

Need for impressions: Zoosemiotics and zoosemiotics, by Aleksei Turovski

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The problem of recognition – this is semiotics.
Aleksei Turovski

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Zoösemiotics

Zoosemiotics can mean two quite different things. According to a more common usage, it is the *study of animal semioses*, i.e. animal communication and animal umwelten, or meaning-making and knowing in animals. ‘Animals’ are understood here as members of the kingdom *Animalia*. Except the natural languages of humans which are left for linguistics to be studied, all other sign systems of *Animalia* are of interest for zoosemiotics. Another meaning in which the term is occasionally used is a *semiotic study of zoos*. This would include the study of human–animal communication in zoos, semiotics of zoo architecture and representation of zoos in the media, etc. In order to mark the difference in pronunciation, a distinction is sometimes made in the spelling – zoösemiotics and zoosemiotics, respectively.²

It is possible to be simultaneously both a zoösemiotician and a zoosemiotician. A famous example was Heini Hediger (1908–1992) – a Swiss zoo director who made important contributions both to the semiotic study of animals and the semiotic study of zoos (Favareau 210: 237ff). Another outstanding example is Aleksei Turovski (b.

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² See, for instance, John Deely’s letter from 14 September, 2014, to Biosemiotics list: “[Z]oösemiotics is the name for the study of zoösemiosis (in both cases with or without the dieresis intended only to ensure correct pronunciation and to distinguish the specific study from the sub-study of captive animals as ‘zoo-semiotics’).”

1946), an Estonian zoologist and semiotician who has been working at Tallinn Zoo for decades and has effectively become one of its symbols.³

Aleksei Turovski studied at the University of Tartu, first majoring in biology, then chemistry, and then biology again. He first encountered semiotics in Juri Lotman's circle of scholars during his student years, which resulted in an article published together with Mikhail Bilinkis (Bilinkis, Turovski 1968; Bilinkis, Turowski 1975).⁴

As a biology student, Turovski became interested in the behaviour of parasitic *Hymenoptera*. His supervisor Vambola Maavara worked as experimental entomologist with social insects, mainly ants, and conducted some correspondence with Edward O. Wilson. It may also be mentioned that the ethological research in Estonia in the 1960s and 1970s (both in entomology, in the group of Vambola Maavara and Aare Kuusik, and ornithology, in the group of Jüri Keskspaik) had a strong ecophysiological emphasis, i.e. the studies focused on the actual mechanisms rather than on evolution. As Turovski also spent some time in Moscow during his studies, he could work together with the ethologists Gennady M. Dlussky, Leonid V. Krushinski and Kurt E. Fabri.⁵

Later, Turovski divided his activities between the Estonian Marine Institute working as a fish parasitologist, and Tallinn Zoo where he has been active as a parasitologist and a guide. He has published works on the Estonian ichthyofauna and fish parasites. His work at Tallinn Zoo has made him a very popular speaker on animal topics in Estonian media; based on it, he has published many essays and also books, including some for children. He also has a remarkable talent (and training) in arts, and besides making scientific illustrations he has created drawings and wood carvings on zoomythological themes (see e.g. his illustrations in Maran *et al.* 2012; Mäeniit 2013; Turovski 2010).

In the 1990s and the 2000s Turovski gave a series of lecture courses on zoosemiotics, zoomythology and ethology at Tallinn Pedagogical University (now Tallinn University) and also at the Department of Semiotics of the University of Tartu.

³ Martinelli (2010: 278) offers an apt characterization: "Parasitologist, zoologist and zoosemiotician at Tallinn Zoo, Estonia, Aleksei Turovski is one of the leading figures in today's zoosemiotics, with a strong emphasis on empirical and field-work. A specialist in comfort behavior, Turovski has published several articles where the topic is given an openly semiotic interpretation [...]. He is also very committed in popularizing zoological topics, [...] for which he was granted the Guardian of Estonian Life Science [*Eesti Eluteaduse Hoidja*] award in 2007".

