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Non-human Animals in Open Societies
Anthrozoology Studies

Presa Universitară Clujeană

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Cuprins

Introducere

Irina Frasin*

We share our world with other-than-human beings, and we marvel at the fascinating complexity of life as more and more of them start to reveal their secrets to us. Due to attentive and farsighted scientists, and carefully drawn research, we begin to understand non-human societies, cultures, and languages. The other animals, just like ourselves, have rich inner worlds, different personalities, and strong and complex minds and emotions. And once all this became clear we cannot be unchanged in our ethical perspectives. All this makes obvious the vulnerabilities of the traditional views, that devalue and depersonalize the other animals in order to instrumentalize, commodify and make them quasi-things.

More than that, the new challenges that humanity faces have made us realize that we are not alone, that our lives are interconnected, and our wellbeing and health are dependent on that of the other animals and the environment. Now, as we clearly see the limitations and dangers of the overwhelmingly anthropocentric traditions, we need to review our ethical convictions and begin re-shaping and re-building our societies. It is of utmost importance to define our relationship with the other animals afresh. In a multispecies world we need to consider cross-species equality. If we are to thrive in this larger community that is our shared home, and to achieve peaceful co-existence, we need to learn to be citizens who live along our fellow animals, we need respect and multi-species justice.

The present volume addresses precisely these questions of how we are supposed to get beyond the knowledge and information to reach a kind of moral awakening. We are clearly, as a collective, as a

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society, as a globally connected network, in need of change, meaningful change. Once we recognize both the special abilities of the individuals of other species and the importance of biodiversity, we simply cannot deny our ethical responsibilities. In this book, researchers from different fields and backgrounds try to ponder these questions, and others, in order to shed light on he possibility of building a respectful and just multispecies community.

The book opens with a chapter on dogs and our long-lasting relationship with them. We know dogs, and they know us, we evolved together. **Marco Adda**, an excellent specialist in dog behaviour, brings to our attention our ways to be around and interact with dogs as a way to think about and forge more meaningful and equal ways of interaction. Dogs have the power to influence our behaviour just as we have the power to influence theirs. Thus, re-thinking our relationship, balancing it in a just way, letting them more freedom and initiative, may serve as model for a transition toward a co-created multispecies society. The following study is a complex and sensitive approach to animal cultures. **Isabella Clarke**, in her wonderfully documented research, brings to the fore the intricacies of animal lives that may elude us at first glance. Now we know that non-human animals have some extraordinary abilities, some of which were considered previously as exclusively human. But they also have others that we can only dream about and imagine. The most intriguing part is that many of these abilities are perfected by social learning and culturally transmitted behaviours. Thus, by recognizing the importance and significance of animal culture we should extend our duties to protecting not just individuals but also communities and populations.

Both authors underline the importance of learning how to listen to our fellow creatures and thus learn to live in a shared world. Until now we considered that we own the world and all that it is in it. Nature was a resource that was supposed to regenerate endlessly and offer us all that we need and want. The next text shows us how things got together to create this picture of submissive nature, animals, and women. **Cătălina Răducu** reveals to us the cultural

construction that made all this possible. Understanding it we may hope to step out of it and change for the better.

The following chapter concentrates on international laws and regulations for animal protection. We all understand clearly that we need real and significant change but, being realists, we understand that this change will come gradually, and our laws have a significant part to play in it. **Lavinia Bejan** is systematically analysing the rules and regulations, treaties, and conventions that work at the present for protecting the other animals. The picture is not very promising, but we need to know where we are in order to be able to think about bringing significant change.

The next two texts are regarding special relationships that we form with specific non-human animal species, cats and horses respectively. They both aim to better understand these species in order to create more just and equal interactions matching a real multispecies community. **Irina Frasin** is writing about learning to live in a real community with the community cats. **Dan Manolăchescu**, **Mirela Tripon**, **Alina Rusu** and **Ionel Papuc** write about human – horse relationship, mutual understanding and the emotions involved.

We are than confronted with something different. **Liviu Mădurianu** and **Daniel Măgurianu** introduce us to cryptozoology, the study of elusive creatures. The interesting presentation of amazing and sometimes really intriguing creatures challenges us to think about what we trully know and face the boundaries of our (scientific) knowledge. Next, **Felicia Ceaușu** is writing on evolution and communication. Learning more and more about communication is paramount for surpassing our residual anthropocentric tendencies. In his chapter, **Codrin Dinu Vasiliu** is focusing on animal photography in times of conflict and / or natural disasters and is dwelling on how it would be possible to approach it in a respectful and appropriate manner.

Closing this volume we have a wonderful text, signed by **Alina Rusu**, about teaching anthrozoology and all the challenges that come with multi, inter and trans-disciplinary research. It is absolutely

crucial that the future generations become more sensitive, more empathetic, more open and more careful toward the other forms of life if we are really to think of changing our society / community for the better.

What is truly clear in the end is that we must put aside our arrogance, as human species, and seriously think about building together with the other species a community that will include us all as partners. For that we must learn how to listen and how to work collectively, to truly collaborate. By now, we must have realised that our current treatment of the other animals is morally unacceptable and thus it must stop. What we are trying to do in this book is challenge you to think radically different about a possible future with our fellow creatures, a future where we are all treasured as individuals, where our common vulnerabilities are recognised and protected and where inter-species justice is a reality.

(toward) a canine anthropology

Marco Adda*

Abstract. *Understanding dog and human interaction in all forms is essential to improve the relationship between the two species and further contribute to a fair process of mutual influence. That is fundamental for dog parents/caregivers/ guardians and professionals working with dogs and people at any level. Additionally, dog-human communication, behaviour and training may play a critical role in rediscussing human supremacy, for people follow dog behaviour and training models extensively and worldwide.*

Countless studies on dog behaviour and cognition have unfolded excellent knowledge in recent decades. However, the psychophysical interface of dog-human interaction needs to be explored further. To investigate this aspect with a multidisciplinary approach, I gather elements from Theatre Anthropology, psychophysiology, cognitive neuroscience and bodymind practices. I introduce the theoretical frame of Canine Anthropology to focus on the psychophysicality of the human bodymind and its canine counterpart when some interactions between the two species occur. I describe the roles of the human "actor" and the canine "spectator" involved in complex events that generate meaning. A human's body position, action, and intention critically impact dog behaviour, and the dog-human interaction acquires a phenomenological significance. As spectators and mediators, dogs can affect human behaviour and flip their roles. They are the receivers and the reciprocators of human synaesthetic transmission. Thus, the dog-human interaction discloses itself as a psychophysical and embodied experience.

Keywords: dogs, human-animal studies, anthrozoology, canine anthropology, theatre anthropology, bodymind, bodyworld, mirror neurons, somatic, Alexander's technique, Tinbergen, Stanislavsky.

Biased terms, predetermined practices, and behaviours

The realm of dog-human interaction is disseminated with various contradictions. While it is the pinnacle of human-animal studies, it reflects perspectives which frame humans as the controller. Those perspectives are outdated, yet they recurringly emerge in

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literature and practice. For example, many journals and researchers still use "dog owner" when referring to a dog's human. While in some cases that may be for practical and editorial reasons (Pongrácz and Camerlink 2022), in other cases, it is the heritage of an outdated paradigm. On the contrary, other journals have a different approach suggesting a

> language that is respectful of our relation to animals of other species. For example, use personal pronouns such as "he," "she," "his," "her," "who," "they," "them," and "whose" but not "its" or "which." […] "companion animal" (not "pet"). "Guardian," "keeper," or "caregiver" (not "owner") should be used. (*SOAN*)

In this essay, I may use the expressions dog "parent," "guardian," "caretaker," and "caregiver." They are equivalent and reflect the need to take distance from the idea of ownership of dogs and every living being.

Vocabulary sometimes represents a critical issue. Academic research is no longer isolated within its borders. Scientific literature can be easily accessed through the internet by everybody, and its vast spread in the news gets wired into the daily life of people and dogs. This may be problematic, for it can subconsciously reiterate "ownership" as a form of control over dogs, justifying a type of communication centred on commands and humans' demands, and echoing human supremacy. Those mindsets undermine understanding and practices, unlikely supporting the rediscussion of anthropocentrism (Kopnina et al. 2018; Adda 2020) and the fostering of multispecies societies. They may prevent empathy, listening, attunement, and other fundamental concepts and practices needed to create a respectful relationship with dogs by embracing animal psychology, emotion and sentience (see Bekoff 2008).

Alongside "ownership," the term "domestication" makes no exception (Adda 2021), for it carries anthropocentric views and doesn't necessarily describe the history of humans influenced by

dogs or exploiting dogs and other animals (see Dimbleby 2008, Nibert 2013).

Biased terms echo discriminatory practices. Dog behaviour, and training theories and practices are crucial vehicles. The "dog learning agenda" – including the various Sits, Stays, Comes, Waits, etcetera – even though those are asked "gently," is still based on established behaviours for the dog, which limit the emergence of other and new forms of expression, communication and dialogue with dogs. Further, we must target one of the most problematic and widespread terms in the dog training landscape: obedience. The term may refer to dogs trained in specific skills, for example, military dogs (Haverbeke et al. 2008). Still, it may also refer to every dog living as a companion in a human family who does not need to do any specific task – apart from coping with daily challenges. Many people believe that a dog, to be "good," must know the basic commands of obedience. This often reflects an anthropocentric view, with the human expected to control the canine counterpart. Although a certain degree of control may be necessary to manage the interaction of dogs with their environment (home, surroundings, dog park, etc.), and for the dog's safety, a healthy bond between dogs and their humans should rely on mutual understanding, empathy, agency and the freedom of choice. Some other approaches to dog training propose perspectives integrating canine psychology, cognition and emotion, and leverage the reliability of a relationship instead of responsiveness to commands (AEDC, AggressiveDog, Do as I do, Do No Harm, Roman's Holistic Dog Training, ThinkDog, Upward Dogology, Without Worry Canine Education).

Reward-based methods – using rewards for the behaviours that one wants a dog to follow, are facets of operant conditioning (see Akpan 2020) and may be relevant to the approach to dogs, while the dog training and parenting landscape should ban aversive training (typically positive punishment and negative reinforcement techniques). However, what is at stake here is not just the distinction between aversive-based and reward-based methods. We are discussing the ability of dogs to choose for themselves and the

possibility for humans to acknowledge that and create the conditions for that to be expressed.

Starting in the late 1990s, fundamental studies have shown that dogs, most likely as a result of domestication, have unique abilities to read human-given communicative signals (Hare et al. 1998; Miklosi et al. 1998; Agnetta et al. 2000) and are, for example, sensitive to a human's perspective (Kaminski et al. 2009). The attention to canine cognition has increased exponentially in the last two decades. Due to their connection to humans and cognitive similarities, dogs today represent more reliable models – compared to some primates, for understanding human social behaviour (Topal et al. 2009). Yet, they happen to be still conceived, in many contexts and geographic areas, as subordinate to humans. That may occur consciously – as in the case of dog trainers who consider humans as being "the boss" (Charles et al. 2021; Greenebaum 2010), or unconsciously. In this latter case, we can incorporate a wide array of behaviours inherited and displayed by humans. For example, when touching a dog on the head. Some people may do that spontaneously and inoffensively. Yet, some dogs may dislike being patted on the top of their head (De Keuster et al. 2006; Kuhne et al. 2012; Landsberg et al. 2003), and people should avoid doing it. While some dogs may adjust and accept that and other human behaviours, others may disagree and show disappointment. Dogs should be allowed to choose what they like or not, what they prefer or not, what they consider more valuable or which behaviour they choose to display according to a particular scenario. In particular, they should be allowed to express their disappointment, which is something human often tends to dispute or punish. Rather, human intervention and a lack of understanding of dog behaviour often interfere with the dog's deliberate choice.

From lack of choice to identified patients

Dogs living as companions are insufficiently exposed to their deliberate choice. They depend on humans for everything: food,

sleep, going out, being on or off-leash, how to greet other dogs and people, barking or not to bark, what to do or not to do, etc.. Dog parents often build their parentship on assumptions, and the choice they make for their dogs may not reflect the dog's preference. This is evident when, for example, a dog wants to sniff a particular object or area, and the human does not allow that, considering it unnecessary, dangerous or disgusting. Though, many other scenarios are less evident where humans prevent dogs from choosing for themselves. For example, dogs may assess food quality (see Chase and George 2018) and spend their days (Griss et al. 2021) differently from what people may expect.

The lack of deliberate choice in the life of companion dogs may generate problems. Namely, the relationship between humans and their dogs becomes stagnant, it doesn't evolve or express its potential, and both dogs and humans within that family system may feel distressed. That often results in dogs' behavioural issues due to depression, anxiety, reactivity and other forms of tension (De Keuster et al. 2006; Corrieri et al. 2018). It is often the case that dogs express that stress more evidently, and they are pointed out as problematic. The dog mirrors a dysfunctional dynamic within the family group. Said otherwise, dogs are often pointed as Identified Patients. For Bateson

> *The identified patient sacrifices himself to maintain the sacred illusion that what the parent says makes sense […] the identified patient exhibits behavior which is almost a caricature of that loss of identity which is characteristic of all the family members* (Bateson 1972).

Dogs mirror human emotions (Adda 2022, Bekoff 2022), and their behaviour reflects a broader family dynamic which requires attention. On the contrary, a healthy relationship happens when all the parts of a family system are emotionally stable and have a certain degree of deliberate choice. That is when the dog-human interaction acquires a phenomenological significance. The meaning of experience is created and determined by the individuals involved.

Dogs can affect human behaviour and flip their roles from followers to leaders, and from spectators to actors, while humans can enter an empathetic state of listening instead of commanding, seeking obedience, punishing, and assuming to know everything. I call this process *Role-flipping*.

Role-flipping and synaesthetic awareness

Role-flipping happens when dogs express their potential and reveal themselves as a generator of action and meaning. Consequently, as a receiver, the human learns and is transformed by the dog. Many processes are involved in that occurrence. Here we focus on synaesthetic awareness, namely, the position and movement of the human body and its parts and how that can influence dogs. Do humans understand how to use their body and synaesthetic transmission? What does a dog read in a human's posture and movement?

When interacting with a dog, humans are prompted to become aware of their communication, of the energy and the forces they use. At any level, everybody interacting with a dog should start with some questions. How are we using our bodies? Is our body communication authentic or unreliable? Here I am not referring to specific uses of the body gestures and related meanings, such as, for example, pointing gestures. I am referring to the essential awareness of humans on how to use our bodies, how to distribute our weight when we move, how we breathe, and what intention we carry when we think or take action. In other words, the self-awareness we target here – a "self that moves" (Eddy 2009), is similar to the work actors must do to develop the self-awareness necessary for their actions: 1) awareness of body position, that is, where you are in the space; 2) awareness of action, that is, what you do and how you do it; and 3) awareness of the intention, that is, what you are thinking and what your aim is.

Focusing on those elements – and integrating them, I hope it appears more evident how a dog parent and an actor share the same

mission: to reach essential and coherent communication and a credible and reliable expression. In this sense, the canine reveals herself as a receiver of authentic human communication. Humans and dogs are then involved in a connection of mutual expression and influence similar to that between actors and spectators. The human "actor" and the canine "spectator" are involved in complex events that generate meaning. The dog-human interaction discloses itself as a psychophysical, non-intellectual and synaesthetic embodied experience. To understand a dog, the human bodymind[1] should be transformed.

At the crossroad of ethology and acting

It is worth gathering and conjugating a few elements to support those ideas. We start with the recent history of theatre. The twentieth century has tremendously influenced the history of theatre and acting. New foundations were laid and are still a point of reference. Early reformers such as Edward Gordon Craig (1872 – 1966), Konstantin Stanislavsky (1863 – 1938), Vsevolod Meyerhold 1874 – 1940), Jacques Copeau (1879 – 1949), and later Jerzy Grotowski (1933 – 1999), Peter Brook (1925 – 2022), W. S. Rendra (1935-2009), and Eugenio Barba (1936), among others, revolutionised the theatrical space, the conception of theatre, the time for theatre and the actors' work. For our discussion, we take the example of Stanislavsky, who, in the first half of the 20th century, formulated an approach to acting that spread worldwide and is still used as a cornerstone in acting academies and university drama departments. One of the cores of Stanislavsky's work revolves around characterisations, namely, how to create a character (see Aquilina 2020; Stanislavsky 1936).

[1] Notably, throughout the century, the term and concept of psychophysicality emerged to describe and remark on the need to integrate body and mind into actors' work. More in general, throughout the second half of the century, body-mind refers to the various systems, disciplines and approaches devoted to psychophysical integration (see Allison 1999). In the late 20th century, "bodymind" emerged as an integrated evolution of psychophysicality and body-mind (see Camilleri 2019; Zarrilli 2019).

Throughout the actor process, essential questions emerge, such as, for example, where a character is coming from, what are the motivation of the character, what actions the character is doing in a specific scene and concerning the overall story, what are the aims of those actions, what are the reasons behind those actions, what is the benefit a character wants to achieve out of those actions, among others. To some extent, we can find striking similarities between those questions on characterisation and Niko Tinbergen's four questions, as they are described in *On Aim and Methods of Ethology* (Tinbergen 1963), which are the foundations of modern ethology and are 1) survival value, 2) evolution, 3) causation and 4) development. It is worth recounting that in the speech Tinbergen gave at the 1973 Nobel Prize ceremony[2], a significant part of his intervention revolved around the work of Frederick Matthias Alexander (1869-1955), an actor from Tasmania who devoted his life to studying human action and behaviour and formulated a method to help actors - and humans in general, to become more aware of their body and expressivity, and to relieve pain and stress (see Alexander 1910, 1932, 1942; Barlow 1973). Alexander's work came to be known as the *Alexander Technique*. Although it originated in acting, the *Alexander Technique* acquired a relevant value in clinical contexts, helping with psychophysical and other conditions. In his later career dedicated to autism, Tinbergen primarily employed Alexander's work. As he mentioned in his 1973's speech:

> *Although no one would claim that the Alexander treatment is a cure-all in every case, there can be no doubt that it often does have profound and beneficial effects - and, I repeat once more, both in the 'mental' and 'somatic' sphere* (Tinbergen 1973, p. 124).

[2] Nikolaas Tinbergen held his Nobel Lecture on 12 December 1973 at the Karolinska Hospital in Stockholm. Professor Börje Cronholm, a Nobel Committee for *Physiology or Medicine* member, introduced him. The 1973's Nobel Prize in Physiology or Medicine was assigned to Nikolaas Tinbergen, Konrad Lorenz and Karl von Frisch.

That anticipated dogs entering as "actors" in the context of autism, among others (Goodmon et al. 2021; Kirnan et al. 2020; Lane et al. 2013).

Thus, the connection between animal behaviour and human expression, in the particular configuration of the actor, is not new. Some already had the intuition about the actor being a possible bridge between the two realms. Here we navigate that prospect and expand on the study of bodymind as a powerful tool of personal transformation and communication with dogs.

Canine Anthropology

While introducing *Canine Anthropology*, we should clarify how the anthropology of theatre and Theatre Anthropology differ. Those two fields are sometimes used interchangeably. That is a mistake. Although the voices sound similar, they have different paths and targets. Anthropology studies the origins and development of human societies and cultures. Culture is the learned behaviour of people and includes languages, belief systems, social structures, material goods, and institutions. Theatre is part of this landscape, and the anthropology of theatre investigates how theatre is conceived and practised and its functions within a given cultural context. Thus, the anthropology of theatre studies those human cultures and societies where theatrical events and forms of representation occur (see Beeman 1993).

Conversely, Theatre Anthropology is an empirical methodology of active research and experimentation on humans' physiological and socio-cultural behaviour in the specific context of representation. Said otherwise, Theatre Anthropology examines humans in situations of representation. It is interested in the underlying human behaviours, techniques, and practices, regardless of the cultural contexts involved. Theatre Anthropology (Barba 1995; Barba and Savarese 2005) looks at the pre-expressive body of humans – in the case of theatre called actors, and how their behaviour and bodymind,

presence, awareness, concentration, and practice, change when they are in a context of representation.

Anthrozoology is worth mentioning here, as it looks at human-animal interaction across cultures and times. Anthrozoology is parallel to Anthropology in that it studies the interaction of humans and animals throughout times and cultural contexts. "Theatre Anthrozoology" – a name we are conventionally using here, looks at those contexts of representation where animals are involved. For example, disciplines targeting those aspects are Ethnoscenology (Turner 2008) and Performance Philosophy (Cull 2014).

