

Article

Ethology of the Freed Animal: Concept, methods, projects

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Abstract: The present essay illustrates the methodological and theoretical premises of an emerging research area carrying out both ethological and (bio)ethical implications: the ethology of the freed animal (EFA). Unlike existing ethological fields, EFA focuses neither on non human (NH) animals in natural conditions of freedom in their own environment, nor on NH animals kept in conditions of “captivity”. Rather, EFA consists of a comparative study of NH animals that are released from a condition of more or less abusive captivity and instead relocated in an environment more appropriate to their species-specific and individual characteristics and inclinations. Ideal places for this study are contexts like “Animal sanctuaries” and parks/reserves provided with a camp or station for researchers, where a previously-captive NH animal can be reintroduced in his/her natural habitat. Even though EFA exists already, as a *de facto* practice of the specialized and/or volunteer personnel running sanctuaries and parks, the field still lacks a recognizable scholarly paradigm, and it is yet to be acknowledged at institutional/academic level. By consequence, one important aim for creating a field like this lies in the establishment of an active interaction between the two parties involved (researchers and sanctuaries/parks operators).

Keywords: ethology; anthrozoology; semiotics; animal sanctuaries; captivity; anthropization; animal ethics; non invasive observation

1. Introduction

This essay intends to introduce the methodological and theoretical premises for an emerging research area carrying out both ethological and (bio)ethical implications: the “ethology of the freed non human animal” (EFA, from now on).

This kind of ethology, unlike the classical, does not focus on the observation of non human (NH) animals in a natural condition of freedom in their own environment. Neither does it compare to laboratory ethology, which observes NH animals in conditions of “captivity” (regardless of the quality of their welfare, which depends on contexts and legislations). Rather, the EFA consists of a comparative and interdisciplinary study of NH animals that are *released* from a condition of more or less abusive “confinement”, from the status of “living tool” of human beings, from any form of exploitation – and instead relocated in an environment as appropriate as possible to their species-specific and individual characteristics and inclinations - including, of course, reinstalling the subject in his/her most natural habitat. “Confinement” is a neutral term aimed at describing various forms of limitation/deprivation of the NH animal’s freedom: in this sense, we do not wish to include only the violent and physically-damaging ones. “Significance” is also a key-word, because it will be important to distinguish the forms of confinement that effectively limit or impair a NH animal’s freedom, from those that have no serious impact.

The third key-word of our study is “anthropization”. While, theoretically, not all forms of confinement can be ascribed to human action, in practice it is almost only the various human interventions on other species that create conditions of “confinement” in the sense we define it here, and that it is only the liberation from these interventions that makes a reasonable case for a veritable EFA.

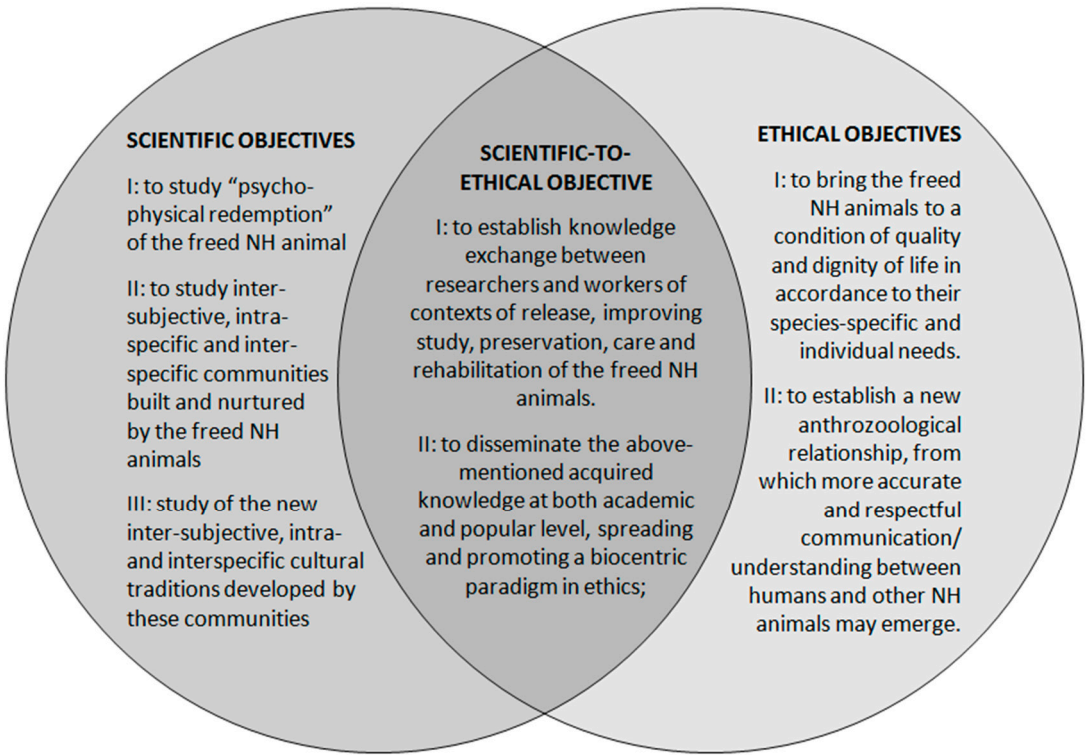
Ideal places for this kind of observation are what we may call “contexts of release”, that is, the so-called “Animal sanctuaries”, of variable dimension and population, and “monitored” natural habitats, such as natural parks and reserves provided with non-invasive camps for research. Sanctuaries are an increasingly-widespread type of institution conceived to host NH animals rescued from diverse forms of exploitation or abuse, with the purpose of reintroducing them to a living condition as much as possible compatible with their needs. As such, EFA exists already, as a *de facto* practice of the personnel running these places – however, it lacks a recognizable scholarly paradigm, and it is yet to be acknowledged at institutional/academic level.

By consequence, the data produced by EFA are not, or too little, collected in form of open databases, archives and systematized data, therefore only a small percentage of the numerous observations and experiences gathered become available to ethological research.

