

The choice between one baby and 1000 guinea pigs

*Arguments and stereotypes on animal experimentation, analysed from a
semiotic perspective*

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The present article aims to investigate some aspects of the most critical topic in the study of non-human animals, i.e., the problem of the approach. The theoretical reflections proposed will then be applied to the case of animal experimentation, from an interdisciplinary perspective. I had the privilege to take part in and assist a socio-psychological research on the human-animal relationship (notably, two focus groups), conducted by Monica Pivetti, researcher for the department of Social Sciences of the University of Helsinki, whose focus was precisely animal experimentation¹. Terms and methodology of the focus group technique and of this research in particular will be illustrated later on.

Is it possible, as humans, to study non-human behaviour in a proper way? Are we able to observe other animals without being affected by a human interpretation of reality? Is it really possible for humans to see an animal's Umwelt through its own eyes? Questions like these seem to be crucial in any form of theoretical analysis of the human/non-human relationship. Particularly, the perception of non-human animals as "others" constitutes a real leitmotif. I will discuss the human categorisations of *animal otherness* in terms of *anthropocentrism*, surely the most popular – some say inevitable – methodological attitude towards other animals. I shall classify three different types of anthropocentrism, then propose a zoosemiotic model concerning anthropocentric attitudes. Elsewhere², I have discussed the theoretical antithesis to anthropocentrism, i.e., *biocentrism*: the limits and purpose of such an essay do not allow me to re-take the issue.

The issue of animal otherness, especially when interpreted in terms of group dynamics, has become a major issue in the field of social sciences. The basic assumption is that humans perceive non-humans as *the others* by definition, i.e., they establish relational dynamics that are comparable to what in the past – and sometimes in the present – the Men-Women, the Blacks-Whites (and many others) relations were. Put simply, humans basically think they do, have, are, etc., what animals do not, have not, are not, and vice versa. When looking at common sayings, such a mindset emerges quite clearly: expressions like "to treat someone like a beast", "a beastly

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² See for instance Martinelli 2002: 80-85

impulse", "chicken-hearted", "a fish out of water", or "to fight like cats and dogs" are basically meant as statements (or suggestions) concerning a primarily moral identity (the human one) constructed in terms of difference and distinction from other animals.

I consider such an issue of strong (zoo)semiotic analytical potential. Indeed, in my opinion, at least two main branches should be distinguished within zoosemiotics, both to be divided, in turn, in two more sub-branches. On the one hand, I shall refer to zoosemiotics in the traditional sense, i.e., a discipline dealing with the behaviour "communication", through the most obvious theoretical tools of semiotics. I shall call this branch **ethological zoosemiotics**. In turn, ethological zoosemiotics can be divided into a **traditional** current and a **cognitive** one, the former including the studies performed by the early Sebeok, or Lindauer, or other scholars belonging to Lorenzian or behaviouristic traditions; and the latter current including at least the latest Sebeok, Cimatti's early zoosemiotic work (1998)³, and Bekoff (not to mention the strong anticipations provided by Darwin).

As for the second branch, which I here call **anthropological**, I intend to refer to the studies dealing with the semiotic interaction between human beings and other animals, including those of cultural and/or sociological type. Experiments on interspecific communication are one example (although very sceptic, Sebeok dealt quite often with those, and so did Petrilli, Deely, Cimatti, Bekoff and others). Such types of study fall under a sub-category of anthropological zoosemiotics, which I call **communicational**. The term refers to contexts where human-animal interaction is of a communicative type, i.e., interactive, reciprocal and intentional. Moreover, studies of applied zoosemiotics, such as human-pets or human-cattle interaction, fall under this group, too.

The second sub-category within anthropological zoosemiotics is, by consequence, named **significational**: here, the non-human animal is a pure source of meaning, an object, rather than a subject, of signification. The model is thus of ecosemiotic type: whereas, indeed, ecosemiotics is the study of human representation of nature, this typology of zoosemiotics deals with the human representation of other animals. It is evidently the case of myths, tales, allegories, but also systematic classifications, such as the taxonomical ones.

It thus appears that ethological zoosemiotics has a close relationship with natural sciences (ethology *in primis*), while anthropological zoosemiotics is a closer relative of human sciences, especially the so-called anthrozoology and the social sciences. In a way, the definition of zoosemiotics provided by Winfried Nöth (1990: 147) appears as the most appropriate for this framework: zoosemiotics 1) is interdisciplinary, and 2) occupies an intermediary position between natural and human sciences.

Therefore, the reflections proposed in the present article fall clearly under the domain of (significational) anthropological zoosemiotics. In all the previously-mentioned common sayings and in all the attitudes I am about to discuss, non-human animals are not seen as such, but as symbols, or, even better, as social conventions. The living being becomes a projection of a general interpretation of reality. Reality, in turn, is subjected to a process of crystallisation, which is typical of social conventions. The result is not rarely a stereotype, and stereotype is the cognitive basis of prejudice.

STEREOTYPES, PREJUDICES AND THEIR FUNCTIONING

³ Quite surprisingly, Cimatti's latest work took a totally different turn on the issue.

