

Introduction

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Zoosemiotics in a nutshell

“Zoosemiotics” was introduced in 1963 by Thomas Albert Sebeok, initially as a compromise between ethological and semiotic research. In the beginning, Sebeok was convinced that “zoosemiotics” had to be used mostly as an umbrella term, uniting different scholarly approaches to animal communication). In the light of its most recent developments, a synthetic definition of zoosemiotics can be today that of *the study of semiosis within and across animal species*.

Let us see the implications of this definition.

Firstly, the focus of zoosemiotics is not simply communication (which is what people normally expect to be the actual goal of semiotics), but rather the broader *semiosis*, that is, following Charles Morris (1971: 366), the process in which something is a sign to some organism. Communication, the process in which a sign is coded and transmitted from a sender to a receiver, is thus to be considered a special, and therefore smaller, case of semiosis.

By consequence, zoosemiotics is interested in at least three important semiotic phenomena¹.

- a) *Signification*, occurring when the receiver is the only subject taking part in the semiosis, and a true sender is missing. In other words, zoosemiotics studies here the way animals make sense out of each other, or out of their environment;
- b) *Representation*, occurring when the sender is the only semiotic subject. In this case, zoosemiotics studies here the way animals construct sense and, often but not always, *offer* it to somebody else; and
- c) *Communication*, occurring when sender and receiver take both part in the semiotic phenomenon, and therefore the above-mentioned “sense” (or text) is exchanged, understood or misunderstood.

Secondly. We said that zoosemiotics studies semiosis *within* and *across* animal species. This means that there is a range of semiotic phenomena that we may call “intraspecific”, and another category that should be called “interspecific”. By intraspecific, we mean the kind of semiosis occurring within one single animal species (or community, as the concept of species is still a bit problematic, to a certain extent), that is, within a group of animals that supposedly share a fairly similar perception of the world and similar ways to codify it. By interspecific, on the other hand, we mean the kind of semiosis occurring between different species (or communities), that is, between groups that do not share the above-mentioned perception and codification of the world, if not to a very basic extent (this latter normally being the very ground for establishing a common code — temporary or not). It is a rather important distinction, because it implies a (sometimes radical) change

¹ See, for instance, Maran 2010: 357. I am using my own definitions here. Any of the three terms of the list can be, and are, meant in different ways according to scholars and theoretical frameworks.

of methodologies, and an address to a (sometimes radically) different order of problems.

Thirdly, the use of the term “animal species” in our definition is here to be intended as covering the entire Animal Kingdom, that is, the human species as well. This means not only that a part of human semiotic behaviour (more or less, what transcends the linguistic domain, although we shall see that the notion of language is not exactly clear) easily falls under the zoosemiotic domain, as ethology had already shown, but also that zoosemiotics investigates a field of knowledge that includes both natural and cultural elements, and that — ultimately — the critical notion of “culture” is to be considered a part of the critical notion of “nature”.

This is probably one of the most important, and courageous, statements of zoosemiotics, as — among other things — it represents the attempt (which by now can be defined fully successful) of extending the attention of semiotic research to the realm of the non-human, starting exactly from the assumption that a great deal of characteristics that we thought were typical of human semiosis, are in fact to be widely reconsidered.

Sebeok’s very introduction of zoosemiotics into the scientific world² was not the first attempt to study non-human signalling behaviour: leaving aside a series of philosophical reflections, as those provided by Porphyry, Locke or Hume, it was the impact of Darwin on animal studies, and particularly two of his late works, *The Descent of Man* (1871), and *The Expression of Emotions in Man and Animals* (1872), that radically changed the scientific perception and conceptualization of animal semiosis.

² “The term zoosemiotics — constructed in an exchange between Rulon Wells and me — is proposed for the discipline, within which the science of signs intersects with ethology, devoted to the scientific study of signalling behaviour in and across animal species” (Sebeok 1963: 465).

