Enhancing survival by not enhancing survival: Sebeok's semiotics and the ultimate paradox of modelling

Paul Cobley, Middlesex University

ABSTRACT

Tom Sebeok lives in recent memory partly because of his phenomenal networking, administration, editing and promotion of individuals in semiotics as well as the disciplinary field in general. Yet this must not be allowed to obscure a body of published writings that is as original as it is eloquent. The current paper will discuss one of Sebeok's most penetrating insights arising from his consideration of a fundamental paradox in modern intellectual life, one that traverses the bridge between the 'hard' and 'human' sciences. This paper will argue that Sebeok's 1979 review of investigations into animals' aesthetic behaviour, originally cast as an early chapter of a much larger book, contains the key observation which drives contemporary, 21st century semiotics. Sebeok's abduction of the riddle posits that "aesthetic sensibility plays the part of a delicate sieve" among animals. In so doing, this paper will argue, it not only clarifies the modelling process as a whole, across verbal and averbal modes, but also provides an agenda for re-thinking tertiary modelling, the humanities and global arts policy.

Keywords: modelling, animal communication, humanities, averbality, Umwelt.

Ladies and gentleman, I am honoured and delighted by the conferral of this award on me. Honoured, especially, because I partake of an outward-facing tradition enshrined in this Society and this award, in which European contributors to semiotics, not just American ones, are regularly recognized. Delighted, especially, because the award is in the name of Thomas A. Sebeok, a mentor to so many, including myself, and an incomparable figure in the history of the entire academy whose work is also, aptly, the focus of the paper which follows. Sebeok bestrode European and American semiotics, ultimately creating the conditions for global semiotics (2001). The global cross-fertilization he saw in semiotics was reflected in his 1991 book on Semiotics in the United States which I then echoed in 1997 in my comic book, Semiotics for Beginners, the latter of which contains an illustration of American semiotics as a "chimera" (119) wrought from the influence of émigrés such as Jakobson, Maritain, Carnap and Cassirer. The other side of the story, of course, is that Sebeok was responsible for nurturing a US semiotics 'proper' – partly through his promotion of Peirce to the foremost position in semiotics that he occupies today; partly through his tireless encouragement of American semioticians that it would be invidious to list since quite a few of them are assembled here this evening.

Yet, this last point also poses a problem for our assessment of Sebeok because, while it is a matter of the most heartfelt of our memories of a scholar who profoundly touched our world, it is a point that is also likely to diminish as scholars who knew him retire or die. It can also obscure the fact that today's key drivers in semiotics — the pre-eminence of Peirce has been mentioned, but biosemiotics might be added — derive from Sebeok's writings and guidance in the field. Moreover, Sebeok's

eclecticism as a polymath has not helped the situation of attributing just one achievement or innovation to him as an intellectual mnemonic. Acknowledging this with only a faint trace of bewilderment, Sebeok wrote in 1986 (ix):

My writing career has been, at least in this one respect, idiosyncratic: it had to mark and chart, step by step, its own peculiar champaign. My earliest papers, beginning in 1942, were technical articles in this or that domain of Uralic linguistics, ethnography and folklore, with a sprinkling of contributions to North and South American linguistics. In 1954, my name became fecklessly associated with psycholinguistics, then successively, with explorations in mythology, religious studies, and stylistic problems. It now takes special effort for me to even revive the circumstances under which I came to publish, in 1955, a hefty tome on the supernatural, another, in 1958, on games, and yet another, in 1961, utilizing a computer for extensive sorting of literary information.

By 1962, I had edged my way into animal communication studies. Two years after that, I first whiffled through what Gavin Ewart evocatively called "the tulgey wood of semiotics". In 1966, I published three books which temporarily bluffed some of my friends into conjecturing that I was about to metamorphose into a historiographer of linguistics.

In the period after 1966, Sebeok inaugurated international semiotics in all its many forms, through the fashionable moment of the 1970s, but even then pre-figuring the developments which would come to fascinate semioticians in the twenty-first century. If one is to take this tack, then the nodal point of Sebeok's work – for those who find it easier to sum up intellectual movements in this way – would be his formulation of 'modelling' after Lotman (see Sebeok 1988, in particular), culminating in his penultimate, and unjustly neglected, book, *The Forms of Meaning* (2000) written with Marcel Danesi. Here, Sebeok and Danesi presented a blueprint for a new vocabulary for semiotics, infusing the recent history of sign study with a modelling systems perspective.