At the beginning of the 17th century, Francis Bacon elaborated a quite complete and still-exhaustive analysis of prejudices. Bacon illustrated what he called “inherent and profound errors and superstitions in the nature of the mind” (*idola mentis*), according to the following types:

- 1) *Idola tribus* concern human beings as such, as a species (Bacon 1620: XLI). The belief that superior and transcendental entities rule our world and our existence as humans (the so-called need for coherence and uniformity), the interpretation of reality through emotions or most evident/influential data, and so forth, are all examples of *Idola tribus*;
- 2) *Idola specus* concern personal and subjective experience, education, personality traits, etc. (Bacon 1620: XLII). It is the case of dualisms of the likes of superficiality/profoundness, differences/similarities etc.
- 3) *Idola fori* designate biases coming from interactions and conventions among humans – language, first of all (Bacon 1620: XLIII). Typically, this occurs when highly complex issues are reduced to simple linguistic explanations (the word “black”, as applied to a person of Afro-American traits, possibly being the best example).
- 4) *Idola theatri* refer to tradition (including the philosophical one), myths and tales. Traditions tend to affect both common opinions and scientific discourse (Bacon 1620: XLIV).

On the basis of this framework, social sciences pointed out that prejudice (a) is mostly referred to social groups, rather than to facts and events, and (b) tends to apply negative connotations to the group observed. Semiotically speaking, the concept of prejudice can be interpreted in terms of *denotation* and *connotation*. If we consider an imaginary continuous axis, where one extreme represents the level of denotation (i.e., prejudice as evaluation before or without empirical data or experience), and the opposite extreme represents connotation (i.e., prejudice as the tendency to negatively evaluate members belonging to a given social group), then a correct definition of prejudice may be placed in different points of the axis, according to what the context suggests. All along the axis, each attitude is associated with the idea that, usually, actions are coherently consequent to evaluation. Apparently, the more opinions lean towards the connotative extreme, the more social implications are evident.

The concept of "stereotype" is relatively new⁴. It was the journalist Walter Lippmann, who in the 1920s (Mazzara 1997: 15) anticipated some crucial points in the study of stereotypes:

1. Simplification of reality is not casual, but rather motivated by precise cultural processes: stereotypes are part of a group's culture and affect individuals in their interpretation of reality.
2. Stereotypes have a defensive function: they maintain the culture and the forms of social organisation of a group, allowing individuals to keep their established social position.
3. Stereotypes affect both the experience and its evaluation – and interpretation, consequently – according to the dominant trends in a given culture.

⁴ The term itself has existed since the end of the 18th century, as used in typography for naming the technique of items' reproduction, through the use of rigid forms (stereòs = rigid, tìpos = print)

4. Stereotypes are related to prejudices, being their cognitive basis. Stereotypes may be defined as “all information elements and beliefs concerning a given category of objects, constructed in a coherent and usually stable way, which support and reproduce a prejudice towards that category” (Mazzara 1997: 19, my translation). For this reason, although basically in cause-consequence relation, stereotype and prejudice are often erroneously considered as synonyms.

Like prejudice, stereotype can also be considered on denotative and connotative levels. On the first edge of the axis, the definition could be “All of the characteristics culturally related to a given category of objects”. On the other edge, “A coherent and usually stable whole of negative beliefs, shared within a social/cultural group, and referred to another social group or category”. Given such conditions, stereotype takes place as a presupposition (cognitive basis) for a prejudice.

Lippmann’s reflections shall be integrated by the illustration of three variables that regulate the functioning of stereotypes:

1. *social sharing*, i.e., the way a certain mental representation is shared within more than one social group. In other words, a given stereotype could be more common than another, the latter being just the result of a limited cultural process.
2. *generalisation*, i.e., the way stereotypical characteristics attributed to a given group are considered as homogeneously spread within that very group. In other words, once a certain mental representation about a social group has crystallised, one may be convinced that every individual of that group possesses those characteristics.
3. *rigidity*, i.e., the way stereotype is or is not constant in time. Some mental representations are strongly related to limited events or temporal contexts and tend to fade or disappear with time.

ANTHROPOCENTRISM AND INGROUP/OUTGROUP DYNAMICS

A second step towards understanding human attitudes as regards other animals, consists in an attempt to define and classify the concept of anthropocentrism. According to usual definitions (see for instance Bartolommei 1995: 40-83), anthropocentrism interprets Nature as (a) an entity existing *apart from* and *for the benefit of* humans, so that (b) nothing in Nature can be considered in itself, autonomously from humans; and (c) it is ethically acceptable for humans and non-humans to be treated in different ways. In other words, Nature is not of interest (e.g., to conservationists and preservationists) because of its hypothetically *intrinsic value*, but just because of its *instrumental value*, i.e., the values it has for and to humans.

Most criticism against animal-related studies tends to emphasise that a totally impartial interpretation of animal behaviour is not possible, for observations are external to the subject of study and cannot avoid frames of reference that are typical of human interpretation of reality. In this sense, the approach is anthropocentric, i.e., concentrated on and mediated by the fact of being human.

Put this way, however, such remarks may appear simplistic (they seem a way out of facing a problem that is in fact quite more complex), partial (such a sceptical view is applied to a limited number of cases: animal experimentation, for instance, is not one of them), and a bit out-of-context (it is true that some elements of anthropocentricity cannot be avoided, but maybe this is not an unbridgeable gap between scientific research and a correct interpretation of reality).