Still, Sebeok opened a door that scholars were rather hesitant to open. When one compares pre- or non-semiotic definitions of animal communication, such as those of Cullen (“Animal communication evokes a change of behaviour in another individual”; 1972: 101), or Dawkins and Krebs (“Communication occurs when an animal, the actor, does something which appears to be the result of selection to influence the sense organs of another animal, the reactor, so that the actor’s behaviour changes to the advantage of the actor”; 1978: 282), with those provided by Sebeok (“the discipline within which the science of signs intersects with ethology, devoted to the scientific study of signalling behaviour in and across animal species. The basic assumption of zoosemiotics is that, in the last analysis, all animals are social beings, each species with a characteristic set of communication problems to solve”, 1963: 465) and other semioticians, it is clear how, thanks to the semiotic approach, animal information exchange could finally get rid of the rigid stimulus-reaction scheme and achieve a more significant status.

From that point on, zoosemiotics has enjoyed an increasing popularity among scholars, although, perhaps, not enough to confer it the status of an autonomous field within semiotics. The wide range of topics covered by zoosemiotics, plus its intrinsically interdisciplinary nature, has made this field a rather eclectic one, with incursions in several fields of semiotics, including some apparently-strictly anthropological ones.

Following, but also upgrading, the classification suggested in Martinelli (2006: 32–34), at least two main branches should be distinguished within zoosemiotics, both to be divided, in turn, into two more sub-branches. On the one hand, there is zoosemiotics in the traditional sense, that is, a discipline dealing with animal semiosis, through the most obvious theoretical tools of semiotics. This branch is named *Ethological Zoosemiotics (EZ)*. This field can be divided in a chronological sense, into an *early current (eEZ)* and a *modern one (mEZ)*.

The former refers to the first stage of zoosemiotics, in which there was no explicit attempt to develop an autonomous paradigm, but rather to use “zoosemiotics” as an umbrella term for gathering different approaches on animal communication. Also, the emphasis on “communication”, rather than the broader semiosis, plays a role in defining this early stage. In this phase, zoosemiotics is a discipline largely relying on the Lorenzian ethological school and on the behaviouristic tradition.

In its modern stage, zoosemiotics achieves a few results: first, it operates clearly a transition from having uniquely communication as its research target, to including the entire spectrum of semiosis. Second, it starts developing a paradigm on its own, trying to propose itself as a viable field of inquiry for discussing animal semiosis (and in that sense, it sees the appearance of scholars who explicitly adopt this paradigm, therefore not leaving Sebeok alone with colleagues from other fields). Third, in the majority of the cases, it embraces a cognitive approach, reflecting exactly the type of transition that ethology experienced after the appearance of Griffin 1976. Such transformation, which goes in the direction of a truly semiotic nature (at least according to the traditional definition of “semiotic threshold”, which always implies a mental process underlying sign production), emancipates zoosemiotics, as it emancipates ethology, from old mechanistic or semi-mechanistic interpretations of animal behaviour (in the Cartesian sense), somehow bringing to final completion some of Darwin’s early auspices. It is always difficult to locate exact chronological records of any historical transition, especially when such a transition is the result of organizational demands (as is my proposal of dividing *EZ* into two historical trends). Therefore, we may gladly welcome the ethologists’ effort to spot their own transition in Griffin’s work, and make it our own as well, thus suggesting that the passage from early to modern *EZ* occurred sometime in the late 1970s.

The second branch of zoosemiotics, called *anthropological*, in short anthrozoosemiotics³ (AZ), refers to those studies dealing with the semiotic interaction between human beings and other animals, including those of cultural and/or sociological type. This branch was highly anticipated by Sebeok and by the zoologist Heini Hediger. The nature of this interaction has two completely different sides⁴.

The first type is called *communicational* (cAZ). In this context, the human-other animal interaction is of a communicative type, that is, interactive, reciprocal and — to a certain degree — intentional. Studies of applied zoosemiotics, such as human-pets or human-cattle interaction, fall under this group, as well as all forms of interspecific communication. In other words, in cAZ, both humans and other animals are semiotic agents, and the study focuses on both parties.