However, whilst I would certainly concur that modelling is central to contemporary semiotics (and have done so in print – for example, Cobley 2010), I intend to argue tonight that the central argument of Sebeok's work is actually more strategic than has been considered hitherto. In what follows, I will refer closely, with numerous quotes, to Sebeok's 1979 essay, 'Prefigurements of art', which has a cult following among some semioticians like myself who feel that it is under-cited. Published in Semiotica as part of a special issue on semiotics of culture edited by Irene Portis-Winner and Jean Umiker-Sebeok, the issue itself derived from the annual meeting of the American Anthropological Association in 1977 and the essay is seventy pages long (including illustrations). It mainly consists of a literature review of extant work on "aesthetic behavior" among non-human animals. It does not take much imagination to see how the essay might sit in the larger book on communication in animals and humans that Sebeok hinted in a number of places that he was writing (for example, 'Japanese monkey performances' 1986: 115). If this projected volume could be reconstructed from Sebeok's archived unpublished papers, it is possible that it would assume a status akin to the Grundrisse or Freud's 'Project for a scientific psychology'. More so than them, the thesis of 'Prefigurements' is adumbrated and

telegraphic, as well as subtle; for that reason, and because of what I see as its great importance in semiotics and beyond, I seek to amplify it here.

The general purpose of 'Prefigurements of art' is to ask

whether the optimal design of certain animal communication systems can allow, given certain contextual conditions, for a superimposed aesthetic function. In other words, how reasonable is it to search for prefigurements of aesthetically charged averbal sign configurations in man's animal ancestry? (5)

For Sebeok, the idea that the verbal codes of humans simply replaced the averbal systems of animals is untenable and he is sceptical of the idea that the phylogenesis of language can be sought in averbal communication systems (8). Yet, this does not rule out the tracing of prefigurements of human averbal aesthetic behaviour in the activities of some animals. This is because human averbal codes have their provenance in the minor hemisphere, "a very superior animal brain", whereas the verbal arts originate in the dominant hemisphere (7).

One of the most well-known examples of aesthetic behaviour in animals is the activities of the satinbird (*Ptylonorhynchus violaceus*) who appear to paint the inside of their bower for purely decorative reasons. It seems that the jury is still out on this issue, with researchers still pursuing the possibility that the painting serves the survival purpose of attracting a mate (Katsuno et al 2013). Yet, even strict evolutionists in the past – Sebeok cites Thomas Huxley and Dobzhansky – have been willing to embrace the idea that, in such activity, there is "definitely the beginning of aesthetics" (6). As Sebeok notes,

All researches in this field are stamped by a tension between a deeply felt conviction on the part of many distinguished and sensitive biologists that artistic activity indeed exists in the animal world and the inability to face its presumed lack of importance, even uselessness (30).

By "uselessness", here, Sebeok is referring principally to the lack of a strict survival motive underlying the activity, some means by which the animal's semiosis is not necessarily geared to the preservation of itself and the passing on of its genes. However, we will re-visit this idea of "uselessness" and extend it in the process of providing a gloss Sebeok's findings.

For the practical purpose of conveying the knowledge garnered from his literature review, Sebeok identifies four general areas of aesthetic semiosis that have been observed among animals. The first involves kinaesthetic signs, semiosis in movement, particularly as it is envisaged as prefiguring human dance. The second is the realm of musical signs, auditory semiosis that goes beyond communicative calls, even encompassing rudimentary melody, harmony and sequenced repetition. The third comprises pictorial signs, framed visual embellishment which takes place seemingly for its own sake. The final area of semiosis involves architectural signs, semiosis invested in building, beyond the practical requirements of shelter, warmth and protection.