Finally, *Canine Anthropology* integrates Anthrozoology, Theatre Anthropology, Ethology, Canine Cognition, Performance Research and practice, Somatic Research and practice (see Mangione 1993; Eddy 2009), human and animal Psychology, Psychophysiology, and Phenomenology. Regarding Psychophysiology, a major input has been provided throughout time by Vezio Ruggieri's psychophysiological model (see Ruggieri 2019, 2001; Ruggieri and Maiocco 2017; Ruggieri and Della Giovanpaola 2002; Ruggieri and Katsnelson 1996). With regard to Phenomenology, Zarrilli's *(toward) a phenomenology of acting* (2019) provided relevant input as well. To some extent, *Canine Anthropology* conjugates phenomenological and psychophysiological approaches to dog-human interaction. It looks at 1) how humans' behaviours change when interacting with a dog, regardless of cultures, geographies and other factors - in other words, it investigates the pre-expressive, pre-formulated behaviours characterising some aspects of human-dog interaction; and 2) the embodied experience of dogs and how they change their bodily expression and behaviour when interacting with humans. Said otherwise, *Canine Anthropology* looks at the psychophysiological organisation of the human body when a human inter-acts with a dog and how the dog inter-acts in return. "Inter-action" here refers to interspecific actions and behaviours unfolding while a dog is present to someone. The body position, action, and intention the human chooses and displays critically impact dog behaviour, experience,

feelings, perception of life, etcetera. This perspective gives the human-dog interaction phenomenological significance in that the behaviour of both species creates reality in a specific space and time.

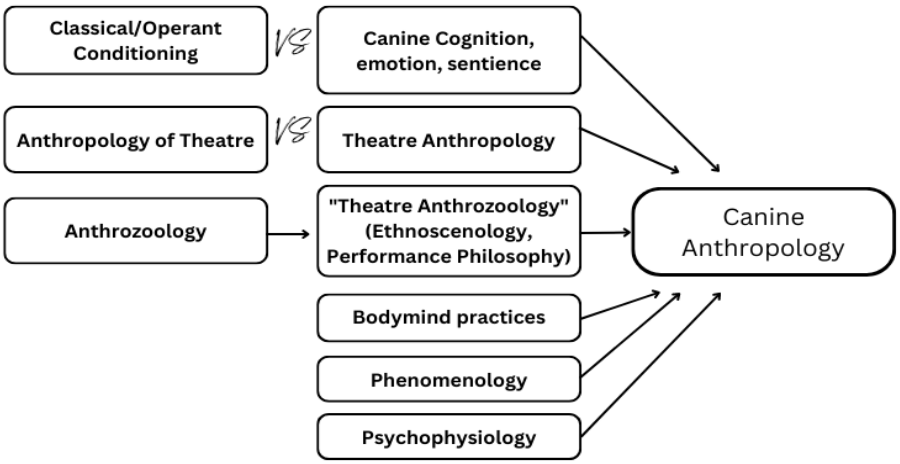

Figure 1. Canine Anthropology's components. Visual representation.

Bodymind and canine

Canine Anthropology brings our attention to the psychophysical base of dog-human interaction. This means that we focus on how humans use their bodymind and how that triggers a kinaesthetic response in dogs. We need another clarification here. Namely, we are not referring to the human body posture considered in the classical and preconceived approach to dogs - typically shoulder up and chest out, which is based on the assumption that one must be assertive to be reliable. We are not referring to any pre-formulated body posture supposedly carrying a particular meaning for dogs. Conversely, we are referring to a conscious use of the bodymind in the presence of a dog, how to move, the quality of the movement, the distribution of the body weight, what tone of voice is used, and the intentions expressed in each form of communication. Let us pause for a moment here and open up a core reflection. Let us assume, for a moment, that the only aspect dogs understand of what we do or say is our intention. How can we express our intention clearly? The

premise would be how to clarify our intention from the start. This is a fundamental problem in the dog-human interaction realm. One of the main reasons behind the often-confusing communication between humans and their dogs is the unclarity of intentions in humans and the lack of understanding of dogs' intentions by humans. On the one hand, many people are ambivalent about what they want to communicate, with limited awareness of how they communicate through their bodymind. On the other hand, people misinterpret the intentions of dogs when they are expressing their most natural behaviour, such as barking, pulling at the leash for they want to sniff a particular area or another dog's poo, growling because they disagree with something happening around them, and so on.

Canine spectatorship

An essential idea that reformulated theatre in the 20th century comes from one of the most outstanding directors of all times, Peter Brook (21 March 1925 – 2 July 2022). In his cornerstone book *The Empty Space* (1968), he brought our attention to a fundamental fact: the experience of theatre begins when there is an actor – somebody making an action, and just one spectator, one observer. Within the dynamic of that interaction, theatre begins.

In theatre, the director is the actor's first "one" spectator. Her presence triggers the dynamics of communication and expressions, which are at the core of synaesthesia. Theatre reformers have investigated those dynamics throughout the 20th century, and neuroscience research starting in the early 1990s has shown how we reproduce in our brain and, therefore, in our body, the movement of somebody else we happen to observe. In the last few decades, cognitive neuroscience shed light on the underlying dynamics of this type of empathic resonance. Evidence shows that humans and other animals – likely including dogs too (Sue 2016), are empathic beings equipped with mirror neurons, a specific type of neurons that reproduce in the bodymind of an observer what is being observed in the actions of others (Gazzola et al. 2006; Heimann et al. 2014; Kohler

et al. 2002; Pellegrino et al. 1992; Rizzolatti et al. 1988; Rizzolatti and Sinigaglia 2010; Rochat et al. 2010). Based on those relevant findings, theatre scholars further investigated the convergence of cognitive neuroscience, theatre and the synaesthetic exchange between the actor and the spectator (Falletti et al. 2016).

In *Canine Anthropology*, dogs are intended as the "one" spectator of their humans and create meaningful experiences just by being within a given context. In other words, for meaning to be made, we don't have to ask anything of dogs, we don't have to teach them anything, and we don't have to train them at anything. It is the presence of the dog that generates meaning. We need to learn – and dogs need to learn, how to exist in a shared space and listen emphatically. We need to attune to the canine presence. The dog – using the theatrical metaphor, becomes our director. Indeed, if a theatre director just by being present as an observer to the act of representation (or simply to the expression of actors while training) has the indirect "power" of influencing actors, so do dogs just by being present to their caregivers. In the metaphorical "stage" of the dog-human inter-action, dogs have the "power" to influence the behaviour of humans. On this very "power" dogs have based their opportunistic connection to humans and the thriving of their species since the beginning of domestication. Actually, from a speculative biology perspective, with humans suddenly disappearing from planet Earth – as wonderfully depicted by Pierce and Bekoff in *A Dogs' World* (2021), this will be one major challenge for dogs, namely, no longer being able "to count" on the human spectatorship that is at the core of their thriving history alongside humans. (See also Bekoff 2021)

To sum up, *Canine Anthropology* introduces:

- A revisited paradigm of dog "training" where we take out of the picture – or at least we put it on the side for a while, the classical commands and requests we make to dogs, and instead, humans learn self-awareness, attention, interoception, proprioception, etc.. In this sense, for dog parents, training somatic and bodymind practices, such as yoga, qigong, and

others, is considerably more strategic than focusing on old training concepts and procedures. Those latter approaches constrain the dog-human interaction in preconceived patterns and do not allow new relations and new meanings to be generated. A revisited paradigm of dog "training" reflects how the presence of dogs may impact humans' transformation, sensory and motor awareness, self-healing, and wellness.

- A multispecies area of practice and research, focusing on human psychophysiology and bodymind related dynamics activated when in the presence of a dog.
- *Canine Participated Somatic Experiencing* - A new area of multispecies somatic practice, where dogs are involved "as they are" – following a previous assessment of suitability (for example, people's fears, allergies, space, history and personality of the dogs, etc.) and join people's process, including self-transformation, emotional expression and release, movement re-education and re-patterning, re-deployment and overall economy in the use of body musculature, work on trauma and stress management, among others. Proprioceptive and interoceptive sensitivity supports homeostasis and self-regulation.
- A general approach to dogs based on the most straightforward integration of their presence. This can also be intended as a pillar for reformulating the attendance of free-ranging dogs in certain areas, or reintroducing them as community dogs – while providing education and support to people (see also Bekoff 2023). Free-ranging dogs in certain areas can bring valuable benefits to humans.

A case study – Canine Participated Somatic Experiencing

Dogs can interpret a given context and become participants, provided we give them the opportunity and create the circumstances. This case study relates to a two-day in-person workshop based on somatic experience held in Italy on 17-18 October 2023. Within the broader context of *Canine Anthropology*, *Canine Participated Somatic Experiencing (CPSE)* intends to highlight the dog's

natural behaviour – in contrast with approaches based on pre-established behaviours and assumptions, and to further stretch the importance of the animal's freedom to choose within a given context. The workshop involved 11 humans (F=n7; M=n4), including the facilitator (Marco Adda) and a five-year-old female dog (Robin). The age of participants varied from 25 to 64 years. The workshop integrated various approaches to movement and voice and was proposed within the frame of expressivity, wellness and self-transformation. The dog was incorporated into the workshop as a canine presence. In this multispecies experiential context, participants accepted the canine attendance, agreed to not "fall" into usual patterns (petting, calling, using a squeaking voice, etc.) in an attempt not to condition the dog, to not rely on her, and yet observe her movement and integrate her intuitively, bodily, and mindfully into their work. Actions throughout the workshop were not directed to the dog. The dog did not have any specific training for that context – although the suitability of that dog was previously assessed. The dog was left free to interact with the space, with people, or stay by herself on the side of the studio[3]. Robin navigated the sessions spontaneously by following her choice about when and how to interact with the space and people. For example, at times, she just preferred to remain on the side of the studio, while other times, she

[3] A detailed portrayal of this experience and a detailed description of the guidelines and recommendations for this approach is out of the scope of this essay. However, all measures are applied in favour of the animal's integrity. First, the facilitator must be an individual with extensive dog behaviour experience and thoroughly observe the dog before integrating her into the session. All the participants were asked whether they agreed with the presence of the dog, both before arrival and after arrival at the studio. The dog was allowed to explore the surrounding area and the studio before and after the arrival of the participants. A blanket for the dog and drinking water were always available on one side of the studio so the dog could feel at ease by staying or returning there anytime. The dog was left free to move, explore, sit, and stay on the side or anywhere around the studio anytime. A caretaker of the dog (not her primary family member) participated in the workshop and could constantly observe the dog and intervene in her favour if something would have been considered inappropriate, in support of the workshop facilitator. Those preliminary guidelines require further attention, research, thinking and elaboration.

curiously explored the space and interacted with the main activity, such as observing the action from a close distance (Figure 2), entering the room between people (Figure 3), and occupying a specific spot in the studio (Figure 4).

Figure 2 – The dog observes the actions
(Photo credit: Marco Adda /AEDC Archive).

Figure 3 – The dog enters the space and places herself among participants (Photo credit: Marco Adda /AEDC Archive).

Figure 4 – The dog places herself in the only spot available at the border of the circle of people (Photo credit: Marco Adda /AEDC Archive.)

The presence of another species – a dog, in this case, created an extra level of attention, and the practitioners' perception expanded. Her attendance brought particular energy during the work. In the context of somatic experience and bodymind training, the dog's presence facilitated emotional release. Crying, hugging, and other behaviours reflected relevant happening in the emotional expression of participants. In the case of Robin, she responded to the emotional release approaching every time people cry. What has been observed also is that the dog approaching a crying person triggered further emotional release and expression. Cecilia, a participant in the workshop, relates:

> *For me, the presence of Robin was very comforting, especially at the beginning. It helped me to unlock immediately, and then during the day I experienced it as a stable presence in sharing with the bodies that moved in that room* (*Personal communication*, 2 November 2022).

Conclusions

Extensive literature reflects how a dog's presence improves people's behaviour and emotional life. This is, for example, the case of dog-assisted reading for children with special education needs (Suk-Chun 2017), dogs and soldiers with Post-Traumatic Stress Disorder (PTSD) (Beetz et al. 2019), and dogs and incarcerated youth (Syzmanski 2018), among others. The foundation of theatre is to have just one actor and one observer. Thus, *Canine Anthropology* further portrays dogs as potential witnesses or spectators, mediators, and creators of meaning. Bodymind, as investigated in theatre and actor training by Zarrilli (2019), Rebecca (2013), and Rendra (Adda 2022a), among others, brings our attention to the need to be whole in our actions, feelings and intention. We can extend those values to our inter-action with dogs. In that sense, the presence of a dog creates for humans the circumstances to become more sensible, aware and mindful, similarly to how the presence of spectators does for actors. While the state of bodymind focuses on the individual's internal and psychophysical processes, the concept of *bodyworld* paves the way for the outside world to be incorporated into one's experience. Despite that being referred mostly to materiality and technology (Camilleri 2019), here we extend the post-psychophysical concept of *bodyworld* to animality and integrate other-than-human animals/other-than-human actors, alias dogs, in the phenomenological process of communication and creation of meaning. Such integration of animality reflects the need for multispecies societies. Said otherwise, open societies, with a multispecies connotation, necessitate the integration of non-human animals on their terms. Dogs represent once again a viable bridge between humans and other animals and offer a further opportunity to include other animals as they are, as they want to be, and as they think and feel.

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Animal Cultures: a paradigm for determining what matters to animals

Isabella Clarke*

Abstract. *This paper argues that if humans are to behave ethically toward wild animals, as individuals and as populations, we must understand what matters to them, and that can be determined by an understanding of their culture. I offer a broad definition of animal cultures, which I consider as evolving interactive processes, and demonstrate that for each population, culture empowers individual animals by enabling them to become knowers, meaning-makers, and agents, while also developing a culture-specific sense of identity. Understanding cultures, as emergent systems arising from relationships between animals and environments, gives us an opportunity to determine what matters to other animals and make decisions which support their existence as full subjects with the capacities required for sovereignty. I determine that this provides human observers and decision makers with the means to avoid anthropocentric thinking about and treatment of wild animals.*

Keywords: culture; agency; identity; epistemology; language; well-being; sovereignty; social learning; resilience; environment; co-operation; entanglement.

Animal Cultures: a paradigm for determining what matters to animals

In 2018, wild sulphur-crested cockatoos in three Sydney suburbs had learned how to open rubbish bins. Two years later, the practice had spread to 44 suburbs in the city, showing the emergence of geographic variation. Researchers conclude that this is evidence of "foraging cultures in parrots" and that it indicates "the existence of cultural complexity". Perhaps of even greater importance in the Anthropocene, they write that as "[b]in opening is directly linked to human-provided opportunities, [it highlights] the potential for culture to facilitate behavioral responses to anthropogenic change." (Klump et al. 2021, 1)

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Animal[1] cultures are receiving increasing scientific attention, with biologists urging conservationists to protect animal cultures as they are deemed to provide the foundation for a population's resilience, as well as its capacity to innovate. For example, Brakes et al. (2021) write, "An understanding of animal social learning and culture has significant potential to help maximize the impact and efficiency of conservation efforts" (2021, 8). The United Nations has issued a similar recommendation (UN India 2020). However, the topic has received less attention from animal ethicists.

In part this may be due to the focus on domestic animals, for whom there appear to be higher priorities, such as ending the horrors of factory farming and laboratory research. Given the huge numbers of domesticated animals (67% of the earth's mammalian biomass is comprised of domesticates; there are more domestic chickens alive at any one time that all the world's wild birds put together (Marren 2023)), it is perhaps understandable that much ethical attention is devoted to them. Yet I feel this is mistaken. That only 6% of the earth's mammalian biomass is made up of wild terrestrial and marine animals (2% of the earth's mammalian biomass comprises wild terrestrial animals compared to 63% for domesticated animals and 39% for humans) (Greenspoon et al. 2023), with large numbers of animal species critically endangered, functionally extinct, or extinct, in the wild, that there has been an "average 69% decline in the relative abundance of monitored wildlife populations around the world between 1970 and 2018" (WWF 2022, 4) instead suggests that for far too long these animals have been granted far too little consideration. Due to this long-term obscuration, there is little consensus about what wild animals need, let alone merit.

I will argue that animal cultures offer an invaluable series of lenses with which to ascertain what is of value to a population of individuals and that considering individuals as atomised units underdetermines what is of value to them. These lenses enable us to

[1] I will use the words 'animal' and 'animals' by which I refer to non-human or other-than-human animals, whether mammals, birds, reptiles, amphibians, fish or invertebrates.

better determine our moral obligations to animals and animal communities. Firstly, animal cultures are critical for the well-being and survival of the animals. Brakes et al. write that an understanding of their cultures is critical to "[maintain] the adaptive potential and [ensure] the long-term persistence of viable natural populations" (2021, 1). Secondly, animal cultures, considered, as I will demonstrate, broadly—including thereby their environment, which contains, of course, other species—supervene on the biology and psychology of individuals, and it is this totality, experienced by the individual, which enables animal sovereignty.

The structure of the paper is as follows. First, in Section I, I will propose a working definition of animal cultures. In Section II, I will sketch out the various aspects of animal cultures which emphasise the ways in which they support survival and well-being. Next, in Section III, I will expand on this basic framework by suggesting that a careful consideration of animal cultures brings to light further ethically relevant aspects of animal life that might be otherwise obscured and which are relevant for animal sovereignty. At this point, a reader might be sympathetic to the claims I make for the ethical significance of aspects of animal cultures but might object that they are already given due consideration through being enveloped in concepts such as an animal's interests, capabilities, or rights and that there is no need to add a new term to animal ethics. I respond to this objection by claiming that animal ethics arguments tend to rest on an anthropocentric perspective and that through exploring cultures, we can de-centre the human, thus acknowledging what is, rather than is assumed to be, of value to animals as meaning-making subjects with the capacity for sovereignty.

Some clarification to start with. I will not discuss what relevance (if any) this has to considerations of human cultures. Nor does this argument support any hierarchical conception of animal cultures. Animal communities differ widely, and while there is greater evidence for more cultural aspects in some populations than others, that does not matter for my purposes. Instead, I make the claim that whatever "culture" may be for a given population, that is

what matters. Nor am I concerned with claims that the lives of wild animals involve more suffering than pleasure.

I. What Are "Animal Cultures"?

Before I can propose that animal cultures are ethically significant, I must clarify my concept.

"Culture" itself has various definitions, but for this paper the most apt is that used by cetacean biologists Luke Rendell and Hal Whitehead:

> *Information or behaviour—shared by community—which is acquired from conspecifics through some form of social learning.* (Whitehead and Rendell 2015, LOC 659)

Social learning can be vertical (parent to child—and is thus relevant for all animals who spend a juvenile period with a parent or parents); oblique (older group members to younger group members) or horizontal (between members of the same generation). Animals need not be intensely social to benefit from social learning: firstly, many animals usually deemed asocial are in fact more social than previously recognised and, secondly, highly asocial species have been documented learning skills from conspecifics in their dispersed population (Fiorito and Scotto 1992; Wilkinson et al. 2010). Some, or all, of these have been determined across a plethora of species (Whitehead and Rendell 2015). Culture, these scientists state, usually leads to "the production and propagation of adaptive behaviour" (Whitehead et al. 2019, 2).

This is a broad definition, but that seems to be necessary—and, indeed, I will further expand on it later in the paper. It may not appear that animals have cumulative or symbolic culture to the extent shown in human cultures. Even if we cede that, it is a difference of degree not kind. It is unlikely that human culture developed de novo in *Homo sapiens*: the evolutionary building blocks of complex cultural capacity instead seem to be widely spread in the animal kingdom (Bonner 1980). While human culture has certainly

brought huge benefits (for example, through medical advances) it is not beyond possibility that other cultures might, for example, have more desirable inter- and intra-species relations. For example, whales will put their bodies between an unrelated group of whales, or even whales of other species, and a pod of attacking orcas (Pitman et al. 2001; 2017). Nor is it the case that we can fully determine all the elements of animal cultures that are of benefit or salience to the animals themselves.

So, as with other capacities, let's not assume that the human is the benchmark. I am in agreement with Matthew Calarco that to use in our ethical-decision making a hierarchical model of complexity—"which draws lines of consideration around select groups of human beings and animals—constitutes yet another iteration of anthropocentrism, with traditional human traits and capacities still occupying the center of ethical attention" (Calarco 2020, LOC 505). Instead, I wish to suggest an inclusive framework, in which the value of the culture is determined not by how we deem it, but by how much it matters to the cultural animals themselves. In this paper, my claim is that any culture can be seen as a collective term for all that which matters to the animals themselves.