Hence, the very first question is, Is there just one type of anthropocentrism, or are there more? In other words, How many ways exist to observe reality according to the criteria of interpretation and classification proper to the human being? It is here

maintained that such criteria should be distributed on at least two layers: *default anthropocentrism* and *binary anthropocentrism*. The latter, in its turn, should be divided into *quantitative* and *qualitative* types. The first elementary level, *default anthropocentrism*, consists in the simple consideration that the subject who observes a given animal species is evidently a human being, with all its resources, limits and modes of categorisation. What we understand about a dog is what we are able to understand. Technology does not fully allow us to perceive a dog the way, say, a pigeon would perceive her. As long as anthropocentrism is reduced to this very basic expression, the seriousness of a scientific research is not in danger.

The second type is *binary anthropocentrism*. Here, the fact of being a different entity from the object observed (human, rather than another animal) produces a dualistic interpretation of reality, based on criteria of *difference* (qualitative anthropomorphism) and/or strongly *hierarchical identity* (quantitative anthropomorphism), which puts the observer, and/or the group she belongs to, in a superior position in relation to the group observed. In the case of qualitative anthropocentrism, the observer/human being tends to distinguish herself from the non-human animal by means of either/or qualities, almost in a causal relation (i.e., humans do, therefore animals do not). In the case of quantitative anthropocentrism, the difference between human beings and other animals is expressed by means of quantities (more/less).

Although hardly studied in the field of human-other animals relations, these dynamics of intergroup relations are theorised at length in social psychology, and are clearly connected with the functioning of stereotypes and prejudices. According to social psychologists, categorising people into groups by identifying some common attributes or characteristics is an adaptive necessity. It reduces the amount of information to be dealt with and thus reduces the complexity of the whole social world⁵.

To acceptable extents, such a categorisation leads to the belief that one's own group (*ingroup*) is different from other groups (*outgroup*) in a kind of special way. Typical is the case of news distribution in newspapers and magazines. What is found there is not "German news", "Japanese news", "Venezuelan news" and so on. The distinction is rather between "domestic news" (ingroup) and "foreign news" (outgroup). In the other cases, categorisations produce *intergroup biases*, i.e., a belief or beliefs that one's own group is *better* than all other groups. This leads to an increased attraction of ingroup members and a devaluation of outgroup members. This is known as *minimal intergroup paradigm* and was pioneered by Henri Tajfel (1981: 275-290). Ingroup members tend to behave in more pro-social ways and be more cooperative towards other ingroup members than they are to outgroup members⁶.

⁵ A good socio-psychological analysis of prejudice can be found in Allport (1954) or Tajfel (1981)

⁶ Other important intergroup biases are:

1. *Outgroup homogeneity effect*: outgroup members are perceived as being more similar in their characteristics, opinions, and behaviour than are ingroup members

Such dynamics operate also within the human-other animal dichotomy. Anthropocentrism itself can be defined simply as a set of mental attitudes that consider human beings as a distinct and independent part of the Animal Kingdom and of all Nature, or as not animals at all, a unique entity, not classifiable in biological terms. Quite banally, *homo sapiens* is the ingroup humans choose to belong to, when involved in zoological contexts. The distinction is *Homo sapiens* and all other animals (e.g., very rarely is it primates-other animals, almost never mammals-other animals). Such a categorisation, which is clearly binary, involves the same intergroup biases emphasised by social psychologists.

In Figure 1 these aspects stand out quite clearly: first, the tendency is to consider the human being as something different and possibly superior to the rest of the Animal Kingdom (minimal group paradigm). Secondly, as a result, any possible comparison with animals is displaced by one degree, so that the outgroup is regarded in a far more generalised way (outgroup homogeneity effect). In other words, *Homo sapiens* is related/opposed to the Animal Kingdom rather than to another species, and an individual *Homo sapiens* is related/opposed to a whole species rather than to an individual specimen. Occasionally, even a single part of a human - a character's trait, typically - is related/opposed to a whole individual animal. For instance, it is a common belief that dogs, all of them, are devoted to their owners, without exception. Not rarely, generalisations of this type are heard from specialists, as well.

A MODEL FOR THE CATEGORISATION OF ANTHROPOCENTRIC ATTITUDES

The stereotypical human attitudes towards other animals can now be classified into a schematic model. The basic idea is to interlace causes and effects, i.e., cultural presuppositions (e.g., philosophical, psychological, or generally conventional), in

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2. *Polarised appraisals of outgroup members*: outgroup members are seen as more extreme in a variety of positive and negative personal dimensions, thus creating greater social distance between ingroup and outgroup members.
 3. *Ingroup favouritism effect*: ingroup members tend instinctively to favour members of their own group over those of other groups.
 4. *Differences in causal attributions across groups*: ingroup members make different attributions of cause and blame, depending on whether the target individual is a member of the ingroup or not; positive behaviours are attributed to internal causes rather than external ones;
 5. *Differences in information processing and retention across groups*: ingroup members perform more elaborate and careful processing about fellow ingroup members; remember more positive information about fellow ingroup members; have more favourable expectations of fellow ingroup members, and so on;
 6. *Illusory correlation*: Infrequent, distinctive behaviours are associated with outgroups even though the behaviours are constant across all groups.

relation to *pro* or *anti* animals attitudes. This latter distinction is rather crucial: although one could say that the main tendency in anthropocentrism is to ‘favour’ humans to the detriment of other animals (i.e., considering the former as an ingroup in all respects), it seems that this is just partially true. In fact, what are here called *zoophobic* and *zoophilic* attitudes are quite balanced. Since both may be considered the opposite extremes of a continuum, they are represented with a Cartesian axis. These terms do not have moral connotations: zoophilic does not necessarily mean ‘good for animals’, exactly as zoophobic does not necessarily stand for ‘bad’: the focus is here on aprioristic and unilateral approaches.