In considering kinaesthetic signs, Sebeok draws attention to now famous

examples such as those of the crane, the chimpanzee and birds in the species of the family *Pipridae* (including *el toledo*), the latter of which both sing *and* dance. Dance in animals, he concludes, is homologous with human dance, "much as laughter and smiling fit into the phyletic scale" (17). That is to say, dance is passed on through the genome rather than from local and traditional practices. Sebeok is at pains to stress that this does not entail that dance is innate: "information may be communicated to a succeeding generation in several different ways, and therefore, since form depends on the function, convergence can hardly be excluded" (18). With this last comment, along with a few others in the article, Sebeok presents an explicitly biosemiotic perspective in stark contrast to a reductive neo-Darwinian one.

The musical signs that seem to amount to aesthetic behaviour in non-human animals are various. As Sebeok notes, an early proposal regarding ornithomusicology stems from a contention of Montaigne that humans first heard birdsong and then went on to imitate it (18). Yet, this cannot stand as a pronouncement on the origins of music because of the body of work on musical signs among animals such cicadas, humpback whales and singing gibbons that Sebeok urges us to consider. Despite the complexity of animal musical signs, Sebeok is circumspect in noting that it is premature to take for granted the aesthetic function in such creatures. Extant knowledge about animals' pictorial signs, on the other hand, enable Sebeok to draw more general conclusions. In addition to birds' decoration of nests, he also discusses the finger paintings, reported by Desmond Morris, of the young chimpanzees, Congo, Alpha and Betsy (32-4). Not only did the chimps seem to take pleasure in creating their paintings, they also spent time observing their paintings when completed. A later Huxley, Julian, referred to the chimp paintings as evidence of "aesthetic potentialities" among primates.

It is possibly the reports of architectural signs that provide particularly spectacular evidence of "aesthetic potentialities" for Sebeok. He writes (43),

In looking at the endlessly manifold abodes constructed by animals - that serve perhaps to trap prey, to protect or comfort the architect or its kind, especially the young, or to attract the attention of a potential mate - we must look for the artistic value that may be involved, although subordinated to the principal interest of the "survival machine", as Dawkins (1978: 21, 25) calls the temporary receptacles housing the colony of genes inhabiting every plant and animal. If there is such a subsidiary purpose, falling passively under the sway of 'mere' biological advantage, or supplementing it, an effort must be made to ferret out this aesthetic component. Such a quest is far from trivial, for, in the end, it is tantamount to asking: what is art?

The architectural activities of animals, Sebeok argues, are to be understood as manifestations of tool use. Animals have certainly been observed to use tools for specific purposes in a range of different ways. Yet, Sebeok draws attention to those studies which reveal tool use with no apparent specific purpose, citing Frisch to the effect that we cannot *know* what goes through the animal's mind during such tool use but, nevertheless, again following Frisch, there appears to be evidence of "aesthetic feelings" among such creatures (48). A case in point, notes Sebeok, is the beaver, whose skills seem to be innate but also comprise remarkable adaptation to environmental circumstances.

At this point, it is worth digressing for a moment to acknowledge one component of Sebeok's vocabulary in addressing these issues. In discussing architectural signs, Sebeok, above, adopts Dawkins' unequivocal term, 'Survivalmachines'. There is a small hint of both irony and bathos as Sebeok introduces the phrase, as if he is deliberately lapsing into reductive mode for purposes of mere exposition, in contrast to the biosemiotic perspective that, as noted earlier, guides the general argument in this essay. At the same time, though, it should be acknowledged that Sebeok's biosemiotics freely incorporates a Darwinian dimension and contains frequent reference to the work of Darwin; this character of Sebeok's work, alive to the environmental demands of semiosis but grounded in biological determination at key points, is also evident, I have argued, in his shifting conception of 'code' (Cobley 2014). Although Dawkins is frequently seen as the arch-determinist in neo-Darwinism, Sebeok cites the 'survival-machine' idea repeatedly during the years following Dawkins' publication (1976) of *The Selfish Gene*. Rather than throwing out Darwin with the neo-Darwinist bathwater, Sebeok incorporates or retains the hardnosedness of evolutionary biology as part of the semiotic armoury. He writes (1986: 3) that