However, it is not just that cultures have traditionally been judged according to the capacities typically considered as archetypal for human culture, but also that a far higher standard has been required to describe an animal behaviour as cultural. What is tacitly assumed to have a cultural component in humans (e.g., parenting) has often been regarded as purely biological in animals.

Caroline Schuppli and Carel P. van Schaik suggest that by applying the same standards to animals as to humans, we would see that animal cultures are "far more widespread and pervasive than commonly thought" (2019, 1). In which case, not only is it possible that cultures are more widespread than previously thought, but also that animal cultures may be more complex and/or cumulative than previously thought. For example, it is plausible that such cultural artefacts as humpback songs may be cumulative, in that each year male whales build on and evolve the song of the previous year.

Scientists are willing to tentatively suggest that this "[satisfies] the core criteria for cumulative cultural evolution" (Garland, Garrigue, and Noad 2022, 8) but add that further research is required. That research has been done in birds and shown evidence of cumulative cultural evolution (Williams and Lachlan 2021).

However, "animal cultures" is, so far, an abstract concept. We need to flesh this out if we are to determine how they impact ethical decision-making regarding animals.

II. "Animal Cultures"—from the Conceptual to the Concrete

Having offered a definition of what I mean by culture, I now describe the kinds of behaviour and information incorporated under the cultural umbrella. I will start by broadly categorising the role culture plays in animal lives under two headings:

1. **Shared, socially learned information and behaviour for group living in a specific population. This includes social structures, family units, codes of behaviour (morality), mating behaviour, parenting methods, and modes of communication (language).**

There are various ways in which groups of social animals can form workable societies. For example, although chimpanzee societies tend to be more hierarchical than those of bonobos, there are cultural variations between different populations: some relatively pacific and egalitarian, others engaging in stricter dominance hierarchies (Leeuwen, Cronin, and Haun 2018). The society of sperm whales, orcas, and elephants is complex and multi-layered. The basic family unit, or pod, is matrilineal, a female and her young, yet they will interact with related pods within the same larger grouping and there are variations between cultural groups at all levels. Wolves live in packs, in which only the alpha pair breed, but all packs are different enough for an experienced wolf-watcher to recognise them by their behaviour. The structure of bands of feral horses is an interplay between environment, predation, the norms of the herd (a group of bands), and the character of the individual stallion (Rees 2017).

Whatever the structure of the society, it provides a framework for the group to manage conflict, to work together, to defend the social unit from outside threats and to bring up young who learn within the group how to behave and what to do both more quickly and without the risks inherent in individual learning.

Even animals traditionally considered asocial (like bears and orangutans) spend a prolonged period learning from their mothers and do interact at certain times with conspecifics (Stonorov and Stokes 1972; Vitale, McKinney, and Linden 2018; Schuppli and van Schaik 2019). Bears and tigers leave claw marks and scent-markings which act as a means of communication between individuals over large geographical areas and across time. Tigers also use their phenomenal tracking ability to seek out family members. Even male tigers, long considered to play no part in bringing up their cubs, will occasionally seek out their mate and interact with the family group (Park 2016). Indeed, many animals usually considered asocial can be seen to live in a spatially separated group, in that they do communicate with conspecifics and commune with conspecifics far more often than was previously thought (Masson and McCarthy 2010, 125).

An animal culture encompasses the codes that enable animals to live together. That is, an animal culture incorporates morality (Kiley-Worthington 2017; Shapiro 2006).

Within each community, young animals learn prescribed and proscribed behaviours. This has been extensively documented by Marc Bekoff and Jessica Pierce, who cite examples of justice, empathy, forgiveness, trust, reciprocity (2009; Bekoff 2009).

Animal cultures may also entail communal decision-making practises. For example, troops of baboons decide where to go democratically (Strandburg-Peshkin et al. 2015); Canada geese communicate an intention to fly off and wait until that is shared by the group (Raveling 1969); pairs of sticklebacks take decisions in turn (Harcourt et al. 2010).

Mating behaviours are also learnt and culturally influenced (Freeberg et al. 1999). For example, bowerbirds take up to seven

years to learn how to make a bower that will attract females. Young males visit many bowers and may assist in their construction (Collis and Borgia 1992). Female elephants simulate oestrus to teach younger females how to behave (Bates et al. 2010). Changing cultures lead to changing mate preferences: urbanised female juncos choose males who are less aggressive and more involved in feeding the nestlings than do their rural cousins due to the way junco cultures have adapted to an urban environment (Atwell et al. 2016).

Some animals, such as wolves and crows, also learn parenting skills by assisting in the care of young (Caffrey and Peterson 2015; Canestrari, M. Marcos, and Baglione 2005; Haswell and Haswell 2013). Among elephants, sperm whales, lions, and others, alloparenting (caring for young that are not one's own) is a critical feature of the society, but there will be cultural variations between groups. In some, but not all, sperm whale families, females other than the mother will suckle young (Bradshaw and Schore 2007; Safina 2020).

Grieving behaviour also varies by culture. Research on elephants, chimpanzees, and orcas has shown how various populations mourn (Douglas-Hamilton et al. 2006; Anderson 2018; Knoth 2019)—but this behaviour is not limited to those charismatic animals: corvids, too, seem to grieve (van Dooren 2014; Bekoff 2009).

Animals also learn how to communicate within their group, using complex languages (Meijer 2019; Slobodchikoff 2012). Bird songs are largely socially learned (Thorpe 1961). Humpback whale songs are culturally transmitted (Garland et al. 2011). Sperm whales communicate which clan they belong to, who they are as an individual and what family group they are in (Whitehead and Rendell 2015). Prairie dogs' communications are highly complex and specific—and they also differ in different populations (Slobodchikoff and Coast 1980). The evidence of these dialectical variations in birds and mammals suggests that "Vocal cultural transmission is clearly analogous to ethnolinguistic groups in humans" (Ryan 2006, 1322).

2. **Shared, socially learned information and behaviour necessary for survival. This includes hunting and foraging**

techniques, predator avoidance strategies, migration routes, and tool use.

Hunting and foraging skills are transmitted through social learning and may be culturally variable. Animals must learn what to eat, what not to eat, and how to get it. For example, it takes young meerkats a significant period of watching and practicing to learn how to catch scorpions without getting stung (Thornton and McAuliffe 2006). Likewise, seal-eating orcas may require six years to become adept at beaching (Whitehead and Rendell 2015). A population of rats in Israel has learned how to feed on pine seeds: this involves a tricky technique that the animals learn by watching conspecifics (Terkel 1996). Many animals also learn to self-medicate, using plants with medicinal properties—and different cultural groups may use different plants (Greene et al. 2020; Huffman 2001; Morrogh-Bernard et al. 2017).

To maximise hunting or foraging success, animal cultures may also incorporate interspecies relationships. For example, coyotes and badgers in some populations hunt together (Minta, Minta, and Lott 1992); ravens develop culturally specific inter-species relationships with other predators (Heinrich 2009). And, of course, some animals have long derived benefits from food sources and habitats provided by humans (O'Connor 2013); interactions with or existence alongside humans may be normative and beneficial for some animals—we may be part of their cultures[2]. As human influence spreads through and into habitats, the co-creation of cultures of co-existence, whether commensal, symbiotic, or parasitic, or the maintenance of such

[2] An article in the Smithsonian Magazine states: 'the house sparrow depends on humans to such an extent it might be more reasonable to say it is native to humanity rather than to some particular region' (Dunn 2012). Marzluff and Angell suggest that humans co-evolved with ravens (Marzluff and Angell 2005). The house crow, Corvus splendens, is described as an 'obligate human commensal' with no known populations living independently of humans (Nyári, Ryall, and Townsend Peterson 2006). Populations of dolphins co-operate with fishermen; honey-guides (birds) lead humans to bee-hives and hyenas live in close proximity with humans in Harar – feeding from dumps as well as being fed and occasionally receiving medical attention (Baynes-Rock 2013; Spottiswoode, Begg, and Begg, n.d.; Romeu et al. 2017).

interactions (e.g. coppiced woodlands which support many small mammals and birds) will increase. This seems to me to be an exciting area of study and of particular value in the Anthropocene.

Tool use also appears to be cultural. Chimpanzee groups inhabiting the same environmental conditions smash nuts and create tools in culturally diverse ways (Whiten 2005). The use of marine sponges for foraging by dolphins is argued to be a cultural adaptation (Mann et al. 2012).

Animals must also learn migration routes and the changing seasonal location of food and water sources. In long-lived animals, social learning continues to impact behaviour. A case study has been done regarding cranes who were reared in captivity and shown their migration route the first time by either an aircraft or another bird. Over the course of the next six years, these birds converged their migration patterns with the cultural traditions of the rest of the flock, allowing them to maximise their chances of survival (Teitelbaum, Converse, and Mueller 2019).

It is important to state here that not all the goods that I argue are entailed in culture are instantiated equally (or at all) in all animal populations. Nonetheless, that even solitary animals like tortoises and octopuses (Wilkinson et al. 2010; Fiorito and Scotto 1992) can learn information and behaviours from conspecifics should lead us to be open-minded with regard to how far the value of culture can spread.

It might be argued that certain aspects of some cultures may lessen well-being and/or decrease the chances of survival.

For example, some populations of baboons live in strict social hierarchies, enforced through dominance behaviour. This imposes significant stress on individual baboons. One group lost the older males through disease and the community became more egalitarian, with significantly less conflict and stress. New baboons who entered the group adopted this "pacific" culture—but it did not spread to other groups (Sapolsky and Share 2004).

In the case of strict hierarchies, however, as Carl Safina emphasises (2020), the vast majority of interactions are non-

aggressive, and, of those that are aggressive, the vast majority entail threat rather than physical aggression. Of the interactions that do become physically aggressive, very few lead to severe injury. While this is clearly not optimal (as the stress levels of lower-ranking baboons in the above study were higher in the non-pacific situation), the non-pacific option still offers the other benefits of culture. It is also worth noting that this group, the Forest Troop, slept in trees 1 km from a tourist lodge and ate food from a garbage heap. This changes the dynamics of the group as, instead of food being spread out over a large geographical territory, it is concentrated in one easy location: which then becomes a resource. Researchers noted that refuse-eaters were more aggressive than non-refuse-eaters (Sapolsky and Share 2004). Thus, it may be that the aggression which was seen in the Forest Troop before the males died of tuberculosis and was then taken as a baseline in this research, was actually non-normative—and a sign of a culture mal-adapting to anthropogenic changes in the environment.

Thelma Rowell argues that hierarchies are responses to stressful conditions, and that internecine aggression is pathological (Rowell 1974). As Gay Bradshaw writes:

> *The most parsimonious interpretation of intraspecific killing argues that exogenous factors such as dramatic environmental changes (habitat destruction and loss, widespread and persistent killing) be taken into account. […] Neither evolutionary biology (including its offshoot, evolutionary psychology) nor ethology has taken into account animal psychological vulnerability as a relevant factor in explaining intraspecific killing.* (Bradshaw 2017)

Nonetheless, an objector might insist that any form of dominance hierarchy is sub-optimal. At face value, this seems a plausible objection. But naturalist John A. Livingston has an interesting perspective. In considering so-called "pecking-orders" among chickens, Livingston writes: "The reasonable possibility that the individual chickens may not feel dominant or submissive—that it [sic] may feel quite comfortable and secure in its [sic] social

arrangements—is not usually entertained. Status may not mean anything to a chicken" (1994, 78). His view is that highly social animals are inclined towards conciliation, which is essential for group-living, and that some system determining who is first to, say, drink from a pool, is inevitable—but it may not be experienced by the individual animals as a psychologically harmful failure to respect their intrinsic rights as individuals. This may be supported by Bernd Heinrich's finding that ravens low in the social hierarchy did not have higher indices of stress than dominant ravens (Heinrich 2009).

Likewise, Barry Lopez questions the concept of "alpha" wolves, explaining that those who have studied wolves in unstressed environments have not witnessed "dominance": instead, they have seen members of a group following an experienced leader (often an older female) when the pack is seeking elusive prey or a denning site. Young females, meanwhile, are often the best hunters—as they are lighter and faster—and may lead the hunt. He describes the social structure as dynamic and responding to skill and experience in various situations. He also describes what are traditionally regarded as "displays of submission" as instead signs of reassurance that group harmony is privileged above personal ambition (1979).

Nonetheless, I am willing to concede that some aspects of some cultures, at some times, may have negative consequences for the well-being of some individuals.

This is not limited to animal cultures, of course. The same possibility is true for human cultures. For example, consider a culture aligned to the view that "there's no such thing as society. There are individual men and women and there are families. And no government can do anything except through people, and people must look after themselves first. It is our duty to look after ourselves" (Thatcher 2013). One might imagine that this culture would not be beneficial for the weak, lonely, sick, and vulnerable, although it might enable, for example, rapid economic growth. It might also be considered as a mal-adaptive response to stress caused by population growth, resource shortages, inequality and so on.

Humans may have the means and ethical motivation to seek to change either their own or other human cultures, though the former demands that the existing culture is resilient enough to evolve rather than collapse while the latter remains an issue of some controversy, in that the cultures imposing change may be regarded as, or may in fact be, asserting domination or a form of colonialization.

The controversy deepens with animal cultures. Firstly, there is the question of whether humans have the right or duty to intervene in wild animal societies. Not all ethicists believe we do: Tom Regan writes that wild animals are due "our respectful nonintervention" (Regan 2004, 357) and Evelyn Pluhar agrees that "Nonhuman animals whose lives have not already been disrupted by us should be permitted to run their own lives" (Pluhar 1995, 276). Secondly, there is a lack of understanding as to how that might be achieved – and certainly how that might be achieved without causing greater harm. This is the view taken, for one, by Steve Sapontzis (though once sufficient knowledge enables humans to intervene, that then becomes obligatory) (Sapontzis 1987, 247). Thirdly, there may be a requirement to appreciate differences as well as similarities before applying value judgments arising from one cultural group to another. For example, all things considered, it may be better for a given cultural community to allow only the dominant pair to mate while restricting the reproductive freedom of other members of the group. This may enhance survival of the group as a whole, and confer other benefits, such as immature animals learning parenting skills, the opportunity for specialisation, greater bonding between generations (as older siblings care for younger siblings), population suppression (given resource finitude), and so on. While the restriction on reproduction might seem a rights violation from a human perspective, the value of intergenerational bonds and the benefit of not exceeding the carrying capacity of the environment, for example, might matter more to the culture being considered. The "face-lifting of the planet in our image" (Livingston 1994, 59) might not be just hubristic, but also detrimental to other beings. Imposed change is likely to be counter-productive as the "[d]estabilization of

traditional social structures and transactions undermines well-being in diverse ways" (Bradshaw et al. 2009, 1386).

Thom van Dooren addresses this issue forcefully. He writes that humans need to step outside the assumption of entitlement and adopt a certain humility, "which is about accepting that the world is not ours to 'sort out,' to unilaterally order to a particular vision of how it 'should' be…. [Instead] what is needed here is a willingness to support, or at least tolerate, other species' own experiments in emergent forms of life for difficult times, experiments that will sometimes make us uncomfortable" (van Dooren 2016, 205).

I would add two further reasons why we should be cautious about judging animal cultures. The first is that while we may be able to escape our ideological assumptions, what we can never escape is our biological humanity and that also leads to misinterpretation and confusion. We are bipedal, we are of a certain height and size, which is very different from that of the average mouse or elephant, and we also have a human array of capacities and senses.

Both the array of senses which a member of any given species possesses and their capacities will alter how they experience the world and thus construct their reality. Abilities like flight or sonar may be game changers when it comes to the creation of a sense of self, of what it is to be a living being. Social lives like those of naked mole rats, who live in communities of up to 300 with, like bees, a single queen, may lead to psychological differences that we cannot fully comprehend. Likewise, how might our interactions with others differ if we could sense the moving foetus within a homeless woman or the tumour in our rival's lung?

> *[W]hales use the echoes [of their clicks] not only to see through the murky water but to understand how soft, taut, fast, or tremulous matter is around them, using sound as we use a sense of touch. Because sound waves in water pass readily into flesh, this tactile sense also penetrates other animals. X-ray touch, delivered by sound… Vocalization and hearing for whales are as if the human senses of touch, kinesthesia, sight, and hearing were united, drawing into our bodies the motions of trees around us, the inner forms of animal*

> *companions, and the textures of distant rocks and buildings.* (Haskell 2022, 300,301)

As we cannot know how an animal fully experiences his situation, what basis do we have for altering it to suit our beliefs? Secondly, as I regard cultures as complex systems (this will be further explored later in the paper) I do not believe it is possible to cherry-pick aspects of a culture and change them without potentially disrupting the entire system.

A further point to make here is that cultures are dynamic, not static. Given climate change and urbanisation, adaptation may be beneficial for a given population. To adapt, however, the cultural elements that limit intra-group conflict and enable communication are critical. Further, the population must be large enough to increase the chances of innovation (Liker and Bókony 2009), and secure enough to be open to experimentation[3]. These ends are best achieved by supporting the existing culture. While some changes, like the loss of dominant males in the baboon group discussed earlier, may give rise to a new state of equilibrium, too many changes or the "wrong" changes may lead to a tipping point, from which a new state of dynamic equilibrium cannot be obtained.

If cultures are to evolve to meet the increasing pressures of climate change, they need to be resilient now. This is already unlikely for many animal cultures, in that scarcity (caused by habitat loss and/or overcrowding due to the absence of predators), population fragmentation, human induced stresses (noise, pollution, disturbance), and environmental changes (caused by flood prevention measures, invasive species, differing agricultural practices, and so on) may already have led to many populations being close to a tipping point already. Thus, it would appear hazardous to risk further destabilising populations through interference.

[3] Where populations are fragmented, the chance of beneficial cultural adaptations passing between groups of conspecifics are limited; without cultural exchange, population persistence may be damaged (Ryan 2006).

To sum up, while animal cultures may not appear perfect to us, they may yet fulfil what the cultural subjects require and desire. Further, interference may inevitably be harmful. In the following section, I will dive deeper into an exploration of animal cultures to strengthen my claim that cultures, conceived as a "cultural gestalt", enable sovereignty.

III. A Deeper Dive into Animal Cultures

I have explained what is initially encompassed by the term "animal cultures" and sketched out examples of aspects of animal cultures, while also drawing attention to the occasionally ambiguous role in survival and well-being of some aspects of certain cultures.

Here I argue that animal cultures are enacted, embedded, embodied, and communal such that the individual cannot easily be disentangled from the situated cultural group. Nor can the benefits to the individual which accrue from her engagement in a culture be separated easily, if at all, from the actual, physical instantiation of that culture. Further, the range of benefits is far more expansive than those aspects of life which are generally considered by existing theories. Several of these benefits confer upon cultural animals the kind of qualities that should lead us to regard them as determiners of value in their own right, which thereby enables their sovereignty.

This is a critical point. Animals are not equivalent to powerless humans who have the same needs as us, which we, as global philanthropists, should provide. That paradigm assumes human dominance and the absence of animal self-determination. Though dominant in effect, through numbers, technology, and existing power relations, it is puzzling to assume that humans have the unquestioned right to make decisions on behalf of others. To riff on the example of global philanthropy, there is a worrying tendency for the wealthy and powerful to seek to model the world in their image, to determine the benefits that will be granted to the less powerful and to ignore or devalue the interests of others. My aim here is to stress that animals, as meaning-makers who can demonstrate what

matters to them through the complex living artefact that is their culture, should have the freedom to determine their own lives.

I will first consider the embedded, embodied, and enacted nature of animal cultures before addressing the role animal cultures play in developing identity and enabling agency, through the communal entanglement of animal subjects.

A culture is embedded in environment—both spatial and temporal. It is adapted to seasonal fluctuations and geography (Hodgetts and Lorimer 2020). Knowledge of migration routes or various water sources, seasonally fruiting trees, and pastures, sites of dens, territories, even elephant bones and so on are entangled with the animal community's cultural practices. A case in point, chimpanzees know when the trees in their territory produce fruit and visit them at that time (Safina 2020). Culture links animals to place and culture structures time (in the case of migration and seasonal vegetation, for example).

Further, the environment itself may be considered part of the culture—as an active external resource that complements the cultural knowledge held in animal minds. For example, the presence of a tree on a ridge, where various bears scratch, may act as a locus of communication between these individuals (Seryodkin 2014).

An animal culture is entangled in the environment. If you do not have a map, the territory is not represented by anything other than itself. If you do not have a book of medicinal plants, each plant represents itself. Knowledge is specifically located.