The second value is concerned with causes. Still, two extremes on a Cartesian axis can be traced and still the connection is not discreet. On one edge, there shall be a self-styled rational approach, here called *Scientific-Pragmatic*. On the other edge, the so-called *Spiritual-Emotional* dimension. Again, the attitudes are true in their intentions, but not necessarily in practice.

By developing a typical Cartesian plane, with one axis perpendicular to the other, four different quadrants can be distinguished. Figure 2 illustrates how these quadrants are filled. Some clarifications are needed. Firstly, some of the words used to name the attitudes are neologisms invented for the occasion: all of them represent a mentality, an attitude, so one might consider them as a series of ‘-isms’. Secondly, most of the terms that already exist are not meant to the letter: utilitarianism, for instance, does not exactly stand for the nineteenth-century ethical doctrine, but rather for a general attitude that identifies the good with the useful. Thirdly, within these categories, several sub-categories can be distinguished: mechanism, for instance, stands not only for Cartesianism, but also for other types of scientism. Finally, as are all forms of classification, this one is too simplistic and generic: to mention one, the model is strongly western-centric. The information collected is not a sufficient sample for this essay to be extended to other cultural conceptions. It is thus suggested to interpret and evaluate this model with appropriate margins of approximation.

Due to the restrictions of the essay-format, the description of the categories will be in schematic form (thus, brief and general), and will feature a) a brief presentation, b) their historical and philosophical bases; c) characteristics of stereotype’s functioning; d) the typology of prejudice; and e) some examples.

Mechanism.

Presentation – The Cartesian mechanism is certainly the theoretical point of reference, but in fact several post- pseudo- or para- mechanistic attitudes are counted.

Historical/Philosophical bases – The basic notion, as provided by Descartes, implies a devaluation/underestimation of non-human animals as sentient beings. According to Descartes, every living being is comparable to an automatic machine, humans included. What really marks the difference between humans and other animals is the possession of a soul. Soul is what allows humans to have feelings and to be aware of them. Descartes finds no trace of hetero- or self- perception in non-human animals. Clearly enough, such a mentality provides alibis to several forms of exploitation towards non-human animals, for every ‘use’ that is made of them is considered as not perceived or felt.

Stereotype’s functioning – a significant decrease of the generalisation variable of the mechanistic approach can be detected. Studies on language acquisition among primates made during the 20th century, for instance, showed that, however problematic the idea itself may be - i.e., to attribute an extra-specific communication

system to a given species - certain cognitive characteristics, starting from awareness, are evident in many non-human species.

Typology of prejudice – *Idola theatri*. Mechanism is a philosophical heritage with clear roots and clear capacity to affect next generations.

Examples – Animal experimentation, genetic engineering, pre-Darwinian zoology, plus a few behaviouristic research models.

Utilitarianism.

Presentation – The non-human animal is considered an economic good, a source for surviving. The utilitarianist process depersonalises the non-human animal, perceiving her as an object, a resource. Cows and sheep are thus “cattle”, minks are fur-animals, and so forth.

Historical/Philosophical bases – As such, utilitarianism is not provided with specific historical bases, except for human evolution itself, pre-historical animal breeding and hunting practices being probably the first instances.

Stereotype's functioning – Increase of generalisation and rigidity. The evolution of utilitarianism goes hand in hand with human technological progress. Non-human animals are more and more subject to forms of exploitation.

Typology of prejudice – *Idola theatri*. Utilitarianism is clearly related to tradition.

Examples – All animal-related economic activities (leather, furs, cosmetics, fast-foods, etc.)

Zoomorphism

Presentation – Zoomorphists accept the idea that *homo sapiens* is in all respects an animal. In its most extreme forms, this implies the moral justification (or at least, explanation) of uncivilised/violent behaviour, as a result of the ‘jungle rule’, where the strongest survives over the weakest. As humans can be considered the strongest species on earth, it is natural to consider animals at human’s own disposal.

Historical/Philosophical bases – Properly or not, the bases are Darwinian and post-Darwinian theories. Hence, not only zoomorphism, in its etymological form, but also several forms of evolutionism and positivism are involved.

Stereotype's functioning – Increase of rigidity and social sharing.

Typology of prejudice – *Idola fori*, i.e., the forms of prejudice whose consistency is mostly given by dynamics of interpersonal relation – such as language – which quite easily lead to simplified interpretations of reality (see the abuse of the term “instinct”).

Examples – Frequently detectable in literature (e.g., Hemingway’s novels or Stevenson’s zoomorphist metaphor of Mr. Hyde) and common sayings (above all, the *Homo homini lupus* principle). Moreover, hunting (and a certain description of it) is possibly the zoomorphist activity *par excellence*.

Conservationism-Environmentalism

Presentation – The main presupposition of conservationism/environmentalism is of the Kantian type: human beings, as the most powerful beings on Earth, have a clear responsibility for preventing bio-diversity from extinction, mostly in order to make Earth a better place for humans to be. Such conceptions, among other things, carry a distinction between species that must be protected, and species that do not.