all survival-machines are only a sign's way of making another sign . . . Each survival-machine thus operates in the manner of a double agential transformer, as it were, firstly, of any 'object' (more precisely: of the Heraclitean notion of *logos*, the formal structure that imparts any 'object' its unity and stability) into a sign, by a process of 'perceptual selection of sensed characteristics' (Gregory 1981: 402), adhering to criteria we admittedly know all too little about. What are the teleonomic goals of such transformations? In other words, what is the function – the force – of semiosis, a criterial attribute of life, in general? I think the answers to these questions must be realized in terms of survival. In the short term, the process of sign-action guarantees to the subject a kind of lifelong cohesive solidarity. It maintains the identity of its semiotic self by a ceaseless rearrangement of its ego-quality (Jakob von Uexküll's "*Ich-ton*"; 1940 [1982]" 84), propelled by the sort of ongoing dialogue so distinctly recognized by Peirce (6.338). In the long term, semiosis, by indefinitely spawning interpretants, permeates ("perfuses") the universe with likeness (i.e., icons).

What Sebeok presents here is a complex interplay, a back and forth, of the exigencies of life and the mutability of the semiosis that characterizes it – from stability to teleonomy, from, transformation to survival, from sign to sign. Suspending the interplay for a moment, it is possible to see that

The proper history of semiotics is thus tantamount to a reasoned and versant account of the laws of Nature, particularly as explicated in terms of Darwinian evolution, and encompassing the totality of the peculiarly Lamarckian adaptation exhibited in the human animal *par excellence* – culture (Sebeok 1986: 81).

From the same period as 'Prefigurements', Sebeok wrote even more explicitly about Lamarckian evolution in animals in the essay 'Fables of fact'. Reviewing six animal behaviours that incorporate extremely high degrees of adaptation, such as honey guide birds and ticks, he writes that "in the evolution of this behavior, factors other

than mere random mutations and natural selection must have played a role" (1986: 38).

While Lamarckian adaptation is insuperably associated with the evolution of culture and Darwinian selection guides biological developments, Sebeok always maintains that the picture is, in fact, fuzzy. One reason for this is embodied in Sebeok's frequent reminders that the binaristic myth of 'nature/culture' constitutes a misguided denial of the fact that culture is merely one fairly small component of nature. At the same time, it is evident from Sebeok's simple observation on human modelling – which is so often repressed that it has to be repeated like a mantra – that "The authentic singularity of man consists of this, that he alone disposes over a pair of communicative codes" (8): the uniquely human verbal and the cross-species nonverbal (or averbal). In light of these postulates, culture, including aesthetic behaviour, is not just made up of verbal arts. This is an uncontroversial, even trivial. statement because it is so obvious. What is less obvious and what Sebeok confronts in 'Prefigurements' is whether the averbal arts of humans have a substrate in the activities of other animals with which humans share this averbality. Yet, more telling still, reflecting the fuzzy 'back and forth' picture of Lamarckian adaptation and Darwinian selection, as well as brain structure, is the advantage that verbality secures for humans. Paradoxically – because non-human animals, of course, possess no fledged faculty resembling language – the survival virtues of verbality present a clue to the purposiveness of 'useless' aesthetic animal behaviour. Language conferred on humans advantages for survival and

the advantage lay in the extraordinary suppleness of the verbal code — unprecedented in evolution, save for the genetic code to decompose and reconstitute in the human *Innenwelt* the incoming sign vehicles filtered out from the relevant portion of man's environments or *Umwelt*, by our total sensory apparatus. This suppleness is a consequence of the dual organization of the verbal code, which makes it feasible for the human mind to model the world and then, in the fashion of a tinkertoy, to 'play around' with this model: to take it apart, then reassemble it in may different novel arrangements (Sebeok 1986: 91).

This plasticity is now well known and is a mainstay of much discussion in contemporary cognitive science. For some time already, Sebeok suggested that grammar allows humans: to posit several putative pasts, to fabricate many kinds of possible future worlds, to imagine death, to create both poetry and science and to project into the future in a fashion that is of a piece with the potential production of an infinite number of sentences from a limited syntax. Above all, perhaps, it allows humans to classify their astonishingly variegated *Umwelt*.