The second sub-category refers to such cases where the non-human animal is a pure source of meaning, an object, rather than a subject, of semiosis. The model is of ecosemiotic type: whereas ecosemiotics is in fact the study of human representation of nature, this typology of zoosemiotics deals with the human representation of other animals. This is evidently the case of myths, tales, allegories, but also systematic classifications like taxonomies.

Now, to be fair, this process corresponds to two different phenomena, signification and representation. On the one hand, the human

³ Two colleagues, one very young, one very famous, noticed that the correct shortened formulation should be ‘anthroPOzoosemiotics’. The result, however, is hardly an economic improvement from ‘anthropological zoosemiotics’. It may still be one word instead of two, but it is so long that one may easily get lost somewhere in the middle, maybe exactly around the ‘po’region. This is why, I believe, the social scientists who developed the field of ‘anthrozoology’, decided to skip that syllable too. We semioticians cannot just afford being practical, can we? Not to mention that the same famous scholar is very comfortable in using words like “proprioception” (instead of etymologically correct but again endless “proprioREception”) in his writings. Maybe he is more flexible with Latin?

⁴ They should be three, as a matter of fact, but we shall see that one is almost always the natural consequence of another.

being *perceives* the non-human animal in a certain manner, and therefore gathers different forms of meaning from it. On the other, this step may be (and is, in most of the cases) followed by an action of representation, in which this perception is shaped, “packaged” and handed over to a receiver (virtual or actual, human or not). These two semiotic moments, signification and representation are obviously two different steps, and one (signification) may also occur without the continuation of the other. However, in the economy of this model (which, as I said, includes instances from fictional, scientific to everyday discourses), it is very difficult to see cases where signification and representation operate independently. The mythic representation of, say, the “cunning fox” is always a consequence of a general perception of that animal as possessing that quality. The (representational) action of gathering a group of animals under one single species is always the consequence of the (significational) perception of that group as homogeneous under different aspects.

For this reason, the name for this type of anthrozoosemiotics will be *significational/representational (srAZ)*.

Table 1. Classification of zoosemiotics.

ZOOSEMIOTICS			
ETHOLOGICAL Z		ANTHROPOLOGICAL Z	
Early EZ	Modern EZ	Communicational AZ	Significational/Representational AZ

One obvious observation, regarding this classification (see Table 1), is that EZ has a close relationship with natural sciences (starting, obviously, from ethology), while AZ is a closer relative of human sciences (especially the so-called anthrozoology) and the social sciences, which nowadays show an increasing interest towards animal-related issues. It is thus safer than before to say that zoosemiotics 1) is interdisciplinary,

and 2) occupies an intermediary position between natural and human sciences.

Another way to treat this classification is Greimasian⁵. In fact, beside a distinction between *EZ* and *AZ*, one should also consider the transversal condition of zoosemiotic research in terms of empirical or theoretical approaches. Once again, as the scientific position of zoosemiotics is located somewhere in between biology and humanities, it is not difficult to imagine that the methodological approach or research interest of zoosemioticians may vary from the typical biologist role of the field scholar to an equally typical philosopher role of the speculative thinker.

Naturally, as it is always the case with these categorizations, differences are not clear-cut and the separation of these roles hardly leads to a simple dichotomy. Besides a purely empirical approach (that is, a direct observation or data collection by the scholar who will eventually analyze those data), we should at least take into account a semi-empirical one, that is, the situation in which the zoosemiotician, although not personally collecting his/her data, relies anyway on (somebody else's) professional findings and offers a purely semiotic interpretation of them, with the support of analytical tools (software, scales, etc.) that normally are part of the field research package. At the same time, also the theoretical zoosemiotician's position is not so clearcut. The development of a theoretical model based, again, on empirical evidence is clearly a different cup of tea from a mere speculation departing from an abstract intuition. In zoosemiotics, be that a strength or a weakness, there seems to be room for this entire range of possibilities.