Historical/Philosophical bases – Considering the young age of the category, historical and philosophical bases are hard to be identified. The birth of conservationism and environmentalism is probably related to the very first ecological

alarms, such as matters of endangered species. Of course, as ecological awareness developed, real conservationist and/or environmentalist theories and speculations took shape. Nevertheless, it is a widely-held opinion that a literary forerunner for environmentalism is Henry David Thoreau's *Walden*, and other similar works.

Stereotype's functioning – Enormous increase of social sharing, in the last 20-30 years especially (together, of course, with the progressive worsening of environment conditions),

Typology of prejudice – *Idola fori*, at least in its most generic manifestations.

Examples – Environmentalist associations, natural reserves, bird watching etc.

Zoophilism.

Presentation – Animals are considered in terms of their aesthetic quality, like objects to preserve, refine and improve. Aesthetic purposes lead the zoophilist to cut a dog's tail, to point her ears, to take her to exhibitions, to provide her with a pedigree, and so forth. The process of animal depersonalisation is again rather evident: a living entity is treated more like an object - a good-looking one, in this case. The zoophilist tends to relate only with 'manipulated', 'pure-bred' animals, the sole category to be considered significant in this approach.

Historical/Philosophical bases – Although not easily identifiable, the historical bases of this tendency date back at least to Scientific Revolution, Renaissance and Baroque. Zoophilism bears witness to a new human being, one who no longer fears nature. Advances in genetic engineering were a natural consequence of these conceptions.

Stereotype's functioning – Increase of generalisation. More and more species are involved in this form of human interest (see the case of exotic animals, like iguanas, nowadays sold and bred as companion animals).

Typology of prejudice – *Idola tribus*. The human-animal relation is established according to totally human (aesthetic, in this case) criteria.

Examples – zoos and all other forms of captivity of animals (either dead or alive, or in between, as happens more often) for exhibition purposes; taxidermy; collecting insects; and all kinds of generally physical modifications of whatever species.

Christianism

Presentation – Within Christianity, the human being is seen as a divinely-selected species, while the rest of Nature is a system created for human use and – within certain limits – abuse. Similarly as with Descartes, non-human animals are considered as having no soul, thus they are incapable of any form of sensibility beyond the basic levels of exploration and perception.

Historical/Philosophical bases –Christianism is comprised of attitudes related to and departing from (some) Christian precepts, but it does not represent the whole complex of Christian doctrine. Indeed, in its most embryonic form, the christianist attitude has much to do with Aristotelian ideas (particularly that of *scala naturae*) and pre-Christian, Jewish traditions⁷. The most effective synthesis of the christianist conception of the human-non human relation can be traced to Genesis 9:2: "The fear and dread of you [Adam] will fall upon all the beasts of the earth and all the birds of the air, upon every creature that moves along the ground, and upon all the fish of the sea; they are given into your hands".

⁷See the case of ritual slaughtering.

Stereotype's functioning – Decrease of rigidity, possibly because of a more and more scientific approach towards nature.

Typology of prejudice – *Idola tribus* by definition.

Examples – a) Superstitions and traditions, belonging to different periods of history; and b) a general allegoric interpretation of certain species (lamb, snake etc.).

Hedonism/Indifferentism

Presentation – The hedonist/indifferentist approaches other animals according to her own needs and wishes, without any ethical or other kinds of implication. Unlike utilitarianism, this category identifies the good with the good, more than with the useful, where good stands for pleasant, tasty and so on. It is thus the case of people who are not very interested in the problem of the human-non human relation. Among other consequences, the hedonist/indifferentist's behaviour may change according to contexts, people, and so forth.

Historical/Philosophical bases – Consumism and luxury culture should be considered the real historical foundation of hedonism/indifferentism.

Stereotype's functioning – High degrees of social sharing and generalisation (although, possibly, the growing interest for environmental matters is causing a decrease of both of them).

Typology of prejudice – *Idola specus*, this category being totally subjectivity-dependant.

Examples – Commercial leisure-related use of animals (an aspect shared with utilitarianism, under many respects), circuses, corridas, use of meat as a metaphor of richness, and so on.

Anthropomorphism.

Presentation – the interpretation of non-human animal behaviour is based on exclusive human criteria. This typology of attitudes is very common in the media. On TV or in many books anthropomorphism is the most commonly used descriptive technique. On the one hand, this technique facilitates the comprehension of certain topics (through processes of empathy), but, on the other, it contributes to the implicit-but-widely-held idea that animal-related studies are something not as serious as other fields of human knowledge.

Historical/Philosophical bases – The long tradition of myths and tales, where animals are mostly used as allegories of humans (dressing clothes, living in houses with doors and windows, speaking human languages, etc.).

Stereotype's functioning – Increase of generalisation (revisionist trends have introduced in popular imagery animals that were previously ignored, or seen from a totally different perspective. One example is the movie-star orca Willy).

Typology of prejudice – *Idola theatri* (a deep-rooted relation with myths and tales).

Examples – Most cartoons, comics and fiction in general (i.e., the myths and tales of nowadays) involving non-human animals. In particular, the commercialisation of the main characters of this fiction (from Lassie to Donald Duck) is based on evident anthropomorphic processes. The same applies also to any marketing form related to non-human animals (e.g., dogs' food commercials).