Thus, a primary aim, while creating a field like EFA, is the establishment of an active interaction between the two parties (researchers and operators of contexts of release). On the basis of that interaction, it should be possible to articulate a program for an operative EFA – distributed among scientific and ethical objectives. While looking forward for an accurate discussion on what this program may look like, in a coherent and solid way, we shall like to propose seven goals - to begin with (see also Fig. 1 for a summarizing Venn Diagram):

1. Scientific objective I: a non-invasive, though not necessarily non-interactive, study of what we shall call “psycho-physical redemption” of the freed NH animal, of its course and of its possibilities and limits. That is: how s/he relies on his/her new condition of non-captive individual; how s/he retakes (or does not retake) possession and control of his/her own body; how s/he develops (or, again, recovers) a temporal-spatial Umwelt, in a condition that is not anymore rigidly constricted, scheduled and manipulated by external factors;
2. Scientific objective II: a non-invasive, though not necessarily non-interactive, study of the inter-subjective, intra-specific and inter-specific communities built and nurtured by the freed NH animals, communities which the same humans tend to be (accepted as) members of;
3. Scientific objective III: a non-invasive, though not necessarily non-interactive, study of the new inter-subjective, intra- and interspecific cultural traditions developed by these communities: an opportunity, as we shall explain, carrying an enormous scientific potential;
4. Scientific-to-ethical objective I: to establish a PeerToPeer-type of knowledge exchange between researchers and workers of contexts of release, with the purpose of improving the study, the preservation, the care and the rehabilitation of the freed NH animals.
5. Scientific-to-ethical objective II: to disseminate the above-mentioned acquired knowledge at both academic and popular level, with the main purpose to spread and promote the adoption of a biocentric paradigm in ethics;
6. Ethical objective I: bring as many NH animals as possible to a condition of quality and dignity of life in accordance to their species-specific and individual needs.

7. Ethical objective II: establish a new channel of anthrozoological relationship, from which a novel, more accurate and respectful, level of communication and understanding between humans and other NH animals may emerge.



[Fig. 1: A Venn Diagram of the seven objectives of the EFA]

The present article has no pretension to be exhaustive at any level of these first steps of the EFA. The readership approaching these lines with the expectation of a "defined paradigm" will be sorely disappointed. The goal of this essay is not the *systematization* of the topic (an action that requires much more work), but rather its *problematization*. A conscious acceptance, from the readership's part, of the fragmentary and explorative nature of this article is essential for a proper understanding of it.

2. Behavior as a self-regulative interaction: post-mechanistic perspectives in the philosophy of ethology

To a conceptual and theoretical extent, the approach to the comparative study of behavior here proposed shall explicitly bypass, not only the traditional mechanist and dualistic Cartesian model, but also the "psycho-hydraulic" model of the classical and the first cognitive ethology (Marchesini 2016a; 2016b), the gene-centric one of "classical sociobiology" (de Waal 2001), and the deterministic model of behavior currently dominant in evolutionary psychology (Lieberman 2013).

Within an EFA framework, behavior is studied as a *self-regulative and cognitive interaction* of organisms with their inter- and intra-specific environment, and as the results of an interactive relation between the internal components of every and each body, which in animals is modulated and transmitted through epigenetic and social inheritance, social conditioning and individual experience, and for which the genetic species-specific inheritance functions as a condition of possibility (Celentano 2017; 2011; 2000).

"Self-regulative activity and interaction" means here that all organisms, of every species, need at any time to internally maintain or restore conditions, processes and physiological states which

allow them to stay alive, and perform this function through explorative and energy trading activities, absorbing and transforming matter and energy present in the external environment, modifying both the latter and themselves.

This self-regulating and cognitive activity are undoubtedly limited and channeled through the constraints imposed by the anatomy and morphology of the species, the intra-specific and inter-specific context, the individual characteristics or biographical circumstances, and the contingencies. However, it allows us to understand both the history of each existed and existing species and the history of each body as an active and selective exploration of the environment and construction of their ecological and social niche and their “homeorretic” path (Waddington 1976).

But what does “cognitive” mean here? We shall call “cognitive” all the activities through which organisms explore their survival chances and test their ability to actively change their physiological and/or perceptual states. Each “cognitive” activity is in this sense *a production of behavioral forms*, or of *self-regulative internal and external interactions*, enabling the performance of the organism’s life cycle. In this perspective, cognitive activities are notable not only in animals, but in all the organisms, because the simple fact that organisms are capable of surviving constitutes evidence of their ability *to somehow make an object of knowledge out of their own living conditions* (Lorenz 1973, Riedl 1980; Celentano 2000, 2017). As already suggested by Jakob von Uexküll, each organism displays the ability of knowing the elements present in its “Umwelt” *as factors that influence or may affect its physiological states*. As Lorenz liked to remember, each organism, even the *Paramecium* which, when encountering a sour acid stream, rotates on itself until it manages to change direction, is able to selectively discriminating some factors present in its environment on the basis of the “negative” or “positive” effects they have on their survival possibilities and “health” status.

3. Epigenetic Inheritance and Selective Behavior as driving forces of evolution

Since the 1990’s, two notions, previously introduced by two great scholars of the 20th century, CH. Waddington and J. Piaget, began to find consensus through experimental findings and took on a central relevance in the evolutionary studies: the “behavior as motor of evolution” (Piaget 1976) and the existence of that *non-genetic hereditary systems*, able to produce phenotypic modifications much faster than genetic mutations (Waddington 1975; Piaget 1974; 1976), which now we call *Epigenetic Inheritance Systems* (Jablonka, Lamb 2005; Jablonka 2014).

To conceive behavior, and the hereditary epigenetic variations which it can trigger, as driving forces of evolution (here understood as a process of differentiation of organisms) means that individuals, populations and species, in the face of changes that endanger their survival or offer them new growth opportunities, *do not passively remain to wait for a favorable genetic mutation that allows some of them to overcome those obstacles, or exploit those resources*. Individuals, populations, and species, facing with new difficulties or opportunities, *engage all the innate and/or learned resources they possess, all their cognitive endowment and experiences, to find various possible solutions*. This means, in turn, that, save those rare cases when they derive from significant genetic mutations, evolutionary divergences always start from the sphere of behaviors, from changes in the ethological attitudes that develop as active responses to social and environmental stresses, or changes in the environmental, social or individual context.