Cultural knowledge, as well as externalised in environment, is, self-evidently, held in brains. But it also influences and changes bodies—as well as being delimited and determined by the morphology and sensorium of a given animal. So, cultural traditions influence what one's body does when approached, say, by a dominant group-member, when appeasing an aggressor, when calming down group members, when making friends, and when expressing affiliation. Cultures influence morphology (as with fish-eating orcas (Whitehead 2017) and diverged populations of juncos (Atwell et al. 2016)) and are in turn influenced by physical

capacities—so, for example, pumas communicate over time and space by leaving scent markings while sperm whales do so using sonar.

Although animals do have language or communication systems, much information and various cultural norms are transmitted through behaviour. The culture is not held as a series of abstract concepts but enacted by and between animal subjects. This becomes clearer when we consider animals as "knowing" subjects.

While animal ethicists are comfortable considering animals as sentient, emotional, thinking beings, a view of animals as "knowers" does not appear to play a large role in the discussion. Animals do not have libraries, but they do retain and transmit knowledge inter-generationally through social learning. Indeed, some suggest that, aside from protection from predation and advantages in group foraging, "probably the most important reason for social living among mammals is to pass on important ecological information by social learning" (Kiley-Worthington 2017).

The information may be passed through mimicry but is also communicated via the shared and culturally specific language. Language, as animal behaviourist Conn Slobodchikoff explains, is epistemically empowering:

> *With language, we can describe the external world, we can describe our feelings and thoughts, and we can make requests and demands of others… We can get building blocks for understanding the world around us. Language is a tool for interaction. Without language, we are individuals drifting along the waves of solitude, never able to communicate our thoughts to anyone, never able to share any experiences, never able to pass along any knowledge that we have accumulated.* (2012, 251)

A culturally specific communication system enables the transmission of cultural knowledge—much of which is retained by the oldest and most experienced members of the group. This is an important aspect of animal cultures: older members of the group are knowledge reservoirs. The loss of an elephant matriarch can be catastrophic for the group. She is the one who knows where to find

water in a drought, who recognises the most members of connected or related groups, who remembers survival strategies from the past (McComb et al. 2001). In shorter-lived species, knowledge may be held communally, rather than individually. David George Haskell writes of black capped chickadees:

> *Their intelligence resides both within individuals and societal relationships. A Chickadee therefore lives in a dual world: a self and a network… Chickadee memories… live within societal relationships. The birds are keen observers of their flock-mates. If one bird should happen on a novel way of finding or processing food, others will learn from what they see. Once acquired, this memory no longer depends on the life of any individual; the memory passes through the generations, living in the social network. … regional traditions colour this cultural knowledge…* (2017, 89)

Communication, information, and culture are interdependent, facilitating each other's development. And all are essential in ensuring animals have the knowledge they need to make sense of the world, to determine who and what they are, and where they belong.

If animals are deprived of the ability to obtain knowledge through the breakdown of their culture by anthropogenic causes, then a wrong is done to them "in their capacity as a knower" (Fricker 2007, 1). This seems to fulfil Miranda Fricker's conception of "hermeneutical injustice" as they experience a "gap in collective interpretative resources [leaving them] at an unfair disadvantage when it comes to making sense of their social experiences" (2007, 1).

As cultures encompass and support the transmission of important social information, survival knowledge, and communication strategies, they enable individuals to respond to the world effectively. They thus enable animal agency.

Animal agency may also be enhanced by virtue of being in a close-knit cultural group. A pack of wolves can develop the cultural know-how to co-operate as a group in order to take down a bison or hunt Dall sheep; a single wolf cannot—and only some packs develop this cultural knowledge. Being in a flock enhances predator

protection for birds: some watch as others forage—duties are shared so that two survival needs can be met simultaneously.

For an animal society, agency may be to a significant extent communal. A methodological individualistic perspective may blind us to an aspect of animal cultural lives that is highly salient to the animals themselves: "the community life and biosocial networks that exceed individual agency" (Willett 2014, 8). Indeed, research in the neurosciences supports the concept of relational agency for humans (Roskies and Walton 2020). This is the view taken by Karen Barad who rejects the use of the term agency, preferring instead "agential realism"—not a property held in some sense like a consumer good, by an individual, but instead "an enactment, a matter of possibilities for reconfiguring entanglements" (Dolphijn and Tuin 2012, 54).

This leads to a related point, namely that identity itself, in some cultural groups, may also—in part—be communal as well as individual. A naked mole-rat, an orca ("an entity with relationships integrally implied" (Bradshaw 2017)), or a baboon may experience themselves regularly as what Barbara Smuts describes as "selves-in-community" (Smuts 2001). Lucy Rees offers a good description of this regarding the movement of horses in feral bands:

> *Horses… are constantly aware of each other. Each horse's position, orientation and movement is determined by a balance of two major influences: first, the position, orientation and movement of others in the assembly and second, individual motivation, often prompted by internal needs. What emerges is a composite, coordinated dance in which no individuals direct others but all influence and are influenced by others in a continuous subtle interplay.* (2017, 74)

Earlier in her book, *Horses in Company*, Rees explicitly addresses the issue of identity:

> *While single frightened animals do seek the centre of a calm band, I do not see horses jostling to be in the centre of a band or herd during flight. Rather, the point seems to be fusion, loss of identity. The single horse loses individual identity in the band.* (2017, 57)

This impression is supported by Livingston, an expert on wild animals, who argues that "the everyday consciousness of wild beings tends to be participatory rather than self-centred" (Noske 1997, xiii). This leads anthropologist Barbara Noske to write:

> *In a sense the consciousness of animals ranges wider than ours. To define them as human-like individuals, such as ethical philosophers do, and give them rights accordingly, is to do them a disservice—to downplay their otherness… Instead of lifting animals up to our level it actually reduces them to humanness: Western individualized humanness… [A]nimals are not lesser humans, they are other worlds whose otherworldliness must not be disenchanted and cut to our size but must be respected for what it is.* (1997, xiii)

Of course, it is an empirical question whether Rees, Smuts, Livingston and Noske are right—but given their expertise, the claim appears worth considering. It is also supported by human transcultural psychology: "in many cultures, the notion of personhood does not coincide with [the] boundary of the skin" (Kirmayer 2007).

This claim of a more porous sense of self-hood is crucial, and I will return to it in the following section. However, in addition to the sense of group identity, through cultural practices, individuals develop a "way of being" which amounts to "who they are". Some animal cultures use signature calls for individuals (names) (Gillam and Chaverri 2012; King and Janik 2013; Berg et al. 2012) and in some groups individuals take on certain roles consistently, whether that be vigilance (for example, stallions in bands of horses (Rees 2017)) or during hunting (such as blowing bubbles for the bubble net strategy in cetaceans (Whitehead and Rendell 2015)). Slobodchikoff avers that through group life, animals come to experience themselves as selves. He writes that, because animals "have to know what each member's role is in the group, and how that relates to them… This argues for an awareness of self, and self in relation to others: I am Joe, and not Sam or Harry. I am with my mate Angela; those are my kids Bert and Arnie, and that's my next-door neighbor Frank." (2012, 233).

Cultural subjects are becomings rather than beings, who emerge, to use Rosi Braidotti's terms, from "a folding-in of external influences and a simultaneous unfolding outwards of affects" (Dolphijn and Tuin 2012, 106). Various thinkers accept this perspective in the case of humans: "determining what it means for an individual to act autonomously, or to be their authentic selves, may be context-dependent and structured by interactions with others and the environment" (Roskies and Walton 2020). As Kelly Oliver puts it, "Subjectivity is inherently intersubjective" (2015).

For animals, too, it is my claim that cultures play a vital role in constructing individual identity or self-hood[4].

Given the wide range of goods encompassed by this expanded conception of culture, it seems to me that culture is what constitutes a population's reality or gestalt. Through cultures, animals socially construct their worlds, by, for example, recognising affordances and determining values, and influence each other's worlds. Cultures are what make animals subjects and not just sentient objects who can be counted, and their welfare aggregated. Cultures demonstrate that the protection of a group or population and its environment is critical to the well-being of each individual, who can never by fully protected *qua* individual. Cultures both enable the individual's capacity to be a meaning-maker—to make sense of her environment and to pursue what is valuable to her—while simultaneously stressing the critical importance of being one of many, part of a whole. Neither the individual nor the group is privileged: each is constitutive of the survival of the other.

Every culture is an expansive community of interwoven aspects, providing a situated and specific "view from somewhere".

Philosophers may here suggest that we do not need a "view from somewhere". The ideal tool for determining what matters to animals is instead neutrality, a "view from nowhere" (Nagel 1995). Here I must object: philosophy's "view from nowhere" remains a

[4] There is not space here to argue a specific understanding of these terms, and I use them in their lay or conversational sense.

view from a very definite somewhere. Philosophy, like theology, is a human art—based on assumptions gained from the facts and beliefs obtained through our human sensorium, ontology, and epistemology. It cannot help but be anthropocentric. What is more, it is founded not just on an entirely human umwelt but also rooted in a value system that is specific to a particular culture at a particular time, which, for example, privileges individualism over connectivity, progress over stability, and reason over emotion.

The assumption that our "view from nowhere" can encompass the plurality of very different animal lives, pleasures, pains, desires, fears, urges, sensory experiences, physical abilities, and so on seems to me absurd. Yet we have this belief that we can, justifiably, determine not just what animals experience and know, but what they should do. Tom Tyler describes this as "the epistemological claim that all knowledge will inevitably be determined by the human nature of the knower and that any attempt to explain experience, understanding, or knowledge of the world, of Being, of others—must inevitably start from a human perspective." (2012, 21).

I seek to de-centre human perspective in the following section.

IV. Putting Animals at the Centre

It is one thing to appreciate that, in addition to not being the only bearers of value, we are not the only animals that determine or confer value and meaning. It is another thing to ascertain what matters to those who are different from us. Perhaps we can never fully know—but to make a start demands the subjugation of certain assumptions and presumptions. We must, as Eva Meijer argues, pay attention to others as others and not as reflections of, lesser versions of, or even purer versions of the human. Meijer writes, quoting Simone Weil:

> *[T]o get to know other animals, we need to move beyond our own motivations and actually pay attention to them… To pay attention also means not immediately trying to understand them from our perspective, but*

> *rather taking the time to "look at them till the light suddenly dawns".* (2019, LOC 1267)

Lori Gruen makes the same point:

> *Being in ethical relation involves, in part, being able to understand and respond to another's needs, interests, desires, vulnerabilities, hopes, perspectives, etc., not simply by positing, from one's own point of view, what they might or should be but by working to try to grasp them from the perspective of the other.* (2012, 224)

This is not new to ethologists, either: they have long acknowledged that the human observer has a responsibility to be true to the differences between self and other:

> *Instead of projecting oneself as a particular type of human into the circumstances of the organism, one attempts to assume both the circumstances and the characteristics of the organism.* (Timberlake and Delamater 1991, 39)

It may be that only a sensitive and committed person who spends many hours, days and months with other animals will experience the light dawning. I am thinking here of Smuts who felt herself "turning into a baboon" (2001).

As for the rest of us, I believe we can begin to bridge that knowledge-gap by considering animal cultures, which, in my view, provide more than simple processes of knowledge transmission and instead encompass a "way of being". Cultures constitute a world-view, providing "implicit cultural affordances—opportunities for action that depend on attending to and construing the environment in culturally meaningful ways" (Kirmayer 2022, 9). As Bradshaw, Capaldo, Lindner, and Grow put it:

> *Psychological outcomes reflect interactions between biological processes and social surround by constituting "a map and charter" of values, beliefs, and function of the experienced social world. At the level of the psychobiological*

> *self, manifestations of cultural patterns are profound, deeply connected to well-being and function, not cosmetic.* (2009)

When looking with, rather than looking at, animal cultures, it becomes possible to see that animal cultures encompass a range of goods which can be obscured without careful consideration.

Nonetheless, an objector could still argue that the umbrella term of "culture" is unnecessary: providing sufficient habitat, protecting populations, and decreasing anthropogenic stressors is all that is required for understanding our ethical obligations regarding animals without adding a new concept to the debate. The objector might say that the instrumental value of culture is already adequately covered by concern for protecting animals from harm in a sufficiently pluralistic fashion.

In response, I argue that cultures are more than the sum of their parts and that their value is underdetermined by an attempt to enumerate a list of interests or even capabilities[5].

> *Culture can be seen as constituting a pool of feeling and thought to which individuals contribute and from which they draw in various ways and degrees… [A culture is] a dialectical process of constituting and being constituted, rather than as a complex of adaptive mechanisms…* (Noske 1997, 81, 87)

A culture, to follow this way of thinking, is an emergent property, understood not by examining parts of it in isolation, but through considering all the interactions between parts, and those parts include the individual animals and their environment. Cultural animals do not have culture, like they have a sense of smell or a liver. They are in culture. Cultures are collectively created "by the social actions, thoughts, and feelings of total living beings" (Noske 1997, 86). The psycho-ecological cultural elements are entangled into a

[5] Martha Nussbaum's Justice for *Animals: Our Collective Responsibilities* (Nussbaum 2023) is a great step forward, but I believe that she still views animals as fully independent entities while I see the culture as empowering the individual and supervening upon individual capabilities: the individual can only be empowered within her culture.

whole (which includes their environment and the other living beings in that environment), which is not a static condition but an evolving process, constantly shaping, and being shaped by, the animals and the environment.

Thus, it does not seem plausible that the goods conferred by animal cultures, as described above, could be secured by other means than through inhabiting the culture itself.

What this implies is that to protect the rights of, maximise the welfare of, or enable the capabilities of an individual, one must also support the culture. And that means supporting the population as a whole and its environment. Culture is not a theoretical abstraction: it is embodied, situated, and relational. For some cultures, that may also involve protecting interactions with other species, including humans.

On a practical level, it seems plausible to contend that each animal culture offers us a perspective to glimpse the view from a situated somewhere, rather than the view from an abstracted nowhere. It acts as a heuristic for all that is ethically relevant regarding that population. And if we are concerned to make ethical decisions which enhance rather than lessen animal well-being and survival, that information—what matters to them—seems critical.

It could be argued that here I am simply swapping a "cultural group" for either a "population" or, even, given the entanglements between culture, place, foraging opportunities, other species, and so on, an "ecosystem". In pragmatic terms, the impact might be the same in some or perhaps many cases. This could lead to the claim that there is a possibility of failing to rightly recognise individual animals. However, what I have argued above suggests that the best way to secure the well-being of an individual is by protecting her cultural group and environment, from which emerges that which empowers her both to survive and thrive.

To that end, instead of attempting to create a world for the sake of each individual in isolation, cultures—entangled into environments and enacted between individuals—offer a heuristic for determining what is of value to other minds. And those other minds

cannot be abstracted out of the network of relationships, for those very relationships are psychologically, ontologically, and epistemologically important for the survival, empowerment, and well-being of each individual.

Thus, in making decisions which impact animals, it is vital to understand their culture; to consider the culture as a whole, rather than as a list of various goods; and to ensure that not only is the culture maintained but that it can adapt.

This argument, if accepted, would demand systemic and wide-reaching changes. Animal cultures cannot function well, let alone optimally, given the restricted space, fragmentation of population, and destruction or degeneration of habitat. Nor are the numbers of many large species high enough to support cultural evolution. Wild animals have been forced to the fringes or enclosed in preserves. Their environment is restricted, denuded, and devoid of other species whose presence helped shaped their cultural codes. A macaw's cultural preferences for certain nesting holes cannot be enacted where old growth forests have been felled. The cultural drive for a male tiger cub to disperse from his natal region cannot be enacted in a sanctuary. A passerine bird's complex songs cannot be learnt in a tiny population. Hazel dormice cannot find safe refuge where woodlands are kept scrub-free.

Protecting animal cultures would involve a dramatic shrinking of human influence and population. While our numbers continue to grow, only those adaptive generalists, like rats, crows, raccoons, and coyotes, will have the cultural affordances to thrive.

Conclusion

In this paper, I have covered the empirical and the speculative. Much of what I have suggested here requires substantially more research and discussion. My purpose was simply to argue that cultures merit ethical consideration; firstly, for the ways in which they support survival and basic well-being and, secondly, for the more expansive, if speculative, list of additional values they provide,

including the means for empowerment and sovereignty; and then to present a case for each culture to be considered as a whole rather than as an aggregation of separate parts.

I accept that much of this paper is speculative, demanding "a radical repositioning of the knowing subject", but I believe that animal ethics, like feminist theory, requires "a double-edged vision, with a strong critical and an equally strong creative function" (Rosi Braidotti, interviewed in New Materialism (Dolphijn and Tuin 2012, 34.36)) if we all-too-human thinkers are to break out of our anthropocentric bubble. We can never speak for the animals, but, I hope, we can learn to speak better with them.

I want to leave you with one final message: animal cultures encompass the most critical aspects of an animal's existence: what she does, where she belongs, and who she is.

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Despre femei și alte animale: o analiză logică a construcției sociale

Cătălina-Daniela Răducu*

„După ce și-a recăpătat cunoștința, prietenul său uman a întrebat-o în limbajul semnelor ce erau cimpanzeii. Ea i-a numit 'PISICI NEGRE' și 'GÂNDACI NEGRI'. Nu erau ca ea și, dacă se raporta la ei ca la pisici și la gândaci, nu ii agrea prea mult. Washoe își însușise mult prea bine aroganța noastră."
(Fouts și Fouts 1994, 29)

„Subsolul acelei clădiri este un abator, acoperișul ei este o catedrală, iar de la ferestrele etajelor superioare avem o priveliște cu adevărat frumoasă a raiului înstelat."
(Horkheimer 1978, 66)

Abstract. *Historically, women were considered closer to nature rather than culture, emotional rather than rational, and defined primarily by their biological functioning. Discourses dwelling on such dualisms and on essentializing women contributed to their social construction as a dominated, submissive 'other', imposing on them a status which justified their oppression. The main purpose of this paper is to show that, on this view, women are in a 'select' company, as discourses that structure the multiple and intersecting oppressions of women appear to converge with and be reinforced by discourses that structure the oppression of other animals. Therefore, the present paper intends to document some of these intersections between conceptions of female-ness, and animality that highlight the common grounds for the social construction of women and animals, with the purpose to argue that, if feminism is an analytic tool that helps denounce social injustice, it should extend its focus on the ways we comprehend and interact with other species, and contribute to a better construction of reality.*

Keywords: animal, feminism, gender, social construction.

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În aforismul *The Skyscraper*, Max Horkheimer ne oferă o metaforă sugestivă pentru situația animalelor din societatea capitalistă a timpului său. Clădirea pe care o descrie el are mai multe etaje, cele superioare fiind destinate „magnaților diferitelor grupuri de putere capitaliste", iar cele inferioare fiind populate cu masa ființelor umane a căror soartă este să moară în „sclavie". Sub toate aceste etaje locuiește o altă categorie de ființe: subsolul găzduiește „indescriptibila, inconceptibila suferință a animalelor, ce simbolizează iadul animal al societății umane, sudoarea, sângele și disperarea animalelor" (Horkheimer 1978, 66). Ipoteza lucrării de față este că, deși avansată la începutul secolului trecut, metafora lui Horkheimer este cât se poate de actuală: deși poate că s-a schimbat arhitectura clădirii, s-au inventat scări și ascensoare ce permit mobilitatea pe verticală, sau uși ce permit mobilitatea pe orizontală, o parte esențială a clădirii a rămas neschimbată. Scările și ascensoarele nu ajung încă până la subsol: situația animalelor în societatea umană a rămas aceeași, la distanță de un secol.

Scopul lucrării de față este să argumenteze, pornind de la o analiză feministă a construcției sociale a genului (Haslanger 2017, 157-167), că există speranța înlăturării acestei bariere, în conștientizarea similarităților dintre două categorii oprimate istoric în mod similar. După cum am arătat în lucrări anterioare (Răducu 2019; Răducu 2022) din ce în ce mai mult, în ultimele decenii, se conturează ideea că femeile pot „dărâma ușa pivniței" (Bujok 2013, 39) și altera definitiv arhitectura clădirii lui Horkheimer.