Summing up, thus, both *EZ* and *AZ* may be investigated by an empirical or theoretical approach. A schematic representation of these

⁵ This allows us, among other things, to dismiss the urban legend according to which it should be impossible to perform any biosemiotic action within non-Peircean structuralist schemes.

four combinations, exactly because they are not just four but virtually endless, is better represented by a Cartesian plan than by the traditional (for semiotics) Greimasian square (Fig. 1). This way, for example, the position of purely empirical research will occupy a place much closer to the edge of the empirical-theoretical axis, while the semi-empirical one (depending on its degree of empiricism) will appear more towards the middle of the same axis. In practice:

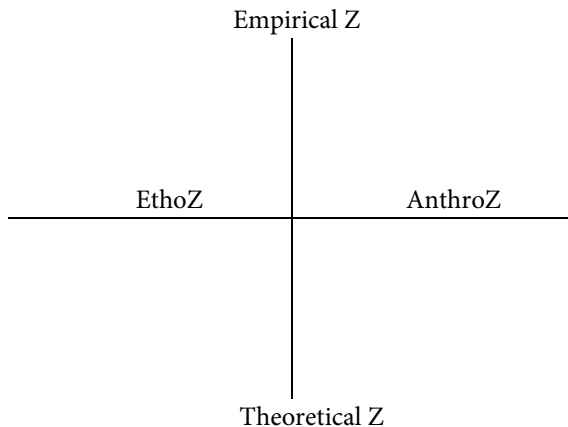


Figure 1. The Cartesian plan of zoosemiotics.

Presentation of this special issue

The appearance of this special issue of *Sign Systems Studies* on zoosemiotics occurs in a particularly propitious period for the discipline. At the time I am writing, two very ambitious publications are shortly forthcoming: a collection of historical zoosemiotic articles from Mouton de Guyter and the first companion to zoosemiotics from Springer. The importance of the aforementioned publishers, let alone the publications themselves, testifies of a renewed interest in the field

launched by Thomas Sebeok in 1963. The new generation of semioticians, also, is increasingly attracted by the study of animal semiosis, and the fact that contributors to this volume like Maran, Tüür and Tønnessen were supported by Estonian Science Foundation within a project called *Dynamical zoosemiotics and animal representations* is a great sign that zoosemiotics is enjoying a breakthrough at institutional level.

This special issue of *Sign Systems Studies* is meant to accompany the two aforementioned forthcoming publications as a part of an ideal trilogy. If the Mouton project is a collection of classics in zoosemiotics (including the prehistory of the field, when similar discussions, under different labels, were going on in philosophy and natural sciences), and if the Springer companion is meant as a critical “status of the art” of the discipline⁶, then this SSS issue is a loud statement from the new generation of zoosemioticians⁷, from those on whom the future of the field will depend (or, in fact, depends already), and from some eminent figures from other fields (like Kaplan and Telkänranta). Call it, if you like, a Past-Present-Future trilogy.

New or anyway fresh ideas abound in the essays here collected. The authors succeeded in introducing new perspectives and in legitimating recently-established ones (anthropological zoosemiotics and zoosemiology, to mention just two whose promotion I am personally committed to), attempting previously unexplored paths, or rediscovering some of those that zoosemiotics had left somewhere on the way. Among the latter, the fact that scholars from other animal-related disciplines agreed to write in a fully semiotic context is to me a very

⁶ “Critical” is very much a key-word in this enterprise, as that Companion will contain specific (personal) remarks on the zoosemiotic paradigm that are not necessarily acceptable (and indeed were not, to the chief editors of this journal) in more *super-partes* contexts like the present issue of *Sign Systems Studies*.

⁷ The statement is not necessarily anagraphic, as different ages are anyway represented in this issue.

encouraging sign of the re-opening of that interdisciplinary dialogue that Sebeok had envisioned for zoosemiotics.