This approach, already introduced by Evolutionary Epistemology and defined by K. Popper as an “exploratory or active Darwinism” which “assumes that, very early in the history of life on Earth,

living organisms [...] become active explorers, actively and curiously searching for new environments [...] for new places to live in or, sometimes, merely from slightly modified ways of living, for slightly new ways of behaving" (Popper 1982: 39) is integrated, in the contemporary evolutionary studies, with some "Lamarckian" theoretical elements supported by increasingly empirical and experimental evidence.

One of the most important studies in this field was, in the first decade of the new millennium, the volume of E. Jablonka and M. Lamb, *Evolution in Four Dimensions* (2005), in which the authors brought into mutual access four important acquisitions of the last 30 years:

- there is more to heredity than genes;
- some hereditary variations are nonrandom in origin;
- some acquired information is inherited;
- evolutionary change can result from instruction as well as selection

The "four dimensions" of inheritance and evolution which Jablonka and Lamb described are the "genetic, epigenetic, behavioral and cultural" (2005: 303). They documented the fact that, in the course of phylogeny, alongside the slow processes of genetic variation, three other types of selection, heredity and variation, respectively defined epigenetic, behavioral and cultural, cooperated with the first and reciprocally producing phenotypic adaptations independently of genetic or genomic mutations. In chapter 4, they described four different kinds of EIS which have in common the ability to transmit from mother to daughter cells information "that is not related to DNA" (Jablonka, Lamb 2005: 402). Already present in the protozoa, fundamental to the evolution of multi-cellular organisms, EIS are indispensable to every sort of organisms to deal with rapid changes, contiguous variations or oscillations of their living and social environments. They are triggered by behavioral habits and/or environmental stimuli, and can preserve or modify, within very few generations, food preferences, immune systems, cognitive abilities, psycho-physical and emotional attitudes. The book reported a rich documentation on cases of transmissions of food preferences happen before and independently of any form of induction or imitation learning, in animals as rabbits, rats and humans (Jablonka, Lamb 2005: 203-207), and illustrated cases of epigenetic transmission of the effects of stress and traumatic experiences or immune deficiencies through cellular memory. It describes also cases in which new phenotypes are produced in absence of any DNA modification (Jablonka, Lamb 2005: 339) and cases of no random genetic mutations, induced by stress or changes in the environment (Jablonka, Lamb 2005: 97, 99, 109, 115-116).

In the last twelve years, this field of research has come up with other promising developments, which, making increasingly evident the close correlation between BIS (Behavioral Inheritance Systems) and EIS (Epigenetic Inheritance Systems), led to the birth of a new field of inquiry: Behavioral Epigenetics (Jablonka 2006, 2013, 2014, 2015; McGowan, Szyf 2010; Champagne, Rissman 2011; Tavory, Ginsburg, Jablonka 2012; Meloni 2014), which, according to Jablonka, includes "the investigation of the role of behavior in shaping developmental-epigenetic states and the reciprocal role of epigenetic factors and mechanisms in shaping behavior" (Jablonka 2017).

What are the implications and consequences of these new approaches in the fields of animal welfare and EFA?

We can today prove that two groups of factors turn out to be the primary ways of triggering and channeling the modification of individual and group behaviors and their trans-generational transmission. These sets of factors include:

- the events that mark the individual's biographical path from its conception onwards, and particularly all those social, emotional and cognitive experiences which produce, in the course of individual development, effects which are similar (or partially similar) to those that the classical ethology attributed to the imprinting (Mainardi, 1992)
- the events and living conditions of the last generations from which the individual descends and their power to leave traces in cellular memory, and hence in a wide range of critical physiological and ethological responses ranging from the immune system to emotional, relational and cognitive attitudes.

For example – and importantly for the present article – the consequences that traumatic events and particularly stressful life conditions can produce, not only in the next generation but also in the following, through an interaction between genetic, epigenetic and social heritage, are already demonstrated in studies about different animal species, including ours (Poole et. al. 2003; Jablonka, Lamb 2005; Iversen 2014).

These are events that in many cases can affect both the organisms directly exposed to them and their descendants, without modifying their genetic code, rather leaving “molecular scars” on their DNA (borrowing the evocative image of Iversen 2014). Other studies, however, point to the fact that stressful and traumatic events can even favor or induce genetic mutations in different animal species (Jablonka, Lamb 2005: 97-127).

These are fundamental acquisitions for a field of study such as the EFA, whose starting point, as we shall see, is precisely the reconstruction of the “personal history”, a biographical profile of every single NH animal observed, and of its provenance context, and whose objective is to learn to encourage as much as possible a dis-anthropization (a word which we shall deepen in the next paragraph) of the freed NH animals, and to study its course with non-invasive methodologies.

This is why a place like an animal sanctuary is an ideal context to study the constraints and limitations that past living conditions may impose on this dis-anthropization process by the freed animals and their descendants, and to identify the factors that can be instead favor its course. In other words, this is exactly the places where a knowledge of the “molecular scars” that each individual carries behind can become a prerequisite for a research aimed at favoring his/her self-liberation.

4. Anthrozoological premises to an EFA

With all this in mind, the next step has to be an extensive analysis of the taxonomy, the characteristics and the operativity of anthropization. It is important to point out that the forms of anthropization that we consider worth of analysis are not only, so to speak, factual (that is, physiological, ethological, physical, etc.), but may often trespass the line of the mythical, the metaphorical, the cultural and so forth. This is due to two reasons: a) our conviction that socio-cultural processes, albeit not necessarily translating into tangible anthropized characteristics in a given NH subject, retain the same value and dignity of any other process (for the same reason why cultural imperialism is worth of the same scholarly attention as military imperialism, or psychological violence is equally significant as physical violence); b) the undeniable fact that socio-cultural processes affect the human treatment of NH animals with equal (or occasionally superior) strength as all other processes (suffice to think of how the mythical perception of the “bad

wolf” has resulted in phobias, extermination of specimens, distorted understanding of wolves’ behavior, and so forth). This is a golden rule that applies to all the anthrozoological reflections we shall suggest in this section of the article, and we hope that the readership will not be too disoriented by it.