New-ageism

Presentation – A very recent but widespread category. The very fast success of the New-Age philosophy firstly, the New-Age trend secondly, and finally the New-Age uncontrolled commercialisation, has turned an invitation to a more spiritual approach

to life into a huge business. A tendency to exoticism has developed into a sort of new version of the Myth of the Good Savage, applied now to ancient civilisations, native populations, and non-human animals. In the New-Age imagery, these categories share a philosophical simplicity, a mystical but down-to-earth kind of wisdom, and the close contact with nature that Western civilisation seems to have lost.

Historical/Philosophical bases – The origins of new-ageism, like New-Age itself, should be traced in many Eastern philosophies, Buddhism for first, but the attitude described here is in fact something far from such foundations: in that respect, one shall refer to recent authors, such as Richard Bach, Anthony De Mello and others.

Stereotype's functioning – like all trends, New-Ageism is doomed to a decrease of rigidity.

Typology of prejudice – *Idola theatri*, especially as one considers its original spiritual character.

Examples – CDs with animal sounds; practices like dolphin therapy; some books and movies (e.g., the fourth episode of Star Trek), etc.

Pietism

Presentation – The concept, still Kantian, is that non human animals are ‘weak and innocent victims’ of human power, and it is thus a human moral duty to be moved by a sense of compassion and to take care of these creatures. The human being is once again the master of nature, by divine choice, and other animals are subordinate entities which the ‘master’ takes care of.

Historical/Philosophical bases – Pietism can be considered the zoophilic side of christianism, as they both share a clear religious basis. In this case, the main point of reference is the type of animal compassion divulgated by San Francesco d’Assisi.

Stereotype's functioning – Increase of social sharing.

Typology of prejudice – *Idola specus*, as pietism is related with very personal experiences and interpretations.

Examples – Old ladies feeding pigeons; people ‘rescuing’ dog or cat pups, formerly abandoned by their mother; particularly moving movies or novels featuring animals, etc.

THE FOCUS GROUPS DATA

A focus group is a research technique that aims to deepen motivations and frames of reference behind a social phenomenon. Being a qualitative methodology, its findings can hardly be generalised to an entire population, but certainly its dynamics and interactions are very close to an ordinary everyday conversation, allowing to draw conclusions which would otherwise require big-scale surveys. As Pivetti explains,

The focus group technique has been described as a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non threatening environment. Guided by a skilled interviewer, participants share their ideas and perceptions, influencing each other by responding to ideas and comments during the discussion. In principle, with proper guidance from the focus group leader, group members can describe

the reasoning behind their action, beliefs, perceptions and attitudes⁸ (Pivetti 2002)

The goal, in the case of Pivetti's research, is to explore attitudes and social representations on animal experimentation. The researcher's observation focuses on conflicts between participants and arguments used against each other. The focus groups were organised and conducted in Bologna (Italy) and Helsinki (Finland) between 2001 and 2002. *Prospective doctors*, expected to support animal experimentation; *animal right activists*, expected to be against it; and *lay people*, expected to be driven by their individual attitudes towards animals, were the categories invited. Pivetti (2002) summarises the composition of the groups in Table 1.

Participants were asked to talk about four main topics:

- 1) Their attitude towards animal experimentation,
- 2) Their arguments in favour or against it;
- 3) Their knowledge of alternative methods, Animal Care Committees and how they trust them;
- 4) What they feel to be the Church's position on the issue.

The outcomes of the experiments offer an incredibly rich opportunity for semiotic analysis.

SEMIOTIC INTERPRETATIONS OF THE FOCUS GROUPS DATA

The previously-illustrated semiotic model on anthropocentrism proved to be quite efficient within this context. Not only participants themselves displayed the inevitable anthropocentrism of the default type. Also, their comments could be expressively related to a binary conception: they seemed not to have any doubts that what they were discussing was a *humans versus all other animals* type of discussion. Participants would not only use the word "animals" for naming all species except humans: also, they would use single species as "synechdoches" (i.e., *pars pro toto*) for all non-human animals. Statements like "We landed on the moon, not mosquitoes" (pronounced during the Italian focus group) is most representative: a) it is anthropocentric; b) it is binary, more precisely ingroup-outgroup articulated (us and them); c) it is a *pars pro toto*: mosquitoes stand for all non-human animals. Only humans (are smart, then are able to) go to the moon. Moreover, binary positions could be of either qualitative (like the above-mentioned comment) or quantitative type (e.g., "we reason *better than* animals", as an Italian prospective doctor said).

As far as single attitudes are concerned, at least six of the categories previously described were represented:

Mechanism – Prospective doctors would often illustrate animal experimentation techniques with almost no regard to the emotional-sentient status of the animal mentioned. At the same time, the above-illustrated decrease of generalisation of this attitude was also rather evident, as in the following fragment of conversation:

⁸ Wider explanations can be found, for instance, in Lunt and Livingstone 1996.

Lay People 1 [*commenting the difference between species for animal experimentation purposes*]: ...it's unfair to make a distinction... I mean, why should a mouse be more valuable than a monkey, or a dog...

Lay People 2: Well, there *is* a difference... I for instance killed so many animals, but they were all mussels, shrimps etc.

Lay People 1: Right, ok, but those...

Prospective Doctor 1: Alright, then we also kill mosquitoes...

Lay People 1: Oh yes, those I kill very gladly!!!

