He is currently a teaching fellow in anthropology at the University of Aberdeen in Scotland. His doctoral research was into relations between conservation organisations and farmers on the Scottish island of Islay. More recently he has conducted research into the ways in which people listen to birds and interact with them through sound.

**Cell Break: A Case Study for Interspecies Interrelations
in the Biological Sciences**
Jennifer Willet

With *Cell Break*, I am interested in intervening in the 'laboratory ecology', as I perceive it. The carefully balanced relationship between all organisms (and parts of organisms) inhabiting the lab – animal and human research subjects – cells, bacteria, enzymes, plants – the scientists themselves, and even unwanted contaminants. What interests me about this ecology is the perceived closed relationship it possesses with external ecologies. Ideally, within a lab, specimens and samples either originate in the laboratory vacuum, or enter from the external world (screened and sanitized), never to leave again. Additionally, elements of external ecologies (i.e. bacteria in the researcher's fingernails, hair, and mouth) are presumably prevented from 'infecting' the environment and organisms within the lab. I wish to produce a series of works that purposefully break with this convention – that break with the penitentiary model of holding biological specimens within the lab, and open our understanding of the human role as one of many organisms interacting and communicating with one another within this site.

With this presentation I will further investigate ecological metaphors for representing biological laboratories, and discuss a participatory performance art work called *Cell Break*. With this work I take a variety of laboratory specimens outside of their controlled environment. I take them for a walk. A hike in the outdoors! I work with participants/viewers to join me in breaking these life forms out of their captivity. Each specimen is secured in a modified backpack to preserve their ideal living conditions, while riding on participants' backs through the external ecologies. Once we have reached the final destination, I encourage participants to allow their life forms a single breath of fresh air – contaminating them forever. We remove

the lids from the flasks – allowing external elements to directly interact with the enclosed plants, yeast, and bacteria. The work concludes with the return of the specimens to their laboratory environment (at the University of Windsor) and the close study of their proliferation (and contamination) during the remainder of their life-times. This project was completed at *The Banff Centre for the Arts* (CAN) in August 2010, and will be presented at *Concordia University* in Montreal (CAN) in October 2010.

Jennifer Willet. With my work in the bioart field, I am interested in democratizing biotechnology through a critical participatory methodology. Participatory – on my part as an artist – but also in allowing the general public small instances of hands-on experience with life forms in the domain of the biological sciences.

An Affective Model of Perception-Action

Mara Woods

The presentation will feature a diagrammatic model of Antonio Damasio's theory of emotions as interpreted through the semeiotic of Charles Sanders Peirce and the *Funktionskreis* of Jakob von Uexküll. The diagrams will represent spatially the relations of Peirce's phenomenological categories, Uexküll's perceptual cues/signs and effector cues/signs, and Damasio's categories of emotions, feelings, and feelings of feelings. A short paragraph that outlines the relevance of the model to future zoosemiotic research will also be included.

Mara Woods is a Masters student in the Department of Semiotics at the University of Tartu. Her research interests include the influence of affect on the perceptual and behavioral actions of humans and other animals.