The NH animals that EFA can study are “freed” animals, not necessarily (or not yet) “free” ones. The difference emerging from these two words implies, to begin with, that the conditions preceding the release – the *past* indeed – is of foremost importance. The long tradition of ethology has primarily focused on two types of condition: the free/wild one and the captive one. Since anthropization is obviously a process that materializes only in the latter situation, we can identify the study of free/wild NH animals as a study of “An-anthropization” (the condition of total absence of anthropization) or – when some form of confinement is likely or bound to happen – “Pre-anthropization” (the temporal condition antecedent to anthropization). As soon as an actual anthropizing process occurs, we can classify at least 22 different types of confinement, distinguished by practices, context, strength and other factors (a lengthy discussion on this topic is forthcoming in Martinelli 2018):

1. Ab-anthropization (A. developed apart from humanity);
2. Anthro-anthropization (A. aimed at anthropomorphizing – physiologically, ethologically, culturally, etc. – the NH animal);
3. Anti-anthropization (A. developed autonomously by NH animals, which actually damages humanity in more or less serious ways);
4. Archeo-anthropization (A. developed in pre-historic times, often as results of co-evolution);
5. Auto-anthropization (the NH animal, so to speak, “volunteers” to be part of the human environment, accepting its dynamics);
6. Bene-anthropization (the human being is “favourable” to an A. process, even when it features elements of risk/damage);
7. Corpo-anthropization (A. that requires a significant manipulation of the subjects’ bodily constitution, physiology, etc.);
8. Credo-anthropization (illusory form of A., that may reveal itself as fallacious);
9. Grapho-anthropization (written/visual A.);
10. Legi-anthropization (A. that occurs or changes status by means of juridical or scientific regulations);
11. Ideo-anthropization (A. occurring at ideological, cultural, mythical level);
12. Idio-anthropization (A. that occurs in a confrontational manner: the NH subject/s is anthropized out of fear or specific wish to subdue);
13. Liber-anthropization (A. within which the NH animal is allowed to follow his/her natural biology);
14. Logo-anthropization (A. due to linguistic dynamics);
15. Loco-anthropization (A. that is characteristic of certain contextual/environmental conditions and that is not possible in others);
16. Macro-anthropization (A. as “large”, possibly global, phenomenon);
17. Micro-anthropization (A. as circumscribed, very local, phenomenon);
18. Philo-anthropization (A. due to emotional attachment, affection, sexual attraction, etc.);

19. Psycho-anthropization (A. that did not occur in reality, but only as a mental attitude and in some individual or cultural processes);
20. Semi-anthropization (partial A. in which the NH subject/s retain elements of their natural condition);
21. Sub-anthropization (A. that was a consequence of another anthropization);
22. Sin-anthropization (A. involving the anthropization of different species/specimens at the same time).

Needless to say, each entry should not be considered isolated from the others, but in fact often in the position to intersect and overlap with, contain or be contained by, other entries.

A “freed” NH animal may thus come from radically different conditions – radically different *pasts*. To begin with, and keeping up with the ways these different conditions relate to anthropization, the termination of a more or less extended period of confinement may result in two distinct states, which we shall call “post-anthropization” and (as anticipated) “dis-anthropization”. Post-anthropization occurs when NH animals that were previously anthropized and now have the opportunity to live outside the human environment/control/manipulation, bear significant traces of the anthropized condition, and – for instance – prove to be unable to re-acquire certain behavioural patterns/skills that would have characterized them if they were *not* subject to anthropization at some point. On the other hand, dis-anthropization is the condition of a NH animal that was previously anthropized and now has disengaged at all levels from that condition, gaining (or regaining) a reasonably an-anthropized status (see above). Here, the NH animal, at least to a reasonable extent, gets rid (physiologically, psychologically, etc.) of his/her previous condition of human control, and retakes significant possession of his/her original profile. An example of the difference between post- and dis-anthropization could be for instance identified in the ability of a predator, who had been deprived of the possibility to predate, to reacquire or not his/her predatory skills and therefore be able to survive on his/her own.

In order to generate “anthropization”, the human being needs to have enough reasons and intentions to engage in some sort of relationship with one or more NH animals. This goes without saying and is a compulsory step of the process, so (drawing from Martinelli 2010: 129-130), we may establish a general set of *motivations* that push human beings to interact with other animals, whatever form these interactions may assume. We shall indicate eight of them: 1) *adaptation* (human adaptation in a given environmental context, always implied and implies a meeting/collision with other animal species); 2) *progress* (scientific and/or technological: human beings believe it is useful to exploit other animals in order to support their own evolution and quality of life); 3) *work* (NH animals have often been part of/support to the human productive cycle); 4) *needs* (humans eat animals, wear them, and so on); 5) *pleasure* (NH animals can be exploited for purely hedonistic wishes – such as in zoos, circuses, etc.); 6) *tradition and culture* (religions, myths, folklore, literature, art... these kinds of anthropization can be either abstract – e.g. tales – or concrete – e.g. sacrifices); 7) *philosophy and research* (the scientific-philosophical relation with other animals is established in order to know more about them, or know more about ourselves as humans); and finally 8) *daily life* (NH animals are often full part of our life, independently from our choices and needs. They are part of our surrounding landscape and our actions, they manifest themselves as a painting on the wall, as

an avatar for a videogame, as material of our shoes, as food in our fridge, as a pet playing few meters from us...).

These eight categories of motivation materialize in twelve different roles that human beings assume as “anthropizing agents” (see for instance Sebeok 1998: 67-73, plus some updates and extensions provided in Martinelli 2010: 130-132): 1) *predator*; 2) *partner*; 3) *player of sports/hobbies/games* (corridas, circuses, bird-watching, etc.); 4) *parasite*; 5) *pseudo-conspecific*; 6) *insensible agent*; 7) *domesticator*; 8) *trainer*; 9) *manipulator*; 10) *information learner*; 11) *signification learner*; 12) *defender/protector/promoter*.