Întrebarea ce apare, în mod spontan, este: ce anume îndreptățește femeile, sau ce anume le face capabile și dispuse să opereze această alterare a arhitecturii societății în care trăim? Argumentarea pe care o ofer are ca bază modul în care au fost conceptualizate femeile și animalele non-umane în istoria speciei noastre: ambele categorii au fost construite ca inferioare, fiind conceptualizate în mod convenabil astfel încât să justifice și să întărească o ierarhie de putere artificială și nedreaptă. Schimbarea arhitecturii clădirii, înțeleasă astfel, are potențial eliberator pentru

ambele categorii de ființe. Femeile și animalele non-umane au împărțit, timp de o istorie întreagă, subsolul clădirii:

> *Când văd tiparul de dominație/supunere al unui bărbat în raport cu animalele, felul în care el reduce animalul la un obiect, un instrument pentru folosul său, înțeleg oroarea pe care o are 'obiectul' dominat față de acel tipar. Am trăit-o. O trăiesc.* (Corea 1984, 37; citat în Adams 2018, 119)

Spre deosebire de animalele non-umane, femeile au capacitatea de a conștientiza mecanismele și efectele dăunătoare ale construcției sociale; mileniile de coexistență în pivnița societății le face mai susceptibile de a conștientiza că animalele umane trăiesc, de fapt, împreună cu animalele non-umane, nu deasupra acestora, și că imaginea acestei stratificări este una produsă artificial.

Conștientizarea faptului că această construcție este una artificială poate releva mai ușor nedreptatea pe care o justifică. Mai mult, poate motiva o schimbare de atitudine: percepțiile sedimentate în timp pot fi astfel schimbate, practicile nedrepte pot fi criticate, ierarhiile de putere pot fi schimbate. Întregul proces poate începe cu această conștientizare că nu suntem categorii radical diferite. Odată cu ea, devine posibilă schimbarea:

> *Femeile trăiesc integrate într-o lume socială care include celelalte animale (atât moarte, cât și vii), reprezentări ale celorlalte animale și atitudini față de celelalte animale. Acestea influențează în mod inevitabil viața femeilor și felul în care opresiunea este experimentată și i se rezistă.* (Adams 2018, xliv)

Aceasta este o lecție exemplară pe care a oferit-o feminismul în ultimele decenii, dovedindu-se o mișcare eliberatoare și capabilă să schimbe lumea pentru femei. Speranța pe care o exprim în această lucrare este că, în calitate de instrument analitic ce a destabilizat construcția socială a realității și a denunțat nedreptățile istorice la care au fost supuse femeile și alte grupuri sociale, feminismul are potențialul și îndreptățirea să extindă această preocupare și în privința semenilor non-umani:

> *Una dintre forțele gândirii feministe este aceea că nu e niciodată 'doar' despre femei: este un discurs critic ce are tendința de a pune întrebări inconfortabile despre orice. A pune întrebări despre cum se raportează teoretizările noastre la înțelegerea lumii naturale este o parte la fel de importantă ca toate celelalte din misiunea noastră.* (Birke 1995, 33-34)

Ce înseamnă, de fapt, a fi construit social?

Una dintre conștientizările eliberatoare ale feminismului este aceea a construcției sociale a genului. În cele ce urmează mă voi strădui să argumentez că, în măsura în care ideea de construcție socială s-a dovedit a fi utilă pentru femei, ea poate fi extinsă și asupra altor categorii de indivizi, în cazul de față, asupra animalelor non-umane. Înainte de a discuta similaritățile și deosebirile implicate de construcția socială a acestora, câteva precizări, distincții și delimitări sunt necesare: așadar, la ce anume ne referim când spunem că o categorie este construită social? Și de ce este important să înțelegem că o categorie este construită social? Ce posibilități deschide răspunsul la această întrebare?

Încă de la început este necesară o delimitare între construcția unui concept (sau a unei idei) și construcția unui obiect (Hacking 1999). A spune că un concept sau idee este construit/ă social înseamnă, în primul rând, a recunoaște că majoritatea ideilor și conceptelor există într-un anumit context social și că ele sunt modelate de forțe sociale și culturale:

> *... uneori uităm că forțele sociale afectează ceea ce gândim și modul în care gândim, deoarece experiențele noastre par să fie cauzate simplu și direct de lumea însăși... Cu toate acestea... cultura în care trăim este responsabilă de uneltele interpretative pe care le aducem în lume, pentru a o înțelege... experiența lumii noastre este deja o interpretare a acesteia.* (Haslanger 2017, 158)

Ceea ce ni se pare evident și obiectiv poate fi (și de cele mai multe ori este) rezultatul unei istorii sociale și intelectuale complexe. A accepta această asumpție echivalează cu acceptarea ideii că

„repertoriile noastre conceptuale sunt cel puțin parțial o chestiune de alegere" și că „putem crea unelte diferite și mai bune pentru a ne îndeplini scopurile cognitive" (Haslanger 2017, 159). În plus, instrumentele noastre cognitive sunt activate și încorporate în practici care implică lumea materială: practicile noastre sunt modelate de asumpții contingente istoric; practicile, la rândul lor, întăresc aceste asumpții, materializându-le. Înțelegerea acestui fapt deschide spațiul pentru critică:

> *... ideile și practicile noastre nu sunt necesitate de lume, ci sunt produse ale istoriei, o istorie ai cărei agenți suntem și a cărei traiectorie o putem schimba* (Haslanger 2017, 159).

Mai mult decât atât, a spune despre un concept că este construit social nu se reduce doar la a pretinde că l-am dezvoltat prin intermediul unui proces socio-istoric. Înseamnă să recunoaștem și că natura nu ne impune să optăm pentru o înțelegere anume, ci că înțelegerea rămâne deschisă.

A spune că un obiect este construit social și a analiza ce anume înseamnă aceasta ne aduce mai aproape de scopul prezentei lucrări. „Nu ne naștem, ci devenim femei", susținea Simone de Beauvoir (1989, 267). Am menționat anterior că instrumentele noastre cognitive sunt activate și încorporate în practici care implică lumea materială. În context social, clasificările pe care le facem pot să meargă dincolo de simpla poziționare a unui grup de indivizi într-o categorie sau alta. Prin atribuirea unor calități anumitor indivizi, putem forța indivizii respectivi să se conformeze clasificărilor respective. Astfel, dacă un individ este plasat într-o anumită categorie, el ajunge să dețină, în virtutea categorizării sale, un set de trăsături care îl fac să se califice drept membru al acelei categorii:

> *Categorizarea mea, încă de la naștere (și în mod sistematic începând de atunci), drept femeie, a jucat un rol în felul în care am fost percepută și tratată; aceste percepții și tratamente au jucat, la rândul lor, un rol cauzal important în devenirea mea ca femeie.* (Haslanger 2017, 163)

Această construcție socială a mea, ca femeie, nu s-a realizat *in abstracto*, s-a întâmplat într-un context social, în baza unor interpretări și practici, în urma unui proces socio-istoric ce nu a fost dictat în mod exclusiv de natură. În plus, plasarea mea conceptuală într-o anumită categorie a avut efecte materiale profunde asupra poziționării mele sociale. Natura m-a creat ca individ uman cu anumite caracteristici biologice, dar am devenit femeia care sunt astăzi în urma unui proces complex de construcție socială. Acest proces complex nu m-a adus la existență, însă m-a creat ca obiect 'construit discursiv' și a influențat considerabil, prin aceasta, cine sunt eu acum. Categoria în care am fost repartizată este doar un instrument conceptual, ea trebuie distinsă de membrii săi reali, existenți:

> *... dacă nu trasăm această distincție, nu vom fi capabili să recunoaștem interacțiunea dintre instrument și realitatea asupra căreia se presupune că acesta trebuie acționeze.* (Haslanger 2017, 164)

Astfel, când spun că aparțin genului feminin, înțeleg că am fost construită social în mod discursiv, într-un cadru conceptual preexistent care și-a propus să mă categorizeze, pornind de la anumite caracteristici naturale. Dar, așa cum am menționat anterior, înțelegerea noastră a lumii nu este inevitabilă, ea depinde, într-o măsură destul de mare, de noi.

> *Acest lucru contează, pentru că facem realitatea să se conformeze ideii pe care o avem noi despre ea, și dacă suntem nemulțumiti cu felul în care se prezintă ea, este util să știm dacă ea este așa cum este pentru că așa am făcut-o noi să fie (s.m. – CDR) sau pentru că nu există alternativă rezonabilă sau realistă.* (Haslanger 2017, 164)

Astfel, putem gândi în mod eronat despre criteriul unei clasificări, elementul comun pe care se presupune că îl împărtășesc membrii categoriei respective, că ar fi o proprietate naturală a grupului identificat, când el este, de fapt, o trăsătură atribuită social; sau că ar fi dictat de cauze naturale când, în fapt, el este dictat de

aranjamentele noastre sociale: de exemplu, criteriul clasificării indivizilor umani în rase nu este constituit de un anumit profil genetic, așa cum s-a crezut, în mod eronat, până foarte curând, ci de modul în care persoane cu anumite caracteristici fizice și provenind din anumite regiuni geografice au fost percepute și tratate:

> *... nu este suficient să știm că strămoșii cuiva provin din Africa pentru a le interpreta 'culoarea', deoarece toți provenim din Africa. Geografia relevantă a originii noastre nu este doar o chestiune de loc, ci de timp și de cultură, de asemenea. Dacă așa stau lucrurile, atunci 'culoarea' nu este doar distinsă social, ea este constituită social.* (Haslanger 2012, 194).

În cazul genului, criteriul clasificării nu este dat neapărat de diferențele anatomice, de existența unor organe reproducătoare, ci de identitățile indivizilor și de localizarea acestora într-un sistem de relații sociale.

Toate aceste distincții și delimitări conceptuale ne ajută să subliniem că înțelegerea faptului că anumite anumite concepte și categorii sunt construite social deschide posibilitatea de a contesta aparența de corectitudine și de inevitabilitate a acestora:

> *După sunt aranjate acum lucrurile, există bărbați și femei și oameni de diferite rase. Dar dacă s-ar schimba substanțial condițiile sociale, s-ar putea să nu mai existe bărbați și femei, și nici oameni de diferite rase. A face vizibilă o categorie socială, prin contrast cu una fizică, necesită uneori o schimbare radicală în gândirea noastră.* (Haslanger 2017, 165)

Analiza operată până acum ne este utilă pentru a argumenta că modul în care privim lumea astăzi este doar unul dintre modurile posibile. Clasificările pe care le facem nu sunt pentru totdeauna; înțelegând că ele sunt construcții sociale, sunt rezultatul unui cadru conceptual construit social, care operează cu instrumente cognitive activate și încorporate în practici care nu sunt neapărat necesitate de lume, ci sunt produse ale istoriei și societății, deschidem posibilitatea de a crea moduri diferite și, poate, mai bune, de înțelegere a lumii în care trăim.

Clasificare și diviziune: până unde poate merge construcția socială?

Clasificările pe care le facem în mod obișnuit ne ajută să ne orientăm în lume, să grupăm informațiile primite în baza unor criterii comune. Dar:

> *Clasificările noastre științifice derivă, pe o cale întortocheată, din clasificările comune ale vieții de zi cu zi. Dacă privim în jur, vedem că organismele (și, de fapt, toate fenomenele) pot fi clasificate în categorii ai căror membri seamănă, mai mult sau mai puțin, unii cu alții. Aceste clasificări tradiționale sunt, într-un sens autentic, 'naturale'. Ele sunt, însă, și funcționale, adică sistemele de clasificare servesc un scop pentru indivizii care le instituie. Clasificăm fenomenele cu scopul de a reduce excesul de informație care ar apărea altfel, dar cum anume le clasificăm ține în mare parte de ceea ce considerăm noi convenabil.* (Dunbar 1944, 109)

Clasificării, ca operație a gândirii, îi corespunde, în oglindă, diviziunea: selectând obiectele în clase, în baza asemănării dintre ele, impunem inevitabil o diviziune între acestea și alte obiecte care nu corespund criteriului clasificării. Sesizăm diferențele și separăm acele obiecte care pot fi grupate împreună, în baza unei asemănări, de alte obiecte de care acestea sunt diferite. Aici intervine principiul noncontradicției, o lege fundamentală a gândirii umane, care ne spune că un obiect nu poate să fie și A și non-A, în același timp și sub același raport.

Diviziunile operate în baza acestui principiu separă indivizii în clase aflate în relație de opoziție logică. În calitate de principiu ultim al simplității gândirii, legea noncontradicției ne ajută să ne orientăm în realitate. Însă, așa cum am văzut anterior, criteriile după care operăm diviziuni pentru a interpreta realitatea nu sunt imuabile, asemeni legilor gândirii. Ele sunt la alegerea noastră, depind de noi, în multe dintre situații. Apare astfel întrebarea: cine stabilește criteriul diviziunii? ce stă în spatele alegerii sale?

*

Cimpanzeul Washoe, menționat în deschiderea acestei lucrări, a fost prima primată non-umană instruită să comunice cu oamenii într-

un limbaj inventat de aceștia. Ea a fost crescută de oameni, într-un mediu domestic uman, și a învățat să comunice cu aceștia prin limbajul semnelor. În afară de familia sa umană, a întâlnit ocazional alte persoane, dar nu a interacționat niciodată în mod adecvat cu alte animale. A observat de la distanță câini sau pisici, față de care a manifestat ostilitate. În timp, a devenit evident că se considera om, la fel ca cei între care crescuse. A internalizat, în același timp, sentimentul superiorității față de celelalte ființe, pe care le considera diferite:

> *Câinii nu făceau, în mod evident, parte din 'grupul' nostru; erau diferiți, prin urmare nu erau de încredere. Pisicile n-au avut nici ele prea mult noroc. Dacă o pisică îndrăznea ocazional să folosească grădina din spate drept scurtătură, o gonea imediat. Nici gândacii nu erau preferații ei. Erau de evitat sau, dacă acest lucru era imposibil, îi îndepărta rapid cu mâna. Washoe acceptase ușor noțiunea de superioritate umană – poate chiar prea ușor. Ideea de a fi superior este îmbătătoare.* (Fouts și Fouts 28)

La vârsta de 5 ani s-a decis ca ea să fie integrată într-un grup de cimpanzei aflați la un institut de cercetare a primatelor din Oklahoma. Atunci când s-a trezit din starea de sedare indusă pentru transport,

> *... cimpanzeii din cuștile alăturate au început să facă zgomot și să țipe la ea. După ce și-a recăpătat cunoștința, prietenul său uman a întrebat-o în limbajul semnelor ce erau cimpanzeii. Ea i-a numit 'PISICI NEGRE' și 'GÂNDACI NEGRI'. Nu erau ca ea și, dacă se raporta la ei ca la pisici și la gândaci, nu îi agrea prea mult. Washoe își însușise mult prea bine aroganța noastră.* (Fouts și Fouts 29)

Cu toate acestea, pe cât de contondent a fost primul contact cu semenii săi, pe atât de ușor s-a adaptat Washoe noului grup, asumându-și un rol matern pentru pui și apărându-i când erau amenințați de cimpanzeii mai mari. A dezvoltat o solidaritate profundă cu noua sa familie, manifestând altruism și asumându-și riscuri considerabile pentru a-și ajuta semenii la nevoie. În cei zece ani petrecuți la institut, Washoe a trecut de cealaltă parte a barierei

clasificatorii, asumându-și identitatea de 'animal' și dezvoltând aversiune față de oameni, din al căror grup nu mai făcea parte: „dacă era cineva care nu-i placă, aceia erau oamenii aroganți care îi necăjeau prietenii." (Fouts și Fouts 29)

Exemplul lui Washoe ne ajută să înțelegem cum conceptul de animal, alături de altele precum genul și rasa, este construit social. Mediul în care a crescut făcea o distincție clară între conceptele de 'om' și 'animal'; distincția operată la nivel conceptual i-a impus lui Washoe atitudinea de separare și ostilitate față de categoria căreia considera că nu-i aparține. În mod clar, Washoe nu se considera animal: ea se identifica drept om datorită condițiilor sociale în care fusese crescută. Dar credința internalizată de Washoe că este fundamental diferită de ceilalți cimpanzei nu avea o bază naturală. Acest lucru este posibil deoarece:

> *... noțiunea pe care cei mai mulți dintre noi (incluzând-o pe Washoe) o avem despre diferența de specie nu este reductibilă la un set de calități reale. Washoe ar fi putut să să-și privească brațul și să vadă că acesta seamănă mai mult cu brațele cimpanzeilor decât cu ale oamenilor. Dar, la momentul respectiv, probabil că niciun fapt empiric nu ar fi convins-o pe Washoe că nu era esențial diferită de așa-numiții 'gândaci negri'.* (Elstein 2003, 3)

Este incontestabil că între animalele umane și cele non-umane există diferențe și că aceste diferențe sunt naturale. Clasificarea/ diviziunea ființelor în diferite categorii în baza asemănărilor/ diferențelor naturale dintre ele nu justifică, însă, în mod logic, distincția și ierarhizarea operată între aceste categorii:

> *Realitatea biologică este că toate clasificările sunt artificiale. Ele impun o anumită ordine în dezordinea relativ haotică a lumii naturale. Speciile, așa cum le descriem noi, țin mai degrabă de convenință decât de realitatea biologică. Lumea reală este alcătuită doar din indivizi care sunt mai mult sau mai puțin înrudiți unii cu ceilalți în virtutea descendenței lor din unul sau mai mulți strămoși comuni.* (Dunbar 1993, 110)

Această distincție are altfel de fundamente, care nu au legătură cu natura, ea este impusă social. Principiul logic al noncontradicției

nu mai este utilizat pentru a delimita diferențe naturale între indivizi, ci pentru a legitima discursiv o ordine 'naturală' care justifică relațiile de putere dintre aceștia. Așa cum menționam anterior, putem repartiza, în baza unor caracteristici naturale, indivizii în anumite categorii, ajungând astfel să construim social acele categorii.

Conceptele de animal și de om nu mai cartografiază doar diferențe naturale, ci o antiteză și o înstrăinare care:

> *... servesc drept bază pentru stabilizarea și legitimarea unor ierarhii 'naturale', inclusiv interumane, și pentru structuri de exploatare și violență care sunt practicate și reproduse în contextul relației tradiționale om-animal* (Müterich 2003, 17; citată în Bujok 2013, 36).

Într-o mișcare conceptuală surprinzătoare, apartenența la natură nu mai servește drept criteriu al clasificării indivizilor (umani și non-umani) în aceeași categorie, ci drept criteriu al diviziunii acestora în două categorii radical diferite și ierarhizate.

Postulând rațiunea drept diferența specifică între cele două categorii, am ajuns să instituim discursiv o antiteză, ignorând faptul că avem mult mai multe trăsături naturale în comun cu animalele non-umane, acestea justificând, în mod logic, plasarea oamenilor și animalelor în aceeași categorie. Nu avem de-a face, deci, cu selectarea unor categorii în acord cu diferențele naturale, ci despre construcția socială a acestora în baza unui criteriu impus discursiv:

> *Atunci Dumnezeu a zis: 'Să facem om după chipul Nostru, după asemănarea Noastră; el să domnească peste peştii mării, peste păsările cerului, peste vite, peste tot pământul şi peste toate animalele mici care mişună pe pământ!'* (Biblia, Geneza 1:26)

Nu mai este vorba, deci, despre logica generală care ghidează gândirea umană, ci despre o 'logică a dominației', un sistem de gândire care:

> *... presupune că superioritatea justifică dominarea. O logică a dominației este oferită drept garanție morală a superiorității deoarece, odată acceptată,*

> *furnizează justificarea pentru a-i ține pe Cei-de-jos, jos. În mod curent, această justificare susține că Cei-de-sus au o anumită caracteristică (de exemplu, în tradiția filosofică occidentală, trăsătura favorită este 'mintea', rațiunea sau raționalitatea) ce le lipsește Celor-de-jos și în virtutea căreia subordonarea Celor-de-jos este justificată.* (Warren 2000, 47)

O astfel de 'logică a stăpânirii' guvernează un sistem de gândire care justifică abuzul împotriva naturii, femeilor și altor ființe umane marginalizate în lumea occidentală (Warren 2000, 47-56; Plumwood 1993, 41-68), deoarece plasează în opoziție radicală rațiunea și natura; opoziția permite astfel ca natura să fie:

> *... instrumentalizată ca simplu mijloc în raport cu scopurile umane prin aplicarea unui dualism moral ce consideră că doar oamenii merită statut moral și definește 'restul' ca aparținând sferei utilizabilului.* (Plumwood 1993, 69)

Faptul că aceasta este o logică inventată și nu una naturală permite și o permeabilitate a granițelor dintre categoriilor construite în baza ei; deși femeile aparțin categoriei generice a oamenilor, în baza unei postulate diferențe de rațiune, ele sunt asociate naturii și animalelor:

> *... femeile sunt ființe umane, dar numai în felul în care o aripă frântă este totuși o aripă; ele sunt cei mai buni reprezentanți imperfecți ai tipului uman.* (Anthony 1998, 64)

Această logică inventată este, în mod evident, distorsionată, de vreme ce ajunge să transforme o presupusă diferență *de grad* într-una *de natură*. Așa se face că femeile și animalele non-umane au ajuns să aparțină aceleiași categorii, construită discursiv ca radical diferită și aflată în relație de opoziție și subordonare față de o categorie superioară care a exploatat în mod inteligent și eficient principiul noncontradicției din logica clasică. Odată instituită discursiv diferența drept distincție, ordinea operată în baza ei a fost considerată naturală și a permis ca raționamentul distorsionat să stea, în mod similar, la baza construcției sociale a altor categorii. În

măsura în care categoria A reprezintă norma, ea include bărbații, rasa albă, cultura, ființele umane, spiritul, civilizația, producția, capitalul (Adams 2003, 50). Acestora, în societatea occidentală, li se adaugă tinerii, cei slabi, heterosexualii, creștinii, cei suficient de stabili financiar (Lorde 2000, 527). Cei ce nu se califică în categoria A sunt 'împinși' în categoria non-A: femeile, minoritățile rasiale, animalele non-umane, popoarele primitive, natura, corporalitatea, reproducerea și forța de muncă (Adams 2003, 50). Acestora li se adaugă indivizii grași, bătrâni, neheterosexuali și ne-creștini (Kemmerer 2011, 13).