Prospective Doctor 2: they're insects, after all...

In other words, a concern about mammals', or superior animals' suffering is legitimate, but when it comes to invertebrates, one can also make fun of them.

Utilitarianism – Animal experimentation was often accepted because of its utility. As a Finnish participant said: “I don't like animal testing but accept it as a necessity for the well-being of mankind”. As already emphasised, this type of goal-justifies-the-methods position is in constant increase: the focus groups data also reflected this trend, and possibly the utilitarianist position was most widely held among prospective doctors and lay people. Within such a perspective, the welfare of a single human is worth the sacrifice of thousands of guinea pigs.

Zoomorphism – The legitimacy of animal experimentation (or exploitation, in general) was also argued by the human supposed superiority as a species. A prospective doctor in the Finnish focus group said: “as a superior species, the humans have the right to use animals for their own comfort and well-being”. For some reason, the Finnish group tended to be more zoomorphist than the Italian one.

Christianism – Unlike zoomorphism, in this case the Italians displayed a more evident tendency towards this attitude. Most probably, this should be read as a reflection of the difference between the Catholic and Lutheran church, the latter being more secular when it comes to the interpretation of not-strictly-religious issues. An Italian prospective doctor said “The Church says we can eat and use animals, but we do not have to provoke unnecessary pain to them”, while his Finnish colleague stated: “Actually...religion doesn't play a crucial role in our lives...”.

Hedonism/Indifferentism – The same dialogue's sample quoted in the case of mechanism is also useful for illustrating the indifferentist attitude. As long as one is fine (i.e., one can sleep or eat, in these cases), one does not care to kill mosquitoes or shrimps. This attitude did not show up as often as expected, the reason probably being that focus groups, although quite faithfully reproducing everyday conversations, are anyway a socially-inhibiting context, at least to the extent that no one really wants to sound superficial.

Pietism – A more or less generic compassion towards 'superior' non-human animals was widely displayed, especially when it came to pets. In fact, in certain cases, participants considered a dog, if she was *their* dog, worth an *unknown* human. An animal right supporter said: “I make choices according to the degree of affective relationship I establish with the subjects in question... If I had to choose between a baby and a dog, I would surely save the baby. But if it was *my* dog and a baby I just don't know, well, the picture would probably change...”

Another possible semiotic interpretation of the attitude emerged in the two groups goes through the Greimasian *semiotic square*. The whole discussion on animal experimentation seemed to be somewhere between a tendency towards human welfare (as a result of scientific research) and laboratory animals' welfare. I will call the former "Attitude pro-Scientific research" (**S**), and the latter "attitude pro-Compassion" (**C**). At the same time, although often in opposition within the context of this discussion, the two terms are not necessarily contradictory to each other, thus the existence of Not-Compassionate (**nC**) and Not-Scientific (**nS**) attitudes is actually possible. The symbols **S**, **C**, **nS** and **nC** represent positions within the square which can be occupied by concrete attitudes or statements emerged from the discussions analysed. The relationships between the four positions can then be described as follows:

1) **S/C** – This type of relationship basically emerged from the comments of the animal rights activists, in both focus groups. According to their statements, ethical respect towards animals and scientific research are not unbridgeable practices. In fact, considering a) the claimed abuse of animal subjects within pharmacological research, which seems to be a business more than a sheer interest for progress; b) the claimed uselessness of many laboratory experiments; c) the claimed unjustifiable repetition of practices whose outcomes are already known; and d) the claimed existence of alternative methods (starting from ethological observation); animal rights supporters maintain that a cruelty-free scientific research is in fact more 'scientific'. One animal rights supporter in the Finnish focus group said: "We've already discovered that the results of some animal tests were very misleading, or the tests themselves made in the wrong way... those drugs turned out to be dangerous to humans"

2) **S/nC** – This can be considered the "science is not ethic, science is science" position. Prospective doctors in both focus groups revealed a tendency for supporting the traditional scientific research, whatever it may cost in terms of non-human lives. Animal welfare may be, and some of them think it is, a legitimate concern, and efforts should be made in order to keep animal conditions under an acceptable threshold, but if and when a choice has to be made, there is no doubt they would take what they consider the 'scientific side'. The duty of science is to produce progress, and since animal experimentation is claimed to be useful and decisive in this respect, the death and the suffering of animals is a necessary evil for progress to occur. This position is efficiently summarised by a prospective doctor in the Finnish focus group, who said: "I find [animal experimentation] necessary. This is my priority...when you need to test a new drug, it is necessary to test it on animalsyou can save a human life that way... I think this is more important than all other things...more important than everything..."

3) **nS/C** – The animal rights supporters who took part in the focus groups happened to be very informed about the 'scientific side' of the animal experimentation issue. In both groups, a remarkable competence on alternative methods, socio-political implications of the problem etc. was displayed. Still, some of their comments are representative of the part of animalism that (to a different extent) is not necessarily eager to take the 'science' issue into consideration. The one and only problem, it is said, is the scientifically-demonstrated (or emotionally-believed, according to the cases) capacity of non-human animals to suffer. Once established that, everything else is claimed to be irrelevant (or not comparably relevant). Animal experimentation may also turn out to be the most useful thing for humans, but if it involves the suffering of sentient creatures, then it makes no sense. It is the "ethics first of all" position. The animal rights supporter of the Italian group said: "having said that [i.e.,

scientific reasons why animal experimentation is not acceptable], I'm against animal experimentation mostly for ethical reasons. Possibly, a part of animal-tested research is scientifically useful, but this doesn't legitimate it, in my opinion."