5. Proposals for an EFA paradigm and possible research lines

Now that we have hopefully legitimized, from both a scientific and a humanistic perspective, the need and the existence of EFA, we can begin to articulate the paradigm as such, elaborating on the reflections proposed in the introduction to this essay (see also fig. 2 for a summarizing scheme). Once more, it is important to remind that this article is prolegomenon to this possible new field, and that we envision plenty of refinement and improvement in the near future.

Concept. Reiterating on what we already suggested, we can define the “Ethology of the Freed Animal” (EFA) as a comparative and interdisciplinary study of NH animals that are *released* from a condition of more or less abusive human confinement, or anthropization, and relocated in an environment as appropriate as possible to their species-specific and individual characteristics and inclinations – including the reinstalling of the subject in his/her most natural habitat.

Objectives. Also, we have already mentioned in the introduction our preliminary proposal for a program of objectives in *seven points*, distributed among scientific and ethical ones. It is obviously an *open* program which needs to be updated and upgraded by other researchers and operators and put to the test in field work. This program includes three “scientific objectives” (study of the “psycho-physical redemption” of the freed animal; study of the inter-subjective, intra-specific and inter-specific communities built and nurtured by the freed animals; and study of the new inter-subjective, intra- and interspecific cultural traditions developed by them), two so-called “Scientific-to-ethical objectives” (to establish a P2P-type of knowledge exchange between researchers and workers of contexts of release; and to disseminate the acquired knowledge at both academic and popular level); and two “ethical objectives” (improvement and increase of the freed animal’s quality and dignity of life in accordance to the species-specific and individual needs; and establishment of a new, more scientifically-accurate and ethically-respectful channel of anthrozoological relationship). In the next paragraph, we shall elaborate on these objectives.

Methods. If concept and objectives were already mentioned in our introductory notes, nothing specific was yet said about methodological aspects. Obviously, the restrictions of an article of this sort do not allow us to deepen this part as much as it would deserve. However, what we certainly intend to do is to highlight some approaches and practices that nowadays characterize both the ethological research and the activities performed in contexts of release, and which are fundamental for the EFA. A second aim is to focus on some activities, such as playful ones, or the spontaneous exchanges of care, not only between conspecifics but also at interspecific level, an aspect which, in

our view, is not only of high scientific interest, but may also play a central role in increasing welfare and social cohesion, and reducing tensions or conflicts, within interspecific communities, such as those established in contexts of release like animal sanctuaries in particular.

With this in mind, the first concept we shall discuss is that of ethology as an “animal ethnography” designed in studies as Lestel 2006 and 2014, and Lestel-Brunois-Gaunet 2006. Lestel believes that only a few years ago, ethology begun to emancipate itself from a mechanistic and deterministic approach, and attributes this important turn, in first place, to the discovery of animal cultures and to the resulting assimilation, by ethologists, of approaches and methodologies which were already in use in the ethnological field. These developments have led to the birth of a truly new discipline, ethno-ethnology: “Unlike classic etho-ecology, etho-ethnology can be described as a discipline that studies the dynamics of agents which combine actions and interpretations in an ecological, historical and individual perspective” (Lestel-Brunois-Gaunet 2006:166). Convinced that sociality, culture (here understood as differentiation of uses and traditions in the populations that make up a species), and individual differences are phenomena widely spread in the animal world, which only arrogance and prejudices prevented us for two millennia to recognize (Lestel 2001), Lestel observes that “the convergence between ethology and ethnography has significantly transformed studies of animal subjectivity and culture. The future of both fields lies in a cultural zoology that treats animals as subjects partaking in culture” (Lestel 2006: 147).

Etho-ethnology, or cultural zoology, in Lestel’s sense, became therefore “an ethnography of the way the individual beings perceive and conceive, in the course of their interactions, the behaviors of other living beings and the way they react to these behaviors” (Lestel-Brunois-Gaunet 2006: 167), a form of comparative study of the animal behaviors, minds, and cultures which places at the center of its approach the animal understood as “a coherent agent that interprets significations in a homogenous manner [...] and attempts to understand it in a historical (which calls on a temporal dimension) and social (an agent always acts in coordination with other agents) perspective” (Lestel-Brunois-Gaunet 2006: 166).

To assume an etho-ethnologic approach means then first of all:

- At the level of procedures and methodologies, to adopt observation and data logging methods which allow to distinguish, in the least invasive possible way, each individual as such, within an observed group, and each observable local or regional intraspecific difference of uses and communication systems in the populations belonging to the same species.
- At theoretical level, to assume that:
 - each animal is not a simple repeater of behavioral patterns typical of its species; it is a selective agent which behavioral, cognitive, emotional and communicative features are the results of its historical and social roots and its experiences and biographical paths¹;
 - each social group, in every social species, confronts environmental contingencies and internal dynamics that can differentiate it from others, leading to the development of divergent interpretations of the same signals, or of more or less deep modifications of the same communicative

¹ Complementary to etho-ethnology is, by Lestel, an ethno-ethnology oriented “to evaluate in what way the behaviors of non-humans – and the reactions they underpin – influence human knowledge and skills, and their further influence on their behavior, their imaginary and their conception of the world” (Lestel-Brunois-Gaunet 2006: 167).

codes, preferences and uses, and so to the birth and consolidation of different interpretative and behavioral traditions.

By way of a protocol for each context of release, the data collection methodologies of EFA would include:

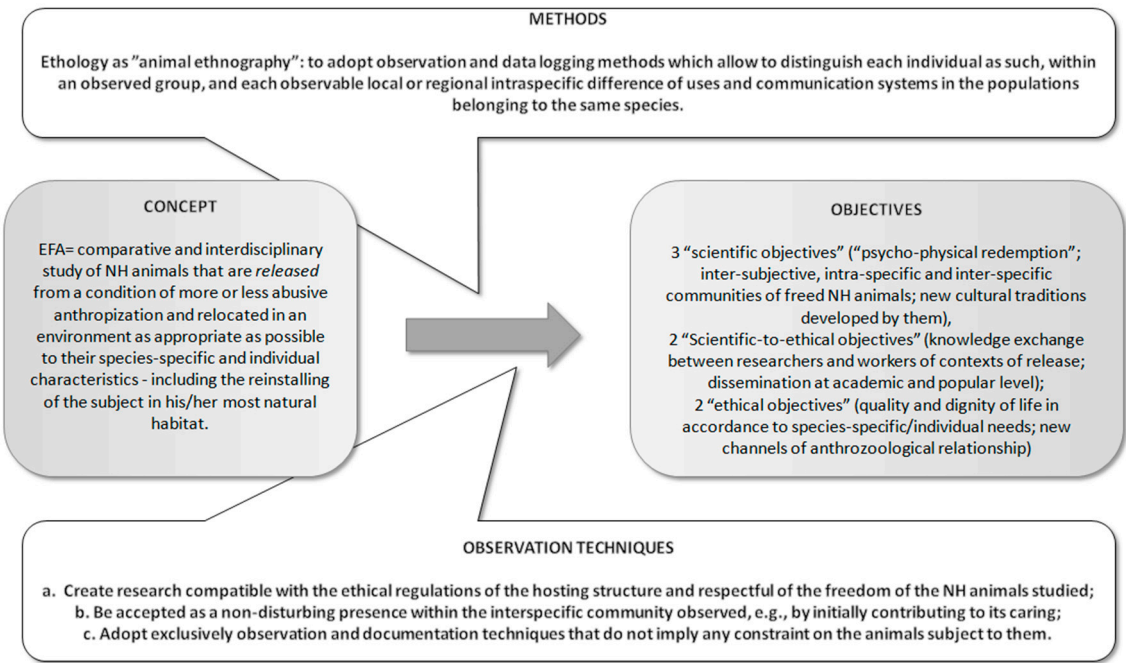
- A biographical profile for each NH animal hosted, inclusive of an anamnesis of the past experiences and trauma suffered – as exhaustive as possible;
- A clinical profile which illustrates the animal’s overall health status, obtained with the less invasive techniques today available;
- A filmic and photographic documentation of physical status and behavior of every hosted individual at the time of his/her introduction in the context of release;
- A methodical monitoring of his/her post-anthropization pathway.

Observation Techniques

According to the EFA approach, the ethologist who intends to study NH animals hosted in contexts of release will have to:

- Create a research project that is fully compatible with the ethical regulations of the hosting structure and that is generally respectful of the freedom of the NH animals studied;
- Be accepted as a non-disturbing presence within the interspecific community in which s/he wishes to be involved, e.g., by initially contributing to the caring of the community itself (animal feeding, maintenance of the living environment...);
- Adopt exclusively observation and documentation techniques that do not imply any constraint on the animals subject to them.

How does this program translate into actual research work? In the next paragraphs we shall provide a few examples of possible “areas of specialization” that EFA may claim as typical of the field. As the value of multi- and possibly inter-disciplinarity seems is in this case imprescindible (particularly due to the prominent involvement of anthrozoological and ethical research), we shall offer examples belonging to diverse fields in both natural sciences and humanities.



[Fig. 2: Summary of the EFA paradigm]

5.1. *Playing, reciprocal care and welfare within a interspecific community*

According to Garvey, C. (1990) play is understood, in the contemporary psychology and ethology, as a range of self-rewarding or intrinsically motivated activities associated with a recreational pleasure, and not related with a direct and immediate increase of fitness or survival. According to the classic descriptions of Lorenz and to the *Dizionario di Etologia* (Dictionary of Ethology) edited by D. Mainardi (1992), a playing activity is possible only if the involved individual, or individuals, is/are not under stress and not conditioned by primary need such as hunger, thirst, or fear and impulse to escape.

Game activities have been found in about 80% of living species of mammals, while so far there are less evidences of their presence in other animal classes. However, they have been documented in some species of social birds such as crows and, in apparently more elementary forms, in some fishes and reptiles.

Here, of course, we cannot to offer an analysis of the various types of observable play activities; we limit ourselves to suggesting that they are subdivided into at least three major groups:

- Playful activities in which animals interact with elements in the environment that are not living beings;
- Playful activities in which animals interact with their conspecifics;
- Playful activities involving animals of different species.

Each of the last two types goes then into two subgroups:

- a) Interactions in which all the involved individuals (whether or not conspecifics) participate spontaneously and exhibit preliminary or recurring patterns such as the invitation to play and the alternation between ritualized aggressive patterns and care patterns (e.g., licking for mammals), which express their reciprocal recognition as play-partners;
- b) Interactions in which one or some of the participants are forced by the other/others into the role of “object” used to carry out self-earning activities. A typical example of this second group is the classic “play cat and mouse”: a non-hungry cat teasing a prey, before or also without killing them.

The manifestation of these three forms of playing is a significant symptom of the state of welfare, and at the same time a significant path to post-anthropization or even dis-anthropization of the freed NH subject. For this reason already, they may constitute a study object of particular interest for EFA. In addition,

- In mammals’ communities, play is a very important factor for social integration, for the unbreakable outburst and overcoming of tensions within a group, for the acquisition of skills and information that will later prove to be useful for survival, and for the formation of a stable social structure.
- The patterns of invitation to play and the forms of ritualization of aggressive, hunting, and sexual behaviors which the young mammals use in their playing activities show an evident *trans-specificity*, an inter-specific value which makes them immediately interchangeable, not only between individuals of the same species, but also between mammals belonging to different species, living in different environments and exhibiting radically different morphologies.
- These patterns of invitation and ritualization result in several documented cases equally functional also in the interaction between mammals and some social birds.
- As mentioned above, we begin only now to fully grasp that playing belongs to a behavioral repertoire that has developed even outside the mammalian class, and particularly among social

birds, in forms that show both great divergences and striking convergences with those developed by mammals.

- These affirmations concerning the playful activities are also extensible to another crucial set of mammals' social patterns of behavior: the exchange of care.

5.2. Overcoming anthropocentrism, speciesism and anthropocracy

As we have seen, while EFA studies the NH subjects in a post- or dis-anthropized condition, at the same time it requires a thorough account of their previous state of anthropization. This is a privileged position to discuss the actual social and existential factors that *de facto* mediate any anthropization process. While the needs (or sometimes just wishes) that motivate and activate anthropization are the ones above described in the first list of paragraph 4, the role humans ascribe to themselves as agents of anthropization (second list) is, in our opinion, characterized by three main domains – often overlapping in action, but not in meaning: anthropocentrism, speciesism and anthropocracy. According to the usual definitions (e.g., Bartolommei 1995: 40-83, or Martinelli 2010: 302-304), 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 because of its hypothetically *intrinsic value*, but just because of its *instrumental value*, i.e., the values it has for and to humans.