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Toate cele expuse mai sus sunt menite să argumenteze cum funcționează construcția socială în societățile patriarhale occidentale; atitudini similare sunt prezente și în alte culturi patriarhale, diferențele fiind instituite după criterii similare, dar adaptate acestora din urmă. Această construcție socială alimentează ierarhii de putere inventate și subminează relațiile interumane, întrucât cei ce trăiesc în patriarhat sunt definiți în baza unor diviziuni inventate: rasa albă/celelalte rase, om/animal, cultură/natură, rațiune/emoție etc. Majoritatea celor ce trăiesc în societăți patriarhale sunt condiționați „să vadă diferențele umane în termeni de opoziție simplistă: dominant/subordonat, bun/rău, sus/jos, superior/inferior" (Lorde 2000, 526). Problema principală legată de astfel de dualisme nu este doar că ar fi simpliste, ci că, deși sunt nejustificate, ele ne afectează capacitatea de a percepe și de a relaționa cu lumea înconjurătoare: „societățile patriarhale nu doar divid, ele cuceresc" (Kemmerer 2011, 12). Într-o viziune duală, patriarhală asupra lumii, categoriile nu sunt pur și simplu definite prin opoziție. Fiind plasate în opoziție, se instituie artificial, se postulează în mod fals o relație de putere în care o categorie este devalorizată:

> *Atât femeile cât și animalele sunt identificate mai degrabă cu natura decât cu cultura, din cauza biologiei lor. Amândouă categoriile sunt concepute, în consecință, în ideologia masculină, drept fundamental inferioare bărbaților, respectiv oamenilor. În societatea dominată de bărbați, femeile sunt*

> *identificate cu natura și cu animalitatea și denigrate, în consecință; o manevră care definește, de asemenea, rangul relativ inferior al animalelor în societatea umană. Ambele sunt concepute ca lipsindu-le acele proprietăți ce înalță bărbații, acele calități în baza cărora bărbații se definesc pe ei înșiși și care îi îndreptățesc să-și definească statutul drept uman, prin opoziție.* (MacKinnon 2004, 264)

Această perspectivă a feminismului radical, deși poate părea exagerată, este instructivă, deoarece este important de explorat relevanța identității de gen în felul în care ne raportăm la natură (Kheel 2007, 251). Lucrarea de față și-a propus să evidențieze logica distorsionată care stă la baza construcțiilor noastre sociale, cu efecte negative pentru categoriile construite în baza acesteia. Deși feminismul de tipul celui dezvoltat de MacKinnon adoptă o atitudine radicală împotriva patriarhatului și identității masculine construite de acesta, nu ar fi logic corect să generalizăm, plasând exclusiv vina asupra bărbaților reali care se bucură de multe privilegii în societate, inclusiv acela de a trata femeile și animalele drept obiecte în virtutea biologiei lor. Construcția socială operează la un nivel implicit, de aceea nu e ușor de explicat de ce, în zilele noastre, animalele non-umane sunt cele mai exploatate ființe de pe planetă sau de ce violența sexuală rămâne o constantă în viața femeilor, de ce cuvintele pe care le folosim a degrada femeile și animalele sunt aceleași sau de ce încă mai vorbim despre femei ca despre „bucăți de carne", uneori fără să clipim, degradând în același timp și femeile utilizate, dar și animalele ce sunt consumate ca atare (Adams 2010, 46).

A generaliza spunând că bărbații sunt vinovați ar fi o eroare logică, dar a ignora modul în care construcția socială a masculinității în societățile patriarhale influențează viețile a miliarde de ființe asociate cu natura și feminitatea, ar fi o greșeală la fel de mare:

> *Deși ar fi greșit să argumentăm că atitudinile distructive față de natură pot fi atribuite exclusiv influenței pe care o are identitatea masculină, ... este la fel de nechibzuit să ignorăm contribuția acesteia.* (Kheel 2007, 251)

Este posibil și un alt fel de construcție socială?

Am văzut cum, în mod sistematic, gândirea occidentală a asociat femeile și animalele cu natura, într-un efort conceptual de separare și devalorizare. Paradoxal, această „luptă a determinării împotriva ambiguității, a preciziei semantice împotriva ambivalenței" (Bauman 1990, 7), menită să împartă strict lumea în diferite categorii, contrazice unul dintre principiile după care se presupune, în aceeași tradiție de gândire occidentală, că ea ar trebui să funcționeze:

> *Natura avansează puțin câte puțin ... în așa fel încât este imposibil de determinat atât o linie exactă de demarcație, cât și de ce parte a acesteia ar trebui, în consecință, să fie plasată o formă intermediară.* (Aristotel 350 BCE)

Merită să ne întrebăm, în manieră feministă, după toată analiza logică de mai sus, dacă nu ar fi posibil un nou mod de a interpreta lumea în care trăim, unul în care diferențele existente între indivizi, fie ei bărbați sau femei, ființe umane sau non-umane, să nu mai constituie motive de diviziune, fără a ne teme că refuzul de a accepta alterizarea și ierarhizarea ar destabiliza lumea în care trăim.

După cum menționam la începutul acestei lucrări, feminismul a reușit să altereze măcar, dacă nu să anuleze, ordinea tradițională dintre oamenii ce alcătuiesc societățile în care trăim. Prin insistența asupra ideii că genul este construit social, prin perseverența în a analiza cum anume se petrece această construcție și în a arăta care sunt efectele ei, feminismul a contribuit, în ultimele decenii, la o mai bună înțelegere a universului nostru social și a modului în care acesta este organizat. Acum feminismul poate face un pas mai departe, pentru a include în demersul reparator nu doar oamenii, ci și celelalte animale oprimate în mod similar. Într-o perspectivă ecologică feministă, diferențele dintre grupuri și indivizi pot fi acceptate fără a li se atribui valoare morală mai mare sau mai mică acelor grupuri sau indivizilor care le constituie: „relațiile sociale drepte necesită ca aceste evaluări să fie evitate" (Gruen 2021).

A recunoaște că, deși ceea ce ține de natură este relativ inalterabil, o construcție socială care justifică statutul inegal al femeilor în societate și în sfera privată este impardonabilă și trebuie schimbată, echivalează cu a accepta că genul poate fi construit social în modalități diferite. În manieră similară, a recunoaște că, deși ceea ține de natură este relativ inalterabil, o construcție socială care determină excluderea, devalorizarea, exploatarea, încarcerarea, dezmembrarea și consumul animalelor este impardonabilă și trebuie schimbată, echivalează cu a accepta că și conceptul de animal poate fi construit social în mod diferit.

Lecția pe care o învățăm de la cimpanzeul Washoe este exemplară: pe cât de ușor și de 'natural' putem să ne auto-atribuim și să atribuim altora apartenența la o anumită categorie, pe atât de ușor această atribuire poate fi schimbată, dacă ne permitem, dacă ne dăm voie să o facem. Este necesar însă efortul de desprindere de scheme conceptuale învechite, iar această desprindere nu este ușoară, pentru că presupune renunțarea la aroganță și la atitudinea de superioritate, la priveliștea frumoasă a raiului înstelat pe care o avem de la etajele superioare ale clădirii lui Horkheimer (1978, 66). Presupune să depășim „mintea discontinuă", să conștientizăm că utilizăm concepte construite social care ne „tentează să forțăm lumea să se distribuie în clasificări calitative, deși ... lumea nu este în mod real organizată discontinuu" (Dawkins 1994, 81).

Dacă că înțelegem cum iau naștere conceptele și categoriile care ne ghidează orientarea în realitate, putem să mergem un pas mai departe și să conștientizăm că:

> *În calitate de indivizi umani, suntem ființe sociale în sensul că reacționăm în mod profund la contextul nostru social și că devenim indivizi fizici și psihologici prin interacțiunile cu ceilalți. Una dintre speranțele feminismului este că putem deveni diferiți ... prin construcția unor practici noi și diferite; că putem deveni un nou tip de ființe, radical diferit.* (Haslanger 2017, 166)

Speranța pe care o exprimă această lucrare este că putem extinde raționamentul acesta feminist, că putem conștientiza că ceea

ce unește ființele umane și cele non-umane este mai relevant decât ceea ce le separă, și că putem extinde acest efort de construcție socială diferită, mai bună, și asupra semenilor noștri non-umani.

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Animal Protection at the International Level. Can We Envision a World Court for Animal Protection?

Lavinia Andreea Bejan*

Abstract. *It cannot be denied that a preoccupation for animal welfare and certain forms of animal protection can be identified at the international level, institutionally speaking. There are both intergovernmental organizations, such as the World Organization for Animal Health, and non-governmental ones, such as World Animal Protection, that are specialized in matters related to animal welfare and protection. Even the United Nations, with several of its institutions and agencies, as well as the World Trade Organization, have shown a certain interest in animal welfare. In parallel, various efforts have been made, and are still being made, in order to identify common standards of animal welfare and protection at the global level, including some forms of achieving justice for breaching such standards. In this context, the present paper aims to provide an overview of the existing institutions and mechanisms regarding animal welfare and protection at the global level, to identify the most relevant proposals that have been advanced in this field, from a legal or institutional perspective, as well as to advance some thoughts regarding a proper global court of justice for animal protection.*

Keywords: animal health, animal protection, animal welfare, One Health, United Nations.

Introduction

Animal health, welfare, and protection have undeniably been taken into consideration by a number of relevant intergovernmental organizations. Some of them have rather general aims, meaning that they do not focus specifically on animals, such as the institutions belonging to the United Nations' system – the World Health Organization (WHO), the Food and Agriculture Organization (FAO), the United Nations Environment Programme (UNEP) etc. There are,

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also, organizations that are specifically focusing on animal-related issues, and the most specialized intergovernmental institution of this sort is the World Organization for Animal Health (founded as OIE), which currently represents the global authority on animal health. These four organizations are also working together in what is called the 'Quadripartite' in order to advance and support the One Health approach, essentially meant to reduce health threats at the human-animal-ecosystem interface. Moreover, the World Trade Organization (WTO), a global institution with a rather rigid regulatory framework, has started to interpret its own rules in a sense that appears to recognize the importance of animal welfare, at least in certain particular contexts. A number of treaties and conventions have also been concluded, at the international level, providing forms of protection for animals in the context of biodiversity, with a particular regard for threatened or endangered species.

A regulatory approach has been the focus of some relevant international non-governmental organizations too, which advanced a few meaningful proposals for legal documents to be adopted at the international level in the field of animal health, welfare, and protection. One of them even conceived and established a form of an 'International Court of Justice for Animal Rights'. In this context, the aims of this paper are to provide an overview of the existing institutions and mechanisms regarding animal welfare and protection at the global level, to identify the most relevant proposals that have been advanced in this field, from a legal or institutional perspective, as well as to advance some thoughts regarding a properly judicial global court of justice for animal protection.

Animal protection by intergovernmental organizations

Within the system of intergovernmental organizations, the concern regarding animals has been mostly visible through other, broader, fields of interest, such as agriculture, food security or the environment. The main focus of these institutions regarding animal-

related issues is animal health, yet animal welfare has also gained significant ground.

The Quadripartite

The health of humans, animals, and ecosystems are closely interlinked, and changes in these relationships can increase the risk of new human and animal diseases developing and spreading. The close links between human, animal and environmental health demand close collaboration, communication and coordination between the relevant sectors (WHO 2022). In this sense, four major intergovernmental organizations, namely the World Health Organization (WHO), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP) and the World Organisation for Animal Health (WOAH), having certain goals in common, decided to collaborate in order to manage such common goals and formed what is known as the One Health Quadripartite. The initiative belonged to the WHO, which aimed at integrating the work on human, animal and environmental health across the organization (WHO 2017). In order to better understand the Quadripartite and the One Health approach that it stands for, let us first take a look at what each of these organizations represent, what interests they promote and how they work toward reaching their goals.

The World Health Organization, founded in 1948, is a United Nations agency, the primary role of which is to direct and coordinate international health within the United Nations' system. The objective of the WHO is the attainment by all peoples of the highest possible level of health (Constitution of the World Health Organization, Article 1). In this sense, the organization leads and champions the global efforts to give everyone, everywhere, an equal chance to live a healthy life (WHO, n.d.). The WHO's mission is to promote health, keep the world safe and serve the vulnerable (WHO, Thirteenth General Programme of Work, 2019–2023, 3). It brings together 194 states and works through offices in over 150 of them. Among the

preoccupations that relate to animal welfare and health are stray dog control (it has coordinated a number of pilot projects on stray dog control, including projects in Tanzania, South Africa and the Philippines), as well as resistance to antibiotics. The WHO also has a program on Public Health, Environmental and Social Determinants of Health (PHE), and one on Zoonoses and Veterinary and Public Health, both relevant for terrestrial and fish farming, particularly on the matter of intensive production (WHO presentation page on World Animal Net, n.d.).

In the United Nations' system, another organization that is highly involved in the field of animal health is the Food and Agriculture Organization (FAO), which generally works toward defeating hunger. More particularly, it aims at achieving food security for everyone and making sure that people have regular access to enough high-quality food in order to lead lives that are active and healthy (FAO, "About FAO", n.d.). The FAO currently has 195 members (194 countries and the European Union) and works in over 130 countries worldwide. One of its thematic areas of work is animal health, seen by the agency as a core element for sustainable development and livestock production (FAO, "FAO's role in animal health", n.d.). In this regard, FAO focuses on several animal health issues, such as disasters and climate change, early warning and disease intelligence, food safety, surveillance and risk assessment, veterinary public health, wildlife and so on. The main activities, plans and programmes of the FAO regarding animal health are Antimicrobial resistance (AMR), the Emergency Centre for Transboundary Animal Diseases (ECTAD), the Emergency Management Centre (EMC), the Emergency Prevention System for Animal Health (EMPRES-AH), the European Commission for the Control of Foot-and-Mouth Disease (EuFMD), the Global Rinderpest Action Plan (GRAP), the Programme Against African Trypanosomosis (PAAT) and the Peste des Petits Ruminants Global Eradication Programme (PPR-GEP). Through these, the FAO generally seeks to detect, respond to, and manage outbreaks, monitor situations of disease, provide warning and guidance to countries

worldwide and conduct missions in the affected countries. The FAO also has an Animal Production and Health Division (NSA), which aims, as part of its mandate, to promote the best practices that maintain animal health, welfare, and livestock productivity. Given that, in the agency's view, healthy animals are closely related to healthy people and a healthy environment, FAO "contributes to improving animal health to make livestock production more productive and sustainable while achieving optimal health for all at the human-animal-environment interface" (FAO, "FAO's role in animal health", n.d.).

The United Nations Environment Programme (UNEP) is the leading global authority on the environment, its mission being "to inspire, inform, and enable nations and peoples to improve their quality of life without compromising that of future generations" (UNEP, n.d.). Founded in 1972 and having 193 member states, it works with governments, civil society, the private sector, and UN entities to address the most pressing environmental challenges, including protecting the world's seas and promoting a green, inclusive economy (UNEP, n.d.). Its mandate is to find solutions to the triple planetary crisis of climate change, nature and biodiversity loss, and pollution and waste. How it tackles these issues is by using its power, together with scientific research and public advocacy, in order to advance the global environmental agenda. Among its preoccupations that positively affect animals is the concern for biosafety and biodiversity, with a deep interest in protecting endangered species.

The most specialized organization in the Quadripartite and worldwide is the World Organization for Animal Health (founded as OIE), which represents the global authority on animal health. The WOAH has been created in 1924 as the Office International des Epizooties (OIE), stemming from an International Agreement (January 25, 1924) to fight infectious animal diseases in solidarity with its (currently 183) members (it has changed its name in 2003). The WOAH focuses on transparently disseminating information on animal diseases, improving animal health globally and thus

attempting to build a safer, healthier, and more sustainable world. The Organization and its members coordinate the global response to emergencies related to animal health, the prevention of zoonotic diseases, the promotion of animal health and welfare, as well as better access to animal health care (WOAH, n.d.). The WOAH works by collecting, analysing and disseminating veterinary scientific information, at the same time encouraging international solidarity in the control of animal health risks. The organization acts by monitoring the emergence and development of animal diseases in terrestrial and aquatic animals, either domestic or wild, also ensuring that the members have the tools, capacity and support they need to equip their Veterinary Services and respond to the threats of animal diseases. Moreover, it monitors and disseminates knowledge about animal diseases, collaborates in various global initiatives (on disease eradication, antimicrobial resistance, food safety, biological threat reduction and, of course, One Health). Very importantly, it established a number of animal health and welfare standards to ensure safe trade, public health, and economic growth within and beyond the borders of its members (WOAH, n.d.).

The WOAH worked on and published two Codes and two Manuals regarding terrestrial animal health and aquatic animal health. The two Codes (Terrestrial Animal Health Code and Aquatic Animal Health Code) provide standards for the improvement of animal health and welfare and veterinary public health worldwide, while the two manuals (Manual of Diagnostic Tests and Vaccines for Terrestrial Animals and Manual of Diagnostic Tests for Aquatic Animals) provide a standardized approach to the diagnosis of the diseases listed in the Terrestrial and Aquatic Codes. The WOAH Terrestrial Animal Health Code (latest version, 2023) provides standards and recommendations for animal disease diagnosis, surveillance and notification, risk analysis, quality of veterinary services, disease prevention and control, trade measures, import/export procedures and veterinary certification, veterinary public health, standards for the transport of animals, slaughter, killing of animals for disease control purposes, dog population

management, use of animals in research and education, animal welfare in production systems and so on.

Equally important, the Code contains an entire section (Section 7) dedicated to animal welfare. Chapter 7.1, 'Introduction to the Recommendations for Animal Welfare', has a particular significance. It provides, first of all, a definition of animal welfare, and the various degrees of welfare that an animal may experience. According to Article 7.1.1., "Animal welfare means the physical and mental state of an animal in relation to the conditions in which it lives and dies" (WOAH, Terrestrial Animal Health Code, Article 7.1.1.). Moreover, it is stated that "an animal experiences good welfare if the animal is healthy, comfortable, well nourished, safe, is not suffering from unpleasant states such as pain, fear and distress, and is able to express behaviours that are important for its physical and mental state" (WOAH, Terrestrial Animal Health Code, Article 7.1.1.). The requirements for good animal welfare are "disease prevention and appropriate veterinary care, shelter, management and nutrition, a stimulating and safe environment, humane handling and humane slaughter or killing" – all of these in the context in which, essentially, "animal welfare refers to the state of the animal" (WOAH, Terrestrial Animal Health Code, Article 7.1.1.).