Against the background of this movement across averbal and verbal realms underwritten by the cartography of the human brain, in 'Prefigurements' Sebeok is able to draw conclusions about non-human animals' aesthetic behaviour. Some of these re-cast the conclusions in his literature review. So one argument that Sebeok revisits is that animals' aesthetic behaviour is cybernetic in character. It is like a thermostat or, better still, homeostasis, in keeping an organism's *Innenwelt* in tune with its *Umwelt*. Sebeok points to evidence in the literature, especially, of birds that design neater – but not more utilitarian – nests in their second season of nest-building. The assumption is that the 'neater' nests offer some satisfaction equivalent to 'letting

off steam'. Connected to this is the second or subsidiary conclusion, that aesthetic behaviour produces self-reward in, as Desmond Morris says, "the unleashing of surplus nervous energy" (quoted by Sebeok 1979: 36).

Yet these conclusions do not really reach too far and they reveal very little about what human aesthetic behaviour entails. It is in Sebeok's further conclusion about classification that we come to the crux of the matter in the current paper. For it is here that Sebeok not only sheds light on the somewhat hackneyed issue of 'what is art?' but also provides clues for where researchers should look if they wish to address the question 'what is it to be human?' The latter question, of course, is by far the most profound of the two because it aims at a description of universals – real universals, as opposed to the propositions denounced by postcolonial critique and the repudiation of grand narratives, for example – whereas the question of 'what is art?' is subject to so many historical vagaries, particularly the attempt to distinguish it from what is not 'art', that it is impossible to reach anything approaching a definitive conclusion. Nevertheless, the more democratic concept of aesthetic behaviour, traversing the world of animals, does enable some consideration of what it is to be human. Sebeok's conclusion is that animals 'indulge' in aesthetic behaviour because it is a particular form of classifying that is operative within their acts of modelling. As such, aesthetic behaviour is an activity with a purpose, even while it seems to have nothing to do with the +, - and 0 of non-human animal existence: the positive seeking out of nourishment/comfort, the avoidance of harm/predation, the general awareness of elements of the environment that can be safely ignored. "The capacity for effective classification", Sebeok writes (41)

is important for survival, perhaps on a par with eating and sex. If so, techniques of classification were bound to evolve so as to be a source of pleasure to the animal and thus to shape the non-random differential reproduction of its genes (natural selection) . . . In other words, although art is always unpredictable, 'it appears to us to have been directed by some organizing center of large codimension, far from the normal structures of ordinary thought, but still in resonance with the main emotional or genetic structures underlying our conscious thought' (Thom 1975: 316).

Aesthetic behaviour, as formulated here, heightens cognitive differentiation. It is a form of modelling with its own specific procedures, practices and rewards. The product of aesthetic behaviour is to simultaneous embellish and furnish animals' niches while also augmenting their basic modelling capacities.

Understanding animals' aesthetic behaviour creates the grounds for understanding the definition of human being. Sebeok juxtaposes the traditional pursuits of philosophical aesthetics with the task of defining life, again problematising pat distinctions between what is learned and what is biologically determined:

The challenge, of course, is to explicitly define what those relations - of balance and order that delight - are in the characteristic idiom of each art, as well as in the all-embracing architectonics of the living megacosm. The concept of delight thus undergoes a radical transmutation: it is elevated into a function that biologists can recognize, objectify, cope with in familiar terms. The 'artistic animal' is not defined by a heightened sensitivity to movement, sound, color,

shape, but by its innate and/or learned capacity to elicit a stable dynamic structure from the fluid environment, whether inorganic, organic, or a subtle blend of both. The sign systems thus created, which serve an underlying semantic function, take in time an aesthetic turn (58-9).

Sebeok's unravelling of the skeins in which classification and aesthetic behaviour are knit is, it is worth reiterating, subtended by the distinction in modelling between humans and non-human animals, with the latter utilising a limited store of averbal modes and the former having access to an extensive repertoire of both verbal and averbal modes, frequently producing hybrid modes of considerable complexity and nuance. A further distinction from contemporary semiotics needs to be added in order to provide a gloss on Sebeok's telegraphic point and to emphasize its implication. It is is a simple observation, but one with notable ramifications: that the non-human animal's aesthetic behaviour and its signs in general are not self-recognized as such. What the development of semiotics has enabled us to realize — a historical trajectory extending from Mongré 1897 through Rossi-Landi 1978, Deely 1990, Petrilli 1998, Deely 2003a and b, 2005, Deely-Petrilli-Ponzio 2005, to Deely's 2010 synthesis — is that humans are distinct from non-human animals in that the former are 'semiotic animals': they recognize not only what signs signify at any one moment but also that there is such a thing as a sign. Non-human animals are restricted to their understanding of what a sign signifies in a particular and very direct context. With this point in mind, palpably survival-driven purposive signifying by non-human animals will most likely have little difference for them from their seemingly 'purposeless' aesthetic behaviour. The distinction between the two kinds of semiosis is the result of human observation, informed by the knowledge that there is such a phenomenon as signification.