⁴ Mihail Bilinkis (1945–2007) was a student of Russian philology at the University of Tartu in 1962–1968, later working at the Chair of History of Russian Literature of the University of St.Petersburg. About the writing context of the article in question, see Mäeniit (2013: 130). The article is extensively quoted in Rabinovich (1979: 113ff.); see a remark about this case in Mäeniit (2013: 131).

⁵ Геннадий Михайлович Длусский (1937–2014), Леонид Викторович Крушинский (1911–1984), Курт Эрнестович Фабри (1923–1990).

He has won recognition as a charismatic lecturer and a leading popularizer of animal life and zoosemiotics.⁶

Turovski has also contributed to several meetings in biosemiotics. At the workshop “Uexküll and the living environment” (Tartu 1999) he gave a talk entitled “On the biosemiotics of the well-parasitized hydrobiontic association”. At the Second Gatherings in Biosemiotics held in Tartu in 2002 he spoke on the topic “The signs of bizarre characteristics in the semiometabolism of animal associations” and also demonstrated the ways in which to communicate with animals during a special tour to Tallinn Zoo “The zoo as a field of reestablishing semiotic boundaries”. For the Fourth Gatherings in Biosemiotics in Prague in 2004 he proposed the theme “The signs as arguments in dialogical network of animals associations”, and was also one of the panelists at the 2011 conference “Zoosemiotics and Animal Representations” that took place in Tartu.⁷

Need for impressions

Turovski’s writings are rich in descriptions of individual observations of interesting cases of animal behaviour, yet these are often related to more general principles of animal behaviour and its interpretation. His theoretical analyses take two major directions, one of these being the interpretation of animals in mythology. He is particularly interested in identifying zoomorphic classifiers,⁸ which can be seen as an aspect of cultural ecosemiotics.⁹ The other main focus of Turovski’s interests is general zoosemiotics, revealing the semiotic principles of animal behaviour. In particular, it is three articles by Turovski (2000, 2001, 2002) that include important ideas innovative for semiotics that could be highlighted when rereading Turovski’s biosemiotic writings.

What is especially valuable among the rich variety of his ideas is his description of the informational aspect of behaviour as based on the organism’s fundamental *need for*

⁶ He is also a member of the editorial board of the journal *Acta Semiotica Estica*.

⁷ Turovski’s name also repeatedly appears in the programmes of the Estonian Spring Schools in Theoretical Biology, linked with topics such as “Brood parasitism and regulation of behaviour” [“*Käguparasitism ja käitumise regulatsioon*”; 1st Spring School, 1975]; “On the comparison between Jakob von Uexküll’s concept of instinct and Konrad Lorenz’s ecological conception” [“*Von Uexkülli instinkti mõiste ja K. Lorenzi ökoloogilise kontseptsiooni võrdlusest*”; 3rd Spring School, 1977]; “Ecopathology” [“*Ökopatoloogia*”; 18th Spring School, 1992] that also has a published abstract (Turovski 1992). However, Turovski never appeared to attend the meetings due to overlaps with fieldwork schedules.

⁸ Cf. Toporov 1982: 332.

⁹ Zoomythological themes are frequently addressed in his numerous popular writings, e.g. Turovski 2010.

impressions – a universal aspect in animal behaviour. He states: “all forms of animal life are united semiotically by the *need for impression[s]*” (Turovski 2000: 384).

Turovski (2000: 383) explains that during the ontogenesis, “an animal passes through a succession of very different behavioural stages of orientation [...] as objects of its attention. One of the important attitudes in this process besides the motivational attitudes to resources, foes, sexual partners, social ranks, broods etc., is the fulfilment of the need to be impressed by changing signals – impulses of information from the environment, otherwise indifferent in the aspects of major biological needs/functions. The matrix structure of the semiosphere of the animal obviously transforms these signals into signs in accordance with the prevailing motivations; so the forms of the *umwelt* become semiotically involved in unique personal experience of the animal in dependence on its ontogenetic age-period”. This is a two-way principle: “Such a ‘need for impression’ is presumably coupled with the need to impress and thus to provoke feedback signals which also contribute to the process of semiosis” (Turovski 2000: 383).