The term "speciesism", coined by Richard Ryder in 1970, was brought to general attention by Peter Singer (1975 – see also Martinelli 2016: 149-151 for an adaptation of the concept within the emerging platform of the so-called Numanities). It is defined as the discrimination against certain animal species by human beings, based on an assumption of humankind's superiority. Its first appearance as a dictionary entry in 1985 (in the Oxford English Dictionary) marked the official acceptance of this word into common language. Much like racism tends to be considered a natural, though not compulsory, consequence of ethnocentrism and nationalism, speciesism is certainly a product of anthropocentrism, although not its *conditio sine qua non*.

Anthropocracy, finally, is proposed as a novel concept (here, and particularly in Martinelli 2018): easily drawing from ancient Greek ("human power/domination"), the term here signifies the positioning that humankind takes within the environment and in comparison with other animal species: the positioning of the ruler, the one in charge of everybody else's destiny, and the one allowed to colonize and manipulate any desired portion of the planet. Already at an early stage of human evolution, domination has become the main, and then the only, form of human adaptation to the environment. Keeping up with the previous comparison with human intergroup dynamics, whereas anthropocentrism reminds to ethnocentrism and speciesism reminds to racism, anthropocracy may be designated to correspond to imperialism and colonialism.

It is very difficult to imagine, at the present state of human evolution, just any form of anthropization that is not mediated by one or more of these three factors. Even the most benevolent types of anthropization depart anyway (and at least) from a self-positioning, from the human agent's part, "at the centre" of the anthrozoological space (e.g., the *responsibility* to preserve a given species), or as "magnanimous despot" (e.g., *ownership* of a pet). The question is problematic *per se*, but it gets even more so, when we consider that anthropocentrism, speciesism and anthropocracy are likely to filter (and consequently distort) the anthrozoological relation with a number of

significant biases (there is no room to develop the question here, but the similarity between these “interspecific biases” and the lengthy-problematicized “intergroup biases” – see Tajfel 1981 – is quite striking). We see EFA as a significant chance to (commence to) overcome these three filters and to replace the biases with a more balanced and knowledgeable understanding of our fellow species.

We shall mention only few of the numerous distortions which affect our anthrozoological relationships. It is certainly high time to face seriously our loss of awareness of our biological nature and condition as “animals”. In nearly all fields of human and anthrozoological interactions, we observe a continuous process of detachment of human beings from their biological status as animals - starting from the word itself, “animal”: when we say *animals*, we think of every animal species except the human one. Our biological roots are forgotten, and in the process, we efficiently create a cognitive gap, identifying ourselves as different (and, most of the times, “better” on some scale). We have established a whole anthropocentric/speciesistic/anthropocratic discourse, which has the immediate effect of separating the world (i.e., the perception of reality) into center and periphery – periphery standing for otherness. To discuss the idea of *animal* means also to discuss the idea of otherness. Nowadays, non-human animals are perceived as *the others* par excellence. Humans basically *think, do, have, are, etc.*, what animals *do not, have not, are not*, and vice versa.

The creation and establishment of such discourse and such socio-cultural dynamics produce what we may call a “Metalevel of representation” – the idea, in other words, that one is led to deal with a given portion of reality through means that belong to another portion of that reality, one that is only indirectly related – and sometimes not related at all. What we may want to ask ourselves is whether there could be a relation between the diverse forms of metalevel, and if (as we evidently suspect) they are part of one single mentality. We believe it is fair to say that there are at least two types of important connection: first, *symbolic violence*, which one shall directly connect to the concepts of structural and cultural violence, defined by Johan Galtung (1969), with reference to ingroup-outgroup dynamics (see again Tajfel 1981) and their impact on socio-cultural interactions; and second, a kind of anthrozoological version of *the conflict between civilizations*, both of which lead once again to our three filters: anthropocentrism, speciesism and anthropocracy. It is not exaggerated to call the anthrozoological relation a “conflict”: the anthropocratic ruler/colonizer is generally speaking a belligerent one: s/he keeps the power by constantly and coercively reaffirming it. S/he kills, exploits, possesses, hunts, imprisons... even when s/he has “won” already.

There is no doubt, to our mind, that developing a serious EFA would be of enormous help in reconnecting with our condition of “animals”. The key would not be in the fact itself of activating a close relationship with NH subjects, in ways that are respectful, non-invasive, and so forth – that happens in many other forms of anthrozoological relationship, be that scientific or not. The point would be the “maturity” of such relationship, the fact that for the first time the latter would be established on the basis of an explicit, programmatic intention to remove any form of anthropocracy, benevolent or not. It would not be a relationship between dominant and subordinate, protector and protected: it would be an active process of “reduction”, and ultimately “removal” of the anthropic presence and influence in the NH animal’s life. It would be a process of “decolonization” in the way the latter should really work: not only would the “troops” leave the formerly-colonized land, not only would independence be formally acknowledged, but also the local inhabitants would be repaid of all the damage suffered through the re-establishment of structural-economic conditions

560 (“cancelling the debt”) that would make the land totally self-sufficient and the independence
561 permanent.