Humans' knowledge of signs, derived from our possession of 'language' or grammar, enables projection into the future in addition to our highly enhanced ability to classify in the present. In 'Prefigurements' (60), Sebeok observes that

It seems clear that the fundamental role of the central nervous system is precisely to provide the creature with a local map simulating its position in the environment, to enable it to sort out, among other vital intelligence, the images of biologically and/or socially important organisms, viz., to distinguish prey from predator. This is surely best accomplished by an arrangement of such images into a distinctive feature matrix, or in terms of 'likeness tempered with difference'.

Effectively, classification enables humans to know their immediate environment and its co-habitants, to be able to draw maps of extended areas beyond their immediate environment and, ultimately, to function with reference to a cosmology. It also enables the devices of memory, from the complicated spatial mnemonic edifices invented by the ancient Greeks, through the memory palaces of the medieval Jesuits, up to all the storage facilities of post-literate culture. With reference to this, I was touched today by the homely reminiscences of Marcel Danesi as he related in his plenary paper the time he spent during childhood in a remote village in Northern Italy. He told how an elderly lady provided pre-electronic entertainment for children in the village during the evenings, telling them stories of their ancestors, in addition to ghoulish tales associated with the local cemetery. In this practice we have a sense of

how narrative preserves community memory and, sometimes, indicates the terrors that lie beyond that community. Yet we also have a picture of memory both *before* the age of electronic memory and aesthetics, plus an illustration of the modes of memory *after* the advent of *verbality* and the techniques of modelling associated with it. Human mapping, again, exemplifies the constant trafficking between verbal and averbal sign systems.

However, it is not the movement between putative different modelling centres in the brain that is the paradox arising from Sebeok's 'Prefigurements'. The ultimate paradox is that animals' aesthetic behaviour is implicated in enhancing survival by not enhancing survival. Much, if not all, of the use-value of aesthetic behaviour consists in not appearing to possess use-value. Sebeok's isolation in the semiosis of animals, including humans, of this paradox poses a major problem. It is interesting to know that non-human animals are potentially securing their allotted existence whilst furnishing their *Umwelten*; but what are humans doing? At a time when Western governments are almost unanimously focusing on science, technology and economic instrumentality (the latter invariably incorporated into the promotion of science and technology), aesthetic pursuits are the subject of policy regression and the humanities are experiencing annihilation through the withdrawal of funded and moral support (see 'What the humanities are for – a semiotic perspective', also included in this issue). In the face of this, it is common to hear many – especially in the academy – calling for a renewal of that old shibboleth, 'Knowledge for its own sake'. This kind of defence, of course, is knee-jerk humanism, a retreat to the Land of Cockaigne, guaranteed to cut no ice with those too crass to see beyond economic instrumentalism. What 'Prefigurements' demonstrates, ineluctably, is that 'Knowledge is for something'. It re-poses the big question for contemporary societies: "What do we pursue in order to maintain an activity which ensures our survival but is not often used instrumentally as such?"

The preliminary answers to that question lie in the realization that aesthetic behaviour *is survival* – it locates humans in their world and enables humans to conceptualise the furnishing of that world. It has indispensable use-value and, in fact, underpins the very science and technology that economic instrumentality seeks to exploit. Thus, even on their own terms, arguments about - and policies supporting – economic instrumentalism in the sphere of knowledge are contradictory and directionless. The preliminary answers also lie in grasping that humans are semiotic animals, able to assess and analyse the signs that circulate in their *Umwelt*, capable of recapitulating the latent benefits of aesthetic behaviour. Foresight, to recognize how seemingly non-purposive signs enhance the *Umwelt*, is paramount, as well as analytic acumen in understanding the relation of aesthetic signs to human existence in the past, the present and the future. In sum, addressing the big question of aesthetic behaviour requires experienced, interdisciplinary technicians to be centrally involved. There can be no equivocation on this.