The Code also provides for certain guiding principles for animal welfare in general. One of these is the fact that there is a critical relationship between animal health and animal welfare. Another highly important one is that the internationally recognised 'five freedoms' provide valuable guidance in animal welfare. These are: freedom from hunger, thirst and malnutrition; freedom from fear and distress; freedom from physical and thermal discomfort; freedom from pain, injury and disease; and freedom to express normal patterns of behaviour. Another guiding principle for animal welfare is the fact that the internationally recognised 'three Rs', namely the reduction in numbers of animals, the refinement of experimental methods and the replacement of animals with non-animal techniques, provide valuable guidance for the use of animals in science. Both the 'five freedoms' and the 'three Rs', which are now

largely acknowledged and recognized in the field of animal welfare, have been, in fact, advanced by WOAH. The general guidelines also state that the use of animals in agriculture, education, and research, and for companionship, recreation, and entertainment, makes a major contribution to the well-being of people, and they recognize that the use of animals carries with it an ethical responsibility to ensure the welfare of such animals to the greatest extent practicable (WOAH, Terrestrial Animal Health Code, Article 7.1.2.). The Code also provides for certain general principles for the welfare of animals in livestock production systems, among which the fact that the physical environment of such animals should allow comfortable resting, safe and comfortable movement, including normal postural changes, and the opportunity to perform types of natural behaviour that animals are motivated to perform, or that the social grouping of animals should be managed to allow positive social behaviour and minimize injury, distress and chronic fear (WOAH, Terrestrial Animal Health Code, Article 7.1.5.).

These four organizations (WHO, FAO, UNEP and WOAH) are working together in the 'One Health Quadripartite' for their common goals, seeking to promote certain multisectoral approaches for reducing health threats at the human-animal-ecosystem interface.

The One Health Approach

In May 2021, the One Health High-Level Expert Panel (OHHLEP) was formed in order to advise FAO, UNEP, WHO and WOAH on One Health issues, and the WHO is the Secretariat for this expert panel, which provides scientific advice to the Quadripartite partners on One Health priority setting, policies and strategies (WHO 2022). This includes recommendations for research on emerging disease threats, the development of a long-term global plan of action to avert outbreaks of diseases like H5N1 avian influenza, MERS, Ebola, Zika etc., recommendations on good practice guidelines, a model One Health Surveillance System (WHO 2017; WHO 2022) and so on.

As an independent advisory group to the Quadripartite, the OHHLEP has issued a comprehensive definition of One Health, which the Quadripartite further embraced. According to this definition, "One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of humans, animals, plants and ecosystems. It recognizes the health of humans, domestic and wild animals, plants and the wider environment (including ecosystems) are closely linked and interdependent. The approach mobilizes multiple sectors, disciplines and communities, at varying levels of society, to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development" (One Health Joint Plan of Action 2022–2026, 5).

In order to respond to international requests for preventing future pandemics and to promote health sustainably through the One Health approach, the Quadripartite has developed the One Health Joint Plan of Action (OH JPA) 2022–2026. What is intended through OH JPA is "a world better able to prevent, predict, detect and respond to health threats and improve the health of humans, animals, plants and the environment while contributing to sustainable development" (One Health Joint Plan of Action 2022–2026, X). The OH JPA is built around six interdependent action tracks that collectively contribute to achieving sustainable health and food systems, reduced global health threats, and improved ecosystem management, namely: 1. Enhancing One Health capacities to strengthen health systems; 2. Reducing the risks from emerging and re-emerging zoonotic epidemics and pandemics; 3. Controlling and eliminating endemic zoonotic, neglected tropical and vector-borne diseases; 4. Strengthening the assessment, management and communication of food safety risks; 5. Curbing the silent pandemic of AMR; 6. Integrating the environment into One Health.

Each of these action tracks consists of a set of actions with specific activities, deliverables and a timeline to achieve certain objectives, more precisely: to provide adequate guidance and tools

for the effective implementation of multisectoral approaches to promote the health of humans, animals, plants, and ecosystems and to prevent and manage risks at the human-animal-plant-environment interface; to reduce the risk and minimize local and global impacts of zoonotic epidemics and pandemics (through prevention and One Health surveillance, early warning and response systems); to reduce the burden of endemic zoonotic, neglected tropical and vector-borne diseases (by supporting countries in implementing community-centric, risk-based solutions, strengthening policy and legal frameworks from the local to the global level and across sectors, and increasing political commitment and investment); to promote awareness, policy changes and action coordination among stakeholders to ensure that humans, animals and ecosystems achieve health and remain healthy in their interactions with and along the food supply chain; to take joint action to preserve antimicrobial efficacy and ensure sustainable and equitable access to antimicrobials for responsible and prudent use (in human, animal and plant health); to protect and restore biodiversity, prevent the degradation of ecosystems and the wider environment.

The OH JPA also promotes the adoption of cross-cutting principles, including systems thinking, advocacy, public-private partnerships, governance, institutional and legal frameworks, as well as traditional knowledge of local and indigenous communities, in order to build connections across the six action tracks and look at shared underlying issues (One Health Joint Plan of Action 2022–2026, XI). The OH JPA is not a binding policy document, but it does provide a framework for action for the four organizations working together to both advance and scale up One Health in a sustainable manner. It is intended to be a living document, which means that it is open to adjustment in order to reflect the progress, the new challenges, as well as the resources made available according to the decisions of the Quadripartite (One Health Joint Plan of Action 2022–2026, 2).

All of the proposed activities, deliverables and timeline for each action track are explicitly described in Part 3 of the OH JPA. Among

the significant activities more specifically related to animal health would be: 2.1.3 Identify drivers and indicators to monitor their impacts on zoonotic disease emergence, re-emergence and spread; 2.1.4 Develop a One Health indicator framework to monitor the health of humans, wildlife, domestic animals, vectors and the environment; 2.3.1 Develop operational tools and resources to conduct targeted One Health surveillance at human-animal ecosystem interfaces and a mechanism for multisectoral data sharing; 2.3.2 Develop guidance on progressive control and management pathways that apply a One Health approach in strengthening biosecurity for existing and potentially re-emerging zoonotic diseases and support countries with implementation; 2.3.4 Develop a pathogen monitoring framework for wildlife and the environment, including in wildlife habitats and support countries with implementation, and so on.

Animal protection and the World Trade Organization

Another major intergovernmental international organization which has a significant impact on animal welfare, this time seen in a rather negative sense, is the World Trade Organization (WTO). The WTO was established through the Marrakesh Agreement (1994, in force since 1995), which includes the agreements previously negotiated under the 1947 General Agreement on Tariffs and Trade (GATT), along with the agreements concluded during the Uruguay Round (1994), all of these agreements staying at the heart of the WTO. The organization now has 164 members, representing 98 per cent of world trade, and its goal is to regulate government actions that affect trade or the conditions of competition for imports; it is, in fact, the only global international organization dealing with the rules of (free) trade between nations.

The free trade legislation of the WTO is seen as a major impediment to the adoption of stronger animal protection legislation by the EU and by other countries, and EU officials state oftentimes that the reason why they cannot take a particular action is because

such action would be incompatible with the WTO rules (Stevenson 2015, 1). The issue is represented by the WTO rule according to which countries may not make distinctions between products on the basis of the method by which such products are processed or produced – in GATT jurisprudence, these are referred to as process or production methods (PPMs). This rule is "extremely forbidding" (Stevenson 2015, 1), in practice, since the EU (or any other WTO member) may wish to apply certain trade restrictions that would distinguish between products derived from animals that are treated inhumanely and those coming from animals treated more humanely. This would imply a distinction made on the basis of the manner in which the animals were "produced" (Stevenson 2015, 1), and WTO regulations are seen as an impediment.

The provisions in question are to be found in Articles I, III and XI of the GATT. In broad terms, Article I prohibits the discrimination, by a country, between imports from different nations, Article III prohibits the discrimination between domestic and imported products, and Article XI prohibits the imposition of quantitative bans or restrictions on imports or exports (an absolute ban on import restrictions). Article III, providing for the 'national treatment principle', states that "The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin…" (GATT 1947, Article III; GATT 1994) (emphasis added). As such, a country may argue that the imported product (being granted less favourable treatment than the domestic one) and the domestic product concerned are not "like" one another; for instance, that a ban on the sale of battery egg does not violate Article III since the banned product, the battery eggs, is not "like" the permitted product, which could be, for instance, free range eggs (Stevenson 2015, 3).

On the positive side, there is, however, a WTO rule establishing certain general exceptions to the other WTO rules (including the aforementioned articles). In this sense, Article XX states that "…nothing in this Agreement shall be construed to prevent the

adoption or enforcement by any contracting party of measures: (a) necessary to protect public morals; (b) necessary to protect human, animal or plant life or health (...); (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption (...)" (GATT 1947, Article XX). These provisions may be used as defences against claims that other WTO rules have been violated. Moreover, Article 2.2 of the WTO Agreement on Technical Barriers to Trade (TBT) provides that "technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create" and one of these legitimate objectives is the protection of "animal or plant life or health, or the environment" (TBT 1994, Article 2.2).

It appears also that, in recent years, the WTO case law has started to find a better balance between trade liberalisation and other legitimate public policy considerations, including animal welfare, including by accepting exceptions such as those stated in GATT Article XX. For instance, in both United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products (U.S. - Tuna II), 2012, and European Communities – Measures Prohibiting the Importation and Marketing of Seal Products (EC – Seal Products), 2014, the Appellate Body has recognised the legitimacy of a country wishing to prevent market demand in its territory from fuelling inhumane practices in other countries (Appellate Body Report in U.S. - Tuna II, par. 342, par. 407; Appellate Body Report in EC – Seal Products, par. 5167; Stevenson 2015, 13). In U.S. - Tuna II (2012), referring to Article 2.2 TBT, the Panel stated that the reference to animal life or health is not confined to endangered species, but allows Members to pursue policies that aim at protecting individual animals or species the sustainability of which, as a group, is not threatened (Panel Report, U.S. - Tuna II, as modified by Appellate Body Report, par. 7437).

EC – Seal Products (2014) concerned the fact that EU legislation prohibits the placing on the market of seal products unless the products fall within certain exceptions (Regulation No. 1007/2009 of

the European Parliament and of the Council of 16 September 2009 on trade in seal products; Stevenson 2015, 4). The Panel recognized the fact "the evidence as a whole sufficiently demonstrates that animal welfare is an issue of ethical or moral nature in the European Union" and added that "international doctrines and measures of a similar nature in other WTO Members (...) illustrate that animal welfare is a matter of ethical responsibility for human beings in general". Since the objective of the EU Seal Regime is "to address the moral concerns of the EU public with regard to the welfare of seals", the Appellate Body agreed with the Panel that the "principal objective of the EU Seal Regime is to address EU public moral concerns regarding seal welfare" and found that this objective falls within the scope of Article XX(a), regarding public morals (Appellate Body Report in EC – Seal Products, par. 5167, par. 5201).

While it should be noted that, for such a judgment, there needs to be evidence that the public in a particular jurisdiction does have concerns of a moral nature about the animal welfare issue at stake (Stevenson 2015, 15), this ruling, that animal welfare can be a matter of public morals, thus covered by Article XX(a), together with the interpretations of Article 2.2 TBT, shows that even the WTO, with its strict rules, started to take into consideration issues related to animal welfare.

International regulations – from animal health to animal welfare

Other than the aforementioned policies and actions of the Quadripartite, at the international level there are also certain international regulations that relate to animal welfare and animal health, with various degrees of enforceability.

Within the United Nations' system, in 2016, the United Nations Committee on World Food Security (CFS) endorsed the recommendations on *Sustainable agricultural development for food security and nutrition: what role for livestock?*, based on the main findings of a report on the matter elaborated by the CFS High Level Panel of Experts (HLPE). Although amounting only to policy

recommendations, the document is highly important since it contains a chapter dedicated to the improvement of animal health and welfare (Chapter VIII), which includes legal language on animal welfare. One of the recommendations is to "Improve animal welfare delivering on the five freedoms and related OIE (World Organization for Animal Health) standards and principles, including through capacity building programmes, and supporting voluntary actions in the livestock sector to improve animal welfare" (Chapter VIII, D). The document marks the first time in UN's history that animal welfare has been identified as a global goal of sustainable agricultural policy (World Animal Protection 2016) and raised the stakes for animal welfare as a deliverable objective of UN-driven public policy (Buller et. al 2018, 82).

Also, in 2022, the United Nations Environment Assembly (UNEA) adopted the Animal welfare–environment–sustainable development nexus resolution, representing the first-ever resolution to be tabled and approved with explicit reference to animal welfare (UNEA, n.d.). The preamble of the resolution acknowledges that animal welfare can contribute to addressing environmental challenges, promoting the One Health approach and achieving the Sustainable Development Goals, and notes that the health and welfare of animals, sustainable development, and the environment are connected to human health and well-being (Animal welfare–environment–sustainable development nexus resolution, 2022).

International regulations on conservation and biodiversity

It is definitely possible to speak of animal protection at the international legal and institutional level when considering, also, the international conventions that have been concluded with regards to the conservation of certain species and biodiversity. Let's take a look at some of the most important ones.

The International Convention for the Regulation of Whaling was signed in 1946 and it is the founding document of the International Whaling Commission, established particularly for "the

proper conservation of whale stocks" (Preamble). The convention has been concluded both "recognizing the interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whale stocks", and "considering that (...) it is essential to protect all species of whales from further over-fishing" (Preamble). The Convention includes a legally binding Schedule, which is an integral part of the Convention and sets out catch limits for whaling.

The Convention for the Conservation of Antarctic Seals was signed in 1972, aiming to promote and achieve the protection, scientific study, and rational use of Antarctic seals, and to maintain a satisfactory balance within the ecological system of the Antarctic (Preamble). The convention contains a prohibition on the killing or taking of seals otherwise than in accordance with the Convention, which confers absolute protection to some species, and also imposes limits on the permissible catch, provides for close seasons, prescribes killing zones, regulates the setting of size limits for seals which may be taken and so on.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), signed in 1973 by 184 parties, is designed to ensure that the international trade in animals and plants does not threaten their survival in the wild (NOAA Fisheries, n.d.). CITES recognizes "that wild fauna and flora in their many beautiful and varied forms are an irreplaceable part of the natural systems of the earth which must be protected" and that "peoples and States are and should be the best protectors" (Preamble). It regulates the trade in specimens of species threatened by extinction, which may become extinct, or that any party identifies as being subject to regulation within its own jurisdiction for the purpose of preventing or restricting exploitation, and as needing the cooperation of other parties in the control of trade.

The Convention on the Migratory Species of Wild Animals, signed in 1979, is an environmental treaty of the United Nations that provides a global platform for the conservation and sustainable use of terrestrial, aquatic, and avian migratory animals and their habitats

(CMS, n.d.). It acknowledges the importance of migratory species being conserved and of Range States agreeing to take action to this end whenever possible and appropriate, paying special attention to migratory species the conservation status of which is unfavourable, and taking steps to conserve such species and their habitat. Moreover, it acknowledges the need to take action to avoid any migratory species from becoming endangered (Convention on the Migratory Species of Wild Animals, 1979, Article II).

The Convention on Biological Diversity, signed in 1992, is an international legal instrument which aims at the conservation of biological diversity, the sustainable use of the components of biological diversity, as well as the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. It affirms that the conservation of biological diversity is a common concern of humankind and that states are responsible for conserving their biological diversity and for using their biological resources in a sustainable manner. The parties are determined to conserve and sustainably use biological diversity "for the benefit of present and future generations" (Preamble).

It seems that, in these institutional approaches and forms of protection, while a concern is expressed regarding the health and sometimes welfare of animals, the rationale is not necessarily, or not primarily, the intrinsic value of the life, health or welfare of animals. Instead, human interest, human health, or the welfare of humans seems to be the main focus, while non-human animals are granted protection only to the extent that they benefit people – as food, as diversity for the future generations (of humans), as entities the health of which affects human health etc.

Regulatory proposals by international non-governmental organizations

If intergovernmental international organizations seem to not have fully recognized the intrinsic value of animals' life, health, or welfare, or decided not to act on it from a strong legislative point of

view, certain non-governmental organizations that are particularly interested in animal-related issues have advanced some ground-breaking proposals.

For instance, Animal Law Resource Center, a project of The International Institute for Animal Law (which has been established to encourage, at the international level, the development of legal scholarship and advocacy skills on behalf of animals), is a platform that, according to its home page, provides access to legislation and legal matters pertaining to animals and the law. It conceived a set of 'model laws' that provide suggested language that can serve as a template for drafting legislation to improve the lives of animals and people caring for animals (Animal Law Resource Center, n.d.). On the larger international scene, there are also several proposals for general legal documents related specifically to animal health, welfare, and protection, advanced by various non-governmental organizations.

The 'Universal Declaration on Animal Welfare' (UDAW) has been drafted by World Animal Protection (named, at the time, World Society for the Protection of Animals), an organization which has a consultative status at the Council of Europe, works in partnership with national governments, the United Nations, the Food and Agriculture Organization, and the World Organization for Animal Health. The UDAW represents a proposed "agreement among people and nations to recognize that animals are sentient and can suffer, to respect their welfare needs and to end animal cruelty – for good" (UDAW 2007, footer). It contains a non-binding set of principles that acknowledge the importance of animals' sentience and the humans' responsibilities towards them. The principles were designed to encourage and enable national governments to introduce and improve animal protection legislation and initiatives (Europa Regina, n.d.). The proponents believe that such a declaration will create a baseline for animal care and treatment that every nation in the world can work towards, that it will make animals a global priority, and that, ultimately, it will make animals matter (World Animal Protection, n.d.).

Another current significant proposal has been drafted as a framework convention to be adopted by the UN General Assembly and has been advanced by Global Animal Law (GAL) Association, taking notice that there is no global protection framework for animals to date. The 'UN Convention on Animal Health and Protection' (UNCAHP), according to its home page, provides encompassing definitions and states core principles as a strong basis for action. The first pre-draft of the Convention (2018) mentions the 'five freedoms' and the 'three Rs' as guiding principles, and animal sentience, precaution, intrinsic value, and dignity as fundamental principles (Articles 2 and 3). If the proposal would turn into an actually legally binding convention/treaty (which is more than a declaration can achieve), then, when it would be ratified by the member states, its regulations would be part of the national legislation of each state, and its provisions would be thus given proper effect.

Another proposed international treaty for animal welfare and pandemic prevention is the 'Convention on Animal Protection' (CAP). This is a draft treaty prepared by Lawyers for the Convention on Animal Protection, a team of practicing lawyers and legal academics specialized in international law and animal law, following the passage by the American Bar Association House of Delegates, in February 2021, of a resolution on the matter (Resolution 101C). This resolution "urges all nations to negotiate an international convention for the protection of animals that establishes standards for the proper care and treatment of all animals to protect public health, the environment, and animal wellbeing" (CAP, n.d.). The second draft of the treaty, called 'Convention on Animal Protection for Public Health, Animal Well-Being, and the Environment', has been elaborated by the International Coalition for Animal Protection and has been presented publicly in November 2022. The text declares "that individual animals, as sentient beings, have intrinsic value and their well-being must therefore be protected" (Preamble).

Another idea put into practice in the world of non-governmental organizations is that of a court of justice for animal

rights. United Animal Nations, part of Franz Weber Foundation, has established one, namely UAN's 'International Court of Justice for Animal Rights'. Founded in 1979, in Geneva, Switzerland, it is based on a charter deliberately designed to mirror that of the United Nations. Its aim is to punish, following official trials, serious crimes against the animal kingdom which have not been taken up by ordinary courts (UIA, n.d.), bringing to the notice of the public, by means of morally symbolic prosecutions, cruel human actions against animals. The court publicly announces its verdict, including by naming ministers and government leaders (for an example, see Oza, Gunavant M., and Polunin 1995, 185-186). Although 'official', these trials would, however, hardly qualify as 'judicial', lacking certain essential elements, such as authority or the ability to enforce proper sanctions. The idea is, however, worth exploring.

Discussion – can we envision a 'real' world court for animal protection?

The institutional idea put into practice by Franz Weber Foundation, while called a 'court', and having carried out some trials, and which does seem to have a 'justice' component, certainly does not amount to a judicial trial in a proper sense. Even so, the question as to whether an actual international court for ensuring the protection of animals may be established does deserve some consideration.

First of all, it is necessary to put some thought into the aim of such a court. What would be the preferred outcome to be achieved by such an endeavour, the intended long-term goal of such an institution? Would it be meant to get states to have better domestic policies regarding animals or, perhaps, for individuals (and other entities, such as corporations, for instance) to be actually prosecuted for certain behaviours amounting to ill-treatment of animals? Answering this question would clarify the type of judicial institution that is desired and its subsequent functioning.

Secondly, the jurisdiction and the limits of competence would require careful consideration. What behaviours or breaches of law would fall under the jurisdiction of the court, which ones or under which conditions would these fall under the international jurisdiction, the conditions in which the domestic jurisdiction would remain applicable etc., all of these are essential and need to be given proper thought. For instance, if such an institution would have a criminal nature, following the model of the International Criminal Court, hence aiming to punish individuals responsible for heinous acts qualified as 'crimes against the world of non-human animals' (as a hypothetical equivalent to 'crimes against humanity'), what would the elements of such a crime be? There are fundamental legal issues that would also require careful consideration, such as the issue of animals' legal standing, if necessary and if it is recognizable, and, if not, who would act and how would they act on behalf of the animal(s). These are only a few substantive and procedural elements that would require careful consideration.