562 Another important distortion that EFA may contribute in addressing critically is what we may
563 call “standardization of diversity”, which can be briefly defined as the replacement of diversity with
564 prototypes. We shall again use language as an example: expressions like “animals are X”, “animals
565 are not Y”, “animals do A”, “animals do not do B”, are not only gross generalizations of
566 observations/reflections that would require accurate distinctions (species by species, if not specimen
567 by specimen), but they are also “empty” expressions that once again bring the discourse on a
568 metalevel that has little or nothing to do with the topic dealt with (e.g., sentences like “animals are
569 intelligent” or “animals suffer” say absolutely nothing about intelligence, suffering or – for the
570 matter – about animals). We may standardize the diversity within the ethogram of a given species
571 (documentaries about wildlife have the sinister tendency of picturing – say – a big feline as a
572 redundant performer of three patterns only: hunting, sleeping and mating); we may standardize the
573 diversity across specimens, by expressing evaluation on a species-basis only: *dogs* (all of them!) are
574 devoted to humans; *cats* are independent; *sharks* are aggressive; *chickens* are stupid – and so forth. As
575 a consequence, the complexity/diversity/asymmetry of reality is invalidated through the claim that it
576 requires too much effort to be completely grasped, and – rather than being simply softened or
577 simplified – that complexity gets reduced to the most extreme degree of generalization, i.e.,
578 binarization. Political discourse, at its worst, is rather effective in adopting this strategy. Most of the
579 rhetoric employed during military conflicts conflicts based on a pretentious distinction between
580 good and evil. The illusion of a total mastering of reality (who, after all, is not able to tell the black
581 from the white, the cold from the hot, etc.?) anaesthetizes minds and consciences, and makes it easier
582 to convey messages of standardization and dominance. Once standardized to one single cauldron
583 (“the animals”, or even “the animal”, in singular form), *all* NH animals become the single ontological
584 counterpart of the very being that, though an animal too, aspires to be “something else”: the human
585 being. The human identity is therefore defined in (winning) comparison with this huge counterpart
586 that in fact becomes not so huge anymore and that rather bears the characteristics of the black box
587 where anything goes. The “Man and animal” rhetoric creates an unrealistic dichotomy where any
588 subject of comparison (be that intelligence, sociality, culture etc.) safely keeps elephants and moths,
589 vultures and turtles, gorillas and salamanders all on the same level. By consequence, the subjects of
590 comparison themselves becomes standardized and binarized: if we can compare “intelligence” only
591 between human beings and *all-other-animals-indistinctively*, it also follows that there are only two
592 types of intelligence, the human and the non-human, and that the latter can only be measured on the
593 former.

594 A serious EFA deprives us of this unjustified privilege. It deprives us of the abusive right to
595 generalize, to assert inaccurate (commonsensical, philosophical, but also supposedly-scientific)
596 statements about *all-other-animals-indistinctively*, and get away with it. EFA should treat any
597 behavioral phenomenon as complex and multi-layered and should refuse on principle reductive
598 one-sided interpretations. In a typical EFA research program (the way we may envision it at this
599 early stage), we are forced to conceive the NH subject’s Umwelt in ways that acknowledge their
600 specific and their individual complexity. We are forced to pursue a pluralistic “hermeneutics” of
601 Nature, which takes into account the biological foundations of certain behavioural patterns and the
602 autonomous and peculiar developments of other ones. We are forced to acknowledge that since

there are about 1,250,000 identified animal species on this planet, we should in principle create 1,250,000 areas of inquiry for ethology, and that the only reason why we cannot do it is demographical (it would take one sixth of the world human population to only activate this enterprise), not because it is not needed. Uexküll teaches us the uniqueness of each interaction between a living organism and the environment it is surrounded by (with all its complexity), between a structure and a counter-structure, between a receptor and a carrier of meaning. These two parts are in constant and reciprocal informational exchange. In fact, the exchange itself is the real generator of any phenomenon pertaining to “life”.

6. Conclusions

Having used so much space to build and defend our arguments, we shall limit our conclusions to a short summary of the material displayed. This article has attempted to introduce some methodological and theoretical premises for an ethology of the freed animal, that is, a comparative and interdisciplinary study of NH animals that are *released* from a condition of more or less abusive anthropization, and relocated in a post-anthropized and/or dis-anthropized condition. “Contexts of release” (i.e., animal sanctuaries and monitorable natural habitats) were identified as ideal places for EFA observation and research.

In paragraph “1.Introduction” we have identified a preliminary program of objectives in *seven points*, distributed among scientific and ethical ones: study of the “psycho-physical redemption” of the freed animal; study of the inter-subjective, intra-specific and inter-specific communities built and nurtured by the freed animals; study of the new inter-subjective, intra- and interspecific cultural traditions developed by them; establishment of a P2P-type of knowledge exchange between researchers and workers of contexts of release; dissemination of the acquired knowledge at both academic and popular level; improvement and increase of the freed animal’s quality and dignity of life in accordance to the species-specific and individual needs; and finally establishment of a new, more scientifically-accurate and ethically-respectful channel of anthrozoological relationship.

In paragraphs 2 and 3 we discussed (what we consider) two crucial ethological preconditions for developing a credible EFA: the concept of behavior as a self-regulative interaction (here approached in an openly post-mechanistic perspective), and the concept of epigenetic inheritance and selective behavior as driving forces of evolution (that we approach in a post gene-centric perspective). In the first case, the position we support and defend is that all organisms, of every species, need at any time to internally maintain or restore conditions, processes and physiological states which allow them to stay alive, and perform this function through explorative and energy trading activities, absorbing and transforming matter and energy present in the external environment, modifying both the latter and themselves. Consequently, each “cognitive” activity is a production of behavioral forms, or of self-regulative internal and external interactions, enabling the performance of the organism’s life cycle. In the second case, we argue that behavior and the hereditary epigenetic variations which it can trigger are sheer driving forces of evolution, and therefore evolutionary divergences always start from the sphere of behaviors, from changes in the ethological attitudes that develop as active responses to social and environmental stresses, or changes in the environmental, social or individual context: this is why the very starting point of EFA has to be the reconstruction of the “personal history” of every single NH animal observed.

In paragraph 4, we have discussed some anthrozoological questions that must be considered basic premises to an EFA, defining more at length the concept of "anthropization", in terms of typologies, motivations and roles.

Finally, the essay was finalized with the more extended paragraph 5 (and subsequent sub-paragraphs), "Proposals for an EFA paradigm", where we restated concept and objectives of EFA and elaborated on methods and observation techniques. More extensively, in the sub-paragraphs, we have offered two possible research lines, drawing from the hoped-for interdisciplinary heritage of this emerging field: play behavior (approached in a mostly-ethological sense) and a more general landscape of the numerous ethical implications of the field (or, rather, opportunities for ethical progress in the anthrozoological relationship).

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