Naturally, when the long-term benefits of an activity are obscure, there is difficulty in making them the core of a consensus. Yet, such difficulties are not insurmountable, particularly as the topic under discussion is one that cuts to the very nature of humans' existence and their most 'instinctive' pursuits. Sebeok notes, with a nod to Peirce,

The propensity to classify seems to have acquired, through evolution, diminishing survival value, but then so did sex: humans can enjoy either, but most tokens, though pleasurable per se, are not biologically relevant. Only the type of activity has a clearcut biological function (42).

Although restaurants have garnered business for centuries, and prostitution has flourished for longer still, nobody, to my knowledge, has suggested that eating and sex should only ever be undertaken for the purposes of generating profit. If semioticians, following the example of Sebeok - who I am sorry is no longer physically with us to repel the forces of philistinism – are able to push the insights of 'Prefigurements' to centre stage, then the absurd proposal for only ever engaging in aesthetic behaviour for brute economic purposes will be banished from the realms of common understanding.

Ladies and gentlemen, thank you once more for your attention.

References

COBLEY, Paul

2010. "Cybersemiotics and human modeling", *Entropy* 12, 2045-66.

2014. "Codes and coding: Sebeok's zoosemiotics and the dismantling of the fixed code fallacy", *Semiotica* 198, 32-34.

COBLEY, Paul (illus. by JANSZ, Litza)

1997. Semiotics for Beginners (Cambridge: Icon)

DAWKINS, Richard

1976. *The Selfish Gene* (Oxford: Oxford University Press) DEELY, John

1990. Basics of Semiotics (Bloomington: Indiana University Press).

- 2003a. "The semiotic animal", in Petrilli and Calefato eds., *Logica, dialogica, ideologica. I segni tra funzionalita ed eccedenza* (=itinerari filosofici; Milan: Mimesis, 2003), 201–219; also in *The Second Renaissance* (Milan: Spirali).
- 2003b. "The semiotic animal", presented in the Monday, 22 September, 2003 'Metaphysical Session', of the International Congress "Christian Humanism in the Third Millennium", Rome, 21–25 September 2003; web version posted on Congress site http://e-aquinas.net/pdf/deely.pdf.
- 2005. "Defining the Semiotic Animal: A postmodern definition of human being superseding the modern definition 'Res Cogitans'," *American Catholic Philosophical Quarterly*, 79.3, 461–481.
- 2010. Semiotic Animal. A postmodern definition of "human being" transcending Patriarchy and Feminism, to supersede the ancient definition as "rational animal" and the modern definition as "res cogitans" (South Bend: St Augustine's Press).

DEELY, John, PONZIO, Augusto and PETRILLI, Susan 2005. *The Semiotic Animal* (Ottawa: Legas) KATSUNO, Yoko, EGUCHI, Kazuhiro and NOSKE, Richard A 2013. "Preference for and spatial arrangement of decorations of different colours by the Great Bowerbird *Ptilonorhynchus nuchalis nuchalis*", *Australian Field Ornithology* 30.1, 3-13

MONGRÉ, Paul

1897. *Sant' Ilario. Gedanken aus der Lanschaft Zarathustras* (Leipzig: C. G. Naumann).

PETRILLI, Susan

1998. Teoria dei Segni e del Linguaggio (Bari, Italy: Edizioni B. A. Graphis).

ROSSI-LANDI, Ferruccio

1978. Ideologia (Milan: ISEDI).

SEBEOK, Thomas A.

1979. "Prefigurements of art", Semiotica 27.1-3, 3-74.

1986. *I Think I Am a Verb: More Contributions to the Doctrine of Signs* (New York: Plenum Press)

1988. "In what sense is language a 'primary modeling system'?" in *The Semiotics of Culture*, ed. H. Broms and R. Kauffman (Helsinki: Arator), 67-80

1991. *Semiotics in the United States* (Bloomington: Indiana University Press)

2001. *Global Semiotics* (Bloomington: Indiana University Press)

SEBEOK, Thomas A. and DANESI, Marcel

2000. The Forms of Meaning: Modeling Systems Theory and Semiotic Analysis (Berlin: Mouton de Gruyter)