Of course, the articles collected in this issue are far from representing a *unified* view of the study of animal semiosis, and personally I am thankful it is so. There are no schools of zoosemiotics, if not in very general sense. As editors of the issue, me and my friend and colleague Otto Lehto⁸ decided to limit our interventions to the strictly unavoidable minimum. We do not want to offer the reader the perception of a discipline possessing a coherent paradigm. We rather prefer displaying a field of inquiry “in search of a coherent paradigm”, or even “happy not to possess one”. In that sense, if the reader will find a convincing argumentation in favour of a given thesis in a given article, s/he shall not be surprised that the next article might bear a just-as-convincing position in defence of the opposite thesis.

My personal impression is that the essays collected in this issue show a paradigmatic inclination in the following directions.

- 1) An increasing adoption of an ethically-minded approach (testified by a good half of the contributions in this issue). When one thinks of the establishment and the rapid spreading of such theoretical projects as semioethics (proposed by the scholars of Bari University) or existential semiotics (proposed by Eero Tarasti), it becomes clear that semiotics has probably emancipated itself from the role of a purely descriptive field of inquiry, and it aims at an increasingly relevant prescriptive paradigm. Zoosemiotics seems to be willing to follow a similar route, often putting a special emphasis on the questions related to animal rights and welfare. A step that I personally welcome with great enthusiasm and commitment;
- 2) More generally, an attention towards the human-other animal relationship, as analyzed through a semiotic interface (what we call

⁸ I take this opportunity to sincerely thank Otto for a fruitful and smooth cooperation on this enterprise.

here anthrozoosemiotics). Sayers' and Telkänranta's contributions to the volume are for instance representative of this attention;

- 3) The increasing adoption of cognitive approaches (Lehto's article being the clearest example, in this collection). Most of the current generation of semioticians interested in animal semiosis seems to agree on the existence of a very active mental life in all animal species (each with their own sources and species-specific potentials/limitations), that underlies any semiotic action, from the most complex to the simplest one (one may easily compare, to mention a couple of cases, the works by Timo Maran and Aleksei Turovski with a focus on mimicry and comfort behaviour, to realise how exactly this approach has been developing). If anything, what changes among zoosemioticians is the methodological motivation: for some, this paradigm seems to be the natural continuation of what is happening already in other animal-related studies (ethology being the most relevant case); for others, the reason is intrinsically semiotic, and relates to the nowadays clear prevalence of Peircean semiotics over the structuralist (semiological, rather than semiotic) tradition;
- 4) With all the due difficulties and contradictions, zoosemioticians seem to prefer nowadays dealing with the most critical topics available in the field, namely those that tend to question the human uniqueness in performing certain behavioural patterns or possessing certain features. Culture, aesthetics, symbolic signalling, and — most of all — language, are all traits whose human species-specificity has been sooner or later questioned from a zoosemiotic perspective. In some cases, especially aesthetics⁹, there seem to be no more doubts among semioticians, that categories of this type can be if not easily then justly applied to the semiotic behaviour of other animal species. In some others, primarily

⁹ Note the significant representation of zoomusicological articles in this collection.

language, the question remains open, and the discussion sharp. It is to be predicted that in the future, zoosemioticians will focus more and more often on these issues, also in the light of the new findings coming from empirical sciences;

- 5) Little by little, and with no hurries of any sort, zoosemioticians are trying to explore paths different from the ones proposed by Sebeok, whose shadow is sometimes so big that one could be tempted to identify zoosemiotics exclusively with its founder. Although nobody attempts to deny the great importance that the Hungarian-born scholar holds in this field, a few cases exist where scholars are either following other approaches, or even daring to question some of his assumptions as not awfully accurate. To interpret it psychoanalytically, such occurrence might be a timid yet clear sign of emancipation: it is the young kid who turns to an age when s/he starts seeing his/her father as not that undisputable hero that s/he used to think he was. It is a significant datum, in this collection, that about half of the articles are *not* using Sebeok as a source. We will see in the future whether the adult age will bring even more departures, or alternatively a (total or partial) restoration of the traditional paradigm.