4) **nS/nC** – This position features two main typologies of attitude: indifferentism and strict utilitarianism, both basically emerged from the lay-people representatives of the focus groups. In both cases, the issues of scientific progress and animal welfare are not considered really relevant. The utilitarian is not interested in the problem, as long as good drugs are still produced: it is the "if it works, it's ok" position. The indifferentist has no specific concerns on the issue: sentences like "I don't have problems with it" or "This is the price we have to pay" were pronounced quite often from the lay-people, especially in the Italian group⁹.

Finally, a Peircean interpretation of the focus groups is also possible. The dynamics of a free conversation work very often, if not always, as hypertexts. Any word or sentence is a potential occasion to start a new topic, or to restart an old one. If one took an ideally-macroscopic look on a whole conversation, it would be easily possible to construct a *geographical map* of it, detecting its dimensions, proportions and directions¹⁰.

Now, if the focus groups took any spontaneous direction, that was certainly an inductive one, i.e., from particular, pin-pointed topics up to very general comments on life. The sentences "Everything we know about our nervous system, we know because of animal experimentation" and "I would love a society where we avoid using the car to go to the disco" were both pronounced during the Italian focus group. Apparently, no whatsoever interrelation exists. Yet, if we quote another comment from the same group and – chronologically speaking – we put it in-between the previous statements, things start to be a little clearer: "You don't really feel guilty if you kill a mosquito¹¹, do you?". It seems that comments evolved from the real, exact topic (animal experimentation and related issues), to a wider discussion on the human-other animal relationship, and finally to a very general exchange of ideas about ecology and 'the way the world should be'. Such a process occurred in both focus groups (almost every time the moderator would introduce a new topic).

There can be many reasons for this peculiarity. Firstly, we can say this is a typical (although not *proto*-typical¹²) dynamics in many types of conversation, the most evident case being husband and wife arguing about their problems. Secondly, the topics introduced by the moderator would themselves offer an occasion to 'expand' the conversation (e.g., the question about religion). Thirdly, none of the participants could be competent on every single topic proposed. Also, on none of the topics

⁹ In Italy, indifferentism is not a marginal sociological category at all. The "whatever will be will be" philosophy, as applied to institutions and 'big' problems, is unfortunately a relevant part in Italian culture, and partly explains certain clamorous political/historical choices.

¹⁰ A literary, brilliant, example of this process is Edgar Allan Poe's *Murders of Rue Morgue*.

¹¹ Apparently, participants had a serious concern about mosquitoes.

¹² Quite often, conversations tend to follow the exact opposite direction, or – in other cases – they simply jump from one topic to another of the same, so to say, consistence.

proposed everyone was competent. Yet, all participants wanted to ‘say something’¹³, and often this could happen only if the topic was slightly ‘enlarged’. Finally, unless interlocutors hate each other or are so intimately related to each other to feel allowed to be always sincere (both apparently being not the case in the groups), there is a tendency in conversations to find dialectic-intellectual balance, i.e., a point on which everybody more or less agrees. Now, especially during the discussion on animal experimentation, the groups displayed a clear *prospective-doctors-versus-animal-rights-activist* dialectic dispute, lay people basically switching from one side to another, with a slight preference for the position of prospective doctors. This was made clear also in terms of body language: prospective doctors would slowly change their sitting position from a traditional circle (**Fig. 4** “before”) into a ‘2 (or 3) side-by-side’ versus 1 position (**Fig. 4** “after”). Such contrasts, evidently caused only by divergence in opinions, ended up being little comfortable for the interlocutors, who unconsciously attempted to find a dialectic ‘deal’, i.e., they slowly switched the conversation into more general topics, in which opinions could be shared more easily.

Now, from a sheer semiotic point of view, one cannot help noticing that the dynamics of the discussion followed a Thirdness-Secondness-Firstness¹⁴ Peircean process. The initial comments were pinpointed, conscious of the context (e.g., the questions of the moderator) and ‘able’ to relate it with participants’ own knowledge. One participant said that everything we know about our nervous system, we know because of animal experimentation. The next comments ‘isolated’ (what participants considered to be) the core of the discussion, i.e., animals and their relation with humans. This still displays an “actual interaction with reality”, but many particulars are now missing. One participant said that we anyway kill mosquitoes, i.e., she switched from laboratory animals to other types of relation with animals. Finally, participants ended up by almost totally excluding the actual topic, which could now be related only by vague associations, i.e., animal experimentation (the “nervous system” comment) > human-animal relationship (the “mosquitoes” comment) > nature and ecology (the participants wished non-urgent use of cars was avoided). The initial topic (thirdness) thus ‘melted’ into a much wider cognitive and dialectic category, possibly the real *first* sign we think about when relating with animals (i.e., Nature, as opposed to Culture, or outgroup as opposed to ingroup).

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¹³ It shall be interesting to go through the psychological reasons why people feel the need to point out their *presence* during such occasions, for it is quite evident that they do.

¹⁴ Thus, in reverse order, as compared to Peirce’s theory. However, the way it is meant here, is not at all in contradiction with Peirce, but rather confirms his intuition.

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