The same principle allows us to understand the organism’s increased attention in unusual situations. A particular sphere of signs is related to disease and health. “In the semiosis-process the signs of health are multi-functional factors which serve as means to attract and/or intensify, fortify and enhance the specific attention of conspecifics, of specimens of ecologically favourable associated species (e.g., of mutualists), in comfort, parental, sexual, foraging and defensive behaviour” (Turovski 2002: 214–215). This allows him to formulate an important principle of medical semiotics: “so, the main feature of the signs of health could be described as *readiness to adequately serve the need for impression* [...] in animal elements of the *umwelt* as a holistic semiosystem” (Turovski 2002: 215).

A situation that requires an organism’s orientation or attention is a situation in which new information is created. Turovski relates this with his characterization of semiosis: “Regarding semiosis to be a process of conducting and directing the fundamental traits of orientation, the attention in the first place, we can present this as the generative canalization of the energy/information exchange” (Turovski 2001: 409–410). He adds: “semiosis as the process of the generative canalization of attention/orientation interactivities can be interpreted in an ecological sense as a field of *signum-* (as well as *energy-*, *information-*) metabolism” (Turovski 2001: 413).

This view makes it possible to see and describe an ecosystem as a network of sign-metabolism: “From this point of view the network of interactions in the biotic part of the ecosystem appears as the field of ‘*signum-metabolism*’: a volume of space organized by semiosis into a dynamic system of biosigns (signals, marks, indexes, symbols, features...), actual as well as virtual ones” (Turovski 2001: 410).

Turovski’s special interests concern the dynamics of parasite-host relationships, this being a field in which he has a long-term professional practice. He sees the interspecific relationships as dialogical: “The parasite-host relationships in such a field

of signum-metabolism, evaluated in the dual aspect of invasion/infestation as eventual-conditional phenomenon, appear as a set of dynamic dialogues” (Turovski 2001: 410).

Development of umwelten is the principal process that organizes the structure of an ecosystem with parasite-host dialogues: “Semiotically, the modification of the host’s behavior done by the parasite influences could be viewed as changes in the umwelt’s context resulting in its reorganization favorable for the parasites but at the same time stimulating the fitness-traits of the host to play a more active role in the dialogical interactions in the field of signum-metabolism, the umwelt” (Turovski 2001: 412).

Moreover, the mutualism develops via a dialogic shifting of the boundaries of self, when “viewing the parasite-host relationships as dialogical developments in the/of the umwelt. The most powerful instrument of those dialogical traits appears to be the skillful manipulation of the criteria of ‘own-strange-alien,’ most important in the intra- as well as interspecific relations of both: parasites as well hosts” (Turovski 2001: 413). This leads to understanding the semiotic mechanisms of evolution: “The development of the parasite’s association in the ecosystem can be approached as the appropriation of environment via the reorganization of semiotic structure of the ecosystem by the vectorizing of intra- as well as interspecific connections between actual and virtual hosts” (Turovski 2001: 413).

Aleksei Turovski’s work in Tallinn Zoo has much in common with the work of Heini Hediger¹⁰ in Zürich Zoo some decades earlier. Similarly with Hediger, he raises the question of what is animal freedom (Turovski 2000; 2011); both of them have the aim to understand animal understanding,¹¹ to translate animals properly.¹² Indeed, learning to translate between species is the central task of zoosemiotics, and a zoo functions as a laboratory for a zoosemiotician in which to develop these skills.¹³

A chronological bibliography of (explicitly) semiotic works by Aleksei Turovski¹⁴

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¹⁰ On Hediger, see Sebeok 2001.

¹¹ Cf. Hediger 1980.

¹² See also Velmezova, Kull 2016.

¹³ This note is dedicated to Aleksei Turovski’s 70th birthday.

¹⁴ For a bibliography of books by Aleksei Turovski, see Mäeniit 2013: 174–176.

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