In any case, a firm and neat emancipation of zoosemiotics from other fields of semiotics is yet to be achieved. Zoosemioticians are still those strange animals that venture either into biosemiotics congresses (where they might *also* feel at home, but it turns out to be a huge house that comprises scholars in plants, micro-organisms, genetics, fungi, not to mention increasingly fashionable approaches on the meaning of life itself), or into human science gatherings where they, brave and lonely, try to remind everybody that issues like architecture, music, culture, etc. are of zoosemiotic concern too, and that an analysis on the paintings of the elephant Siri is not semiotically less worthwhile than a paper about Van Gogh. Zoosemiotic congresses and symposia are being organized here and there, now and again, but

we are still far from referring to these events with words like “tradition” or “regularity”. Other than to a lack of people, which is still *the* issue, the problem also seems to be related to a lack of organization. So far, zoosemioticians seem to prefer working on their own, rather than enhancing and encouraging interaction. When the possibility of interaction is envisioned, it is not rare that personal views and egos prevail on the necessity of developing a unified paradigm (let alone a “school”).

In particular, the apparent ease with which zoosemioticians accept to be identified as just a special case of biosemioticians is rather tricky. On the one hand, it is true that being a part of a larger community increases the chances of exposure, and — in the specific case — contributes to empower the biosemiotic project, therefore, among other things, improving a condition from which zoosemiotics itself fully benefits from. On the other hand, however, in doing so, zoosemioticians encourage a strongly anthropocentric equilibrium within semiotics that they (together with all other biosemioticians) should be the first to reject and fight against, that is, the implication that all of the nature-related fields should be concentrated in one (no matter how big) single pot, while all cultural areas of semiotics have a right to enjoy a space of their own. When one, for instance, thinks that a single human body consists of about 25 trillions cells, a number that is 2,000 times bigger than the entire human population on this planet (plus, all these cells have direct or indirect connections with each other through more than one modality), it becomes clear that an area like cytosemiotics is at least as entitled as — say — literary semiotics to claim exclusive property of some land.

One may safely say that the big challenge for zoosemiotics, in its next future, is the search for an affirmation of its own identity. It is certainly a discipline with a robust theoretical (methodological in particular) apparatus, but with too few followers who would be convinced that following this path is any more worthwhile (or sometimes any different) than the ones proposed by disciplines like ethology or

zoology. If biosemiotics, social semiotics, musical semiotics, and several other fields were able to convince a fair number of biologists, sociologists and musicologists that the semiotic approach does actually add something to their own study, ethologists, zoologists, socio-biologists and other categories have so far found nothing astoundingly different or charming in zoosemiotics, if not in a few cases (I always like to recall Marc Bekoff's contribution to the journal *Semiotica* — 1975).

The question is, did these scholars ever have a chance to find it out? In other words, how often were zoosemioticians able to expose zoosemiotics to colleagues from other fields? The answer, it must be feared, is that these occasions were very few, and, among those few, most of them did not really help, as they either ended up in strong polemics (the most famous instance being Sebeok's harsh rejection towards interspecific communication scholars, despite repeated invitations from some of them, like Sue Savage-Rumbaugh, to actually visit their centre and see them working), or in that — unfortunately not rare — presumptuous attitude of semioticians to consider semiotics the ultimate carrier of scientific truth, with the implication that the scholars involved in similar topics, but according to different frameworks, are merely wasting their time.

It *is*, undeniably, a problem. A problem that must be solved first *inside* semiotics (particularly by showing more tolerance for alternative paradigms), and then *in relation with* other fields. This is why, as guest-editors of this issue, Lehto and myself are very happy to host a varied range of contributions, including some that are not semiotic (strictly speaking) and some that are significantly different from the paths we personally follow. Dialogue and open-mindedness being, possibly, the key-words.

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