Alleging that clarifications in these fields would be provided, the founding statute would have to be not only brought on the global agenda, but the political desire to establish it would need to be strong. As noticed, there are several proposals for various declarations and treaties regarding animal health, welfare, and protection, but, on the institutional intergovernmental level, the political desire to endorse any of them does not seem to be sufficient for the major intergovernmental organizations to actually act in that direction. It also seems that there is not one particular proposal that gathers more attention than others, and it is rather surprising that the specialized organizations did not work together for one comprehensive document, but chose to each conceive their own proposal. Greater cooperation between such organizations may be a more viable solution to managing to bring a framework document on the table of significant intergovernmental organizations – one that would stand a real chance at being properly endorsed. And, if a world court for animal protection is to be envisioned, this endorsement is quintessential.

A few concluding remarks

An institutional interest clearly does exist, at the international level, regarding animal-related issues, with relevant intergovernmental organizations, such as the United Nations with its institutions and agencies, taking some steps towards recognizing the importance of animal health and welfare, acting in a collaborative manner with more specialized organizations, such as World Organization for Animal Health etc. Approaches such as One Health and the work of the Quadripartite are strong indicators for this interest, and even the World Trade Organization, with its rather rigid rules, seems to have started to take into consideration the well-being of animals. It is true, also, that this interest is mediated by human interest, health, and welfare, which is noticeable even in the international regulations regarding the conservation of species and biodiversity.

However, various standards for animal welfare have been articulated, and there are even some proposals for international regulations through declarations and conventions specifically regarding the protection of animals. These proposals do raise valuable points, such as recognizing animal sentience, dignity, and intrinsic value, yet none of them gained, so far, the desired status – of being properly endorsed by relevant intergovernmental organizations and the nations of the world. While, unfortunately, widespread support for the proper institutionalization of such proposals is largely questionable at the time, a significant legal instrument, unitary and consisting in binding rules (or, at least, conceived in a strong legal language), together with a subsequent mechanism for animal protection, does deserve careful consideration.

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Cat Sanctuary.
Co-existence with community cats

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"Having a bunch of cats around is good. If you're feeling bad, just look at the cats, you'll feel better, because they know that everything is, just as it is."
Charles Bukowski

Abstract. *In Romania we have a large population of free roaming cats but their presence and life style are mostly ignored. Not as disturbing for the general public as the free ranging dogs, cats are not raising so often the concern for controlling their population. This is giving the opportunity for cat loving people to approach them, learn about and from them and try to make their life easier.*
My paper/article/chapter is mainly an attempt to understand how best we can be there for our feline friends. We can start by simply observing and learning more about the way cats live when they are less influenced by us, humans and maybe challenge some of the very popular conceptions about them. Treating cats as subjects, partners and co-workers, cat rescue organizations and cat sanctuaries are operations that raise some very interesting moral challenges. I will be focusing on some of them trying to untangle how this can lead to the development of "interspecies solidarity".

Keywords: cats, coexistence, community, rescue, care, empathy, responsibility.

Introduction

Cats are today one of the most popular, if not yet the most popular, human companions. We love them for their cuddly nature but also for their independence. They have their special ways of finding their place in our homes and in our hearts. "The most popular companion animal in our increasingly urbanized world, cats

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themselves may have cause to believe their popularity is due to their superlative qualities as a species" (Lynn, Santiago-Avila and Stewart 2022). We see them everywhere, online they are a huge success, beside us they learned how to adapt to our crowded places and busy schedules. But this wonderful relation that we share does also have a darker side. Our cats are also misunderstood and sometimes mistreated. They get abandoned and left behind, as they are sometimes failing to adapt to our conditions.

In ancient times, cats were drawn to human settlement by the large grain storages that were plagued by rodents. Our ancestors appreciated cats' hunting skills and did everything to allure them to stay. The bold and audacious cats took the challenge and thus our common history began. Cats simply made humans love them and "this is the true basis of feline domestication" (Gray 2020, 18). Today we blame and resent them for the same qualities that attracted us together in ancient times. Our relationship has been all along the way one of love and hate mingled together.

Cats were worshiped in ancient Egypt and hunted, tortured, and killed in the Middle Ages. They were both symbols of protection, creativity, and motherly love, as well as true embodiment of the devil. Old stereotypes of cats as evil beings still linger till today. For some people, cats are still useless animals with no place in the human world. But for many they are the ultimate animal companion, loving and attentive to our emotions and dispositions. Cats are discrete, loyal, and loving companions. But our belief in our separateness from nature augmented resentment towards cats. A clear separation between nature and culture, between wilderness and civilisation, maybe even fed by our ancestral fears of our once fierce predators (the big cats; see Tucker 2016) made us reserved, less tolerant, and even suspicious of cats.

To be able to coexist we must make an effort to see them as they are, to strip away centuries of superstition and dark beliefs and question our preconceptions and stereotypes. Dealing with other species is never plain or simple, it is always charged by our cultural assumptions. The way we understand and interact with our cats is

no exception. Thus, we should always approach them with care, respect and an open mind and heart.

The story of cat domestication

Cats have been part of the human society for thousands of years, and their relationship to us has been one of the most fascinating and mysterious aspects of our common history. The process of cat domestication is complex and raised much heated debate and speculation.

Most of us believe / are convinced that cats domesticated themselves. Attracted to early human settlements primarily by the abundant source of food (rodents that accompanied the granaries of the proto-farmers) they were in the beginning tolerated by humans for the mutual beneficial coexistence: cats have food, humans have their own food protected. Traditionally we considered that cats were first domesticated in Ancient Egypt, 4000 years ago. This civilization was simply fascinated by cats, and for good reasons. Cats not only protected their crops from rodents but also protected them from poisonous snakes and scorpions. This attracted admiration and respect. In Egypt we have the first known catteries beside temples dedicated to the cat-goddess Bastet. It is believed that the selective breeding that was happening in these facilities (even if without the intent or intervention of the humans) led to the true domestication of then tame cats that joined human villages and temples.

More recent studies, investigations and archaeological discoveries moved the date of cat domestication further back, somewhere more than 10.000 years ago and pointed to a new location, the Fertile Crescent. If we go on with the self-domestication hypothesis this seems perfectly logic, as the beginning of agriculture should go hand in hand with the attraction of these small and fierce predators of rodents. Of the five different subspecies of wildcat (*Felis Silvestris*), the one considered the sole ancestor of our cats today is *Felis Silvestris Lybica*. Both DNA analysis and behavioral investigations pointed in this direction and today we know for sure

that all domestic cats descend from her alone[1]. Compared to dogs, domestication did not alter cats so much. And there was no taming and domestication plan and systematic process followed for cats. There are authors (Coli et al. 2016, 65) that still question if cats were truly domesticated or just tamed as this process for the cat did not follow the usual changes. Most authors seem to consider cats somewhere half-way on domestication scale; not wild, but not truly domestic either, as a way of facing this dilemma. The morphological changes are also not so significant between the wild and domestic cats; apart from the purposely design races (such as the brachycephalic ones), it is almost impossible to make the difference between a wild and domestic cat seeing only the skeleton. And even the genome of domestic cats differs only in a very small amount from their wild counterparts.

Confirming our domestication story, apart from the genetic analysis, we also have archaeological evidence – fragments of cat bones in human settlements (although it is difficult to say if they were domesticated or not, or for what reason they were there), cats in burial sites (like the very famous example from Cyprus) and also artifacts. It is very important to notice that even from early history (or maybe even prehistory) cats played a significant role in culture, religion, and folklore. Thus, we can trace evidence of their presence way back.

The oldest identification of cat bones (58 wildcat bones) related to human settlements dates from the 11.600-year-old Hallan Çemi village (Turkey), but we cannot establish the kind of relationship cats and humans shared at the time[2]. When cat paw prints are seen in a tile, then we can assume that by that time cats were fearless enough to approach human working areas. But the most famous and significant discovery of cat remains is the one on the island of

[1] This is important if we think about an opposite hypothesis, the multiple centers of domestication for the cat.

[2] They may have simply been sacrificed for their meat or beautiful pelts.

Cyprus. There, in 2004, archaeologists unearthed a 9.500-year-old burial site of a human and a cat. Given the fact that there are no native cats in Cyprus and that the distance from the land is too large for the cats to have swum there on their own, most probably tame / domesticated cats have accompanied humans on their sea voyage since then. This seems to be a clear indication that proto-farmers were already living alongside cats. Their sedentary life, their grain crops, and the rodents that accompanied them, must have already attracted cats and brought these exquisite and opportunistic hunters close to human settlements and villages. This was the beginning of a mutually rewarding relationship. The most interesting thing is that proximity of the cat and the human within the burial is showing that their relationship went far beyond mere utility. We are allowed to assume that an emotional involvement / attachment led to the decision to share the afterlife.

But given zooarchaeological and genetic evidence it is likely that only in ancient Egypt the cat attained its fully status as a permanent human companion. Although now we know that the domestication of these predators did not start there, Egypt[3] still played a crucial role. Ancient Egyptians loved and worshiped cats and for this reason the richest treasure of ancient cat remains in human contexts lies in Egypt. In Bubastis, the city of Bast, the cat-goddess, and also in other places throughout Egypt, countless numbers of cat mummies were found. These mummies, either votive mummies, mummies of pet cats or of sacred animals (depending on the context) provide evidence of the close relationship people established with cats by that time. The raising of cats on such a great scale had a large impact on the domestic cat population, so large that in fact that today most our cats can trace their origins to Egypt.

[3] For more on cats in ancient Egypt see Malek 2023 and Kurushima et al. 2012.

Taming and vulnerability

"*You become responsible, forever, for what you have tamed...*"
Antoine de Saint-Exupéry

The story of domestication, this fascinating process, is still continuing for our cats. The way we interact with them, the way we understand them and their needs, the way we treat our house cats and the free-living or community cats will certainly influence not only our relationship now but also this continuing process and our future together.

As Carolin Johansson[4] is underlining in her thesis, it is very important to keep in mind the distinction between two terms that we usually use interchangeably: *domesticate* and *domestic*. The first term is naming the animal species that have undergone the domestication process, while the latter is naming all that is connected with the *domos*, the home. All along pre-history and history, and also today[5], humans have lived beside and shared their lives and homes with a very large variety of animals. Out of this large number only a few species have been domesticated[6].

Cats are lacking some of the very important features characterizing all domesticated animals, features common to all, that are considered key traits of all domesticates[7]. They are not easily adaptable to new diets, they are strictly or obligate carnivores, and they do not care for or accept hierarchical leadership. To these features we can also add a number of morphological changes that the

[4] In her thesis *Origin of the Egyptian domestic cat* https://www.diva-portal.org/smash/get/diva2:560231/FULLTEXT01.pdf, 21.

[5] Like parrots or different species of rodents or lizards, etc. they are our companions, and we form strong bonds with them, very affectionate on both sides most of the times, but they still are not domesticated species.

[6] Diamond (2002) counts 148 species.

[7] These features are counted by Johansson 2012, 21: "adaptable to new conditions such as change of diet; able to live crowded in captivity and lack of fearfulness; able to breed in captivity with a relatively rapid growth rate; human-friendly behavior; easily controlled and tended for; social behavior and acceptance of hierarchical leadership".

domesticated species underwent[8] and cats are missing. Also, a group of changes that characterize the juveniles of the species are kept into adulthood by domesticated animals and this is known as neoteny. Cats share some of these features but not others, and all this is leading experts to talk with caution about the domestication process of cats. We can also add to this some very specific behavioral traits of cats that make this conversation even more complicated. Humans had little or no control over the reproduction of cats, unlike the case with the other domesticated animals. Even in more restrictive conditions still the mate choices of cats are generally not managed by humas. This is still the case with most cats today with the notable exception of the special breeds. Also, cats still fare very good on their own and proof to this are all the large populations of feral cats that live out of human control all around the world. Domestic cats can generally easily turn feral and live independently of humans and/or away from humans and their management ways.

But, without a doubt, there are both morphological and behavioral changes that differentiate our moggies from the wild cats. The striking thing is that these differences do not reach the extent known for the other species. This is why feline experts like John Bradshaw (Bradshaw et al. 1999, Bradshaw 2014) talk about the cat as "partially domesticated". "Compared with the dog and other common domesticated animals, the modern cat is not as fully domesticated, or altered, genetically" (Hart and Hart 2013). The domestication process is still continuing, and this is even more notable with cats than other species.

On the other hand, tame refers to individual animals living in human proximity and adapting to human conditions and lifestyle

[8] "shortening of the face and jaw; deposition of fat under the skin and around the muscles in contrast to wild animals where surplus fat is stored around organs; shorter or curled tail, soft and floppy ears; submissive behavior; change in relative proportion of body part sizes; reduction in body size; smaller brain size (cranial capacity); less acute sense organs; more differentiated pelage coloration and fur types; docile or "friendly behavior", tolerance of human proximity; changes in reproduction cycles; changes in the population's demographical composition" (Johansson 2012, 23-24).

(domestic, in this respect, but not domesticated), exhibiting friendly and / or submissive behavior toward the human companion. It is very important to notice that these terms do not exclude each other, meaning that there may be domesticated animals that are not tame (like the case of feral, free-living cats) and also non-domesticated animals that are tame (like the case of companion parrots).

All this story is proof of the difficulties and challenges of adapting cats to our human society. As early as the proto-farmers noticed the cats in the proximity of their villages and the anciet Egyptians began to tame and keep these wonderful animals close to them, the independent nature of cats showed up making our living together very specific. We appreciated cats for their hunting skills and their independent nature, and this created a very particular relationship, unlike any other with a domesticated animal species. It is this aspect of wilderness, and freedom and independence that many of us still find so appealing in our house cats.

But even if cats are fully domesticated or just tame, our commensals, we still have great responsibility towards them; I mean us, as a collective. Even if their domestication was not targeted like in the case of other species, even if they self-domesticated by coming close to human settlements to take advantage of the abundance of rodents, even if they (most of them but surely not all) may revert to feral (semi-wild) state and live quite good in absence of human care, we still have a responsibility towards them. We are, for centuries, or rather millennia, living in a relationship with them, no matter the choice of terms we make to define it. And this relationship creates responsibility.

We accepted and used their services as pest controllers and maybe, without their help, all human history would have looked different. Maybe if the fate of our first granaries were different, all our history would have had a different course. And let's not forget or overlook their important roles in keeping our papyri and libraries safe. More than that, all through history, they had a crucial role in

protecting from rodents all kinds of different stocks (wool and parchment, and so on), and also travelling long distances on boats to make these voyages safe. They also protected us from disease by keeping the environment clean and eliminating germ-infested individuals of other species (like rodents in the case of Middle Ages plague). For all this and more we owe them our respect and a duty of care. But we should be very careful when distinguishing what exactly this duty entails as to not confuse care with control.

Taming is built on trust. Everyone working with free-living cat populations knows just how difficult is to get their trust. Keeping respectful boundaries is key to that and also listening, watching carefully and understanding the cats. They have their ways of letting us know when we become intrusive. How we live together and learn from each other also shapes who we are and who we are becoming. They have a claim on us. Even if, looking at them closely, we may think they inhabit a different and maybe alien realm, they still oblige us to see them, acknowledge their existence and respond to their needs (whenever and however is possible). Sometimes it is necessary to just respect the distance between us, and their otherness, their separateness and opacity. Free-living cats have their ingenious ways of letting you know their limits of getting too close. And knowing our boundaries means growing our trust. And building trust generates responsibility because entering into a relationship obliges us.

Thus, if we tamed and/or domesticated them, we have responsibility towards them. We have an obligation of care. But when we come down to decide what exactly this obligation imposes on us, what is there to be done, things get less clear. Keeping a respectful distance and not becoming intrusive may be a first step. Maybe an important one that will make us aware not to confuse control or management of cat population with care. We must understand and always keep in mind that there are no perfect solutions but, if we cannot or do not know how to help (it's hard

maintaining a balance between intervention and safety versus freedom and respect[9]) we should at least strive not to do them harm.

Why Sanctuary?

The meaning of animal sanctuaries and their mission today is to protect animals from the current state of affairs, from our society and economy that are built on their exploitation. Sanctuaries strive for a brighter future, not only for the animals they house, but also for all of us. They show that a world with different relations between its inhabitants is possible, a world where relations of trust and respect, of empathy and care are built; a world where we all are important and where every life matters.

I shall not dwell on the history of this movement, as it is beyond the purpose of this paper. I shall only begin by underlining the meaning of the word itself. Originally *Sanctuarium*, is coming from the Latin noun *sancta* / *sancti* meaning sacred persons or things and sufix *–arium* which, when used together with the noun, means a place where the noun is kept. *Sanctuarium*, the sanctuary, originally was a place where holy or sacred things were kept. The word got its today meaning when churches started granting protection for fugitives fleeing violence, oppression, and war, and providing safety to people facing risks of oppression or violence. A practice similar to today's practice of offering political asylum.

The main purpose of this paper is to imagine the possibility of a place, or rather state of mind, state of being, where we recognize our multispecies collectives and our common vulnerabilities. The Sanctuary movement is generating a new kind of relating to the others. Untill now, this new way is visible in isolated places and special circumstances. But hopefully we can gradually change that

[9] We may enter an ethical loophole here: the more we respect cats the more we have to let them alone, to let them decide what's best for them but then we have disease, fights, accidents, abnormal behavior caused by high density, kitten deaths, etc. But when we intervene, when we control their lives and populations, we get other kinds of problems so stepping with care and affection and empathy will hopefully guide us.

and create multispecies communities where the other animals' intentions and wishes are taken into consideration and where they are given the freedom and choice of the way they wish to interact with us. And I imagine and hope our relationship with the cats, the free-roaming ones most of all, but all individual cats as a matter of fact, may serve as model for this new kind of collective.

We may agree that we have our duties of care toward community cats, duties not to harm and to protect them as best as we can. But how would all this practically look, what will this practically entail, is still very much unclear. We still need cat sanctuaries, places where to isolate the cats from society in order to be protected (us or the cats remains to be decided, theoretically both). "A cat sanctuary would protect the welfare of cats, possibly helping them live a happier, healthier life, as well as consider wildlife protection" (Loyd and Hernandez 2012). But we still do not know how this place, this cat sanctuary should look like in order to fulfill the needs of the cat-residents as good as possible. Cat sanctuaries[10] are safe areas where cats should have the possibility to choose how to live their lives free from harm. In building these kinds of spaces we should always be cautious as to what we really know about the cats' needs and good life (from their perspective). It is important to imagine how we can actually measure their welfare and wellbeing. And also keep in mind the active role that cats must have in determining what their good and happy life should look like. We should let the cats lead the way and teach us what they need. And for this they need to be free of our control and become our partners and co-creators of this safe and good environment. And the better we know the cats, the better we understand them and can provide what they need.

[10] "Cat sanctuaries may provide a solution for managing smaller cat colonies, and this option should be explored by more cities and non-profit organizations. Cats could be trapped, neutered and then released only within the boundaries of a fenced sanctuary, where they would be safe from vehicles and coyotes and where wildlife outside the fence is protected" (Loyd and Hernandez 2012).

In general, we have sanctuaries[11] for farm and/or wild animals (in general animals that we frame as less likely to find a permanent home elsewhere) and shelters[12] for cats and dogs and other animal species that we consider belong in human families and are more likely to find forever homes. But the reason I talk of cat sanctuary and not cat shelter is because I mean a permanent state of affairs; protection from harm, respect and care for cats for life. The community cats have their place in our community and need not find other new homes. The point of this paper is not to dwell on how we could build sanctuaries for cats but on how we can change attitudes and perspectives to the point where segregation is no longer needed because we will gradually understand that the world equally belongs to us, humans, and all the other animals. Cats should be respected and protected where they are, and the need of building special places to protect them from harm should wane. We should strive towards "empty cages, not larger cages" as philosopher Tom Regan summarizes so well.

Our long history together, and the increasing interest of the general public on the matter, should lead to the welfare of community cats to become the focus of public concern. Acknowledging that feral cats are worthy of our concern and humane treatment we will also discover they are a very interesting and important topic for study. They can shed light where our companion cats' behaviors are hard to understand. Thus, the attitudes and perceptions of the general public towards cats, their experience with cats, their overall knowledge on the subject must change for the better. And this will be informing decisions about how to care for the cats together, as a community. And this is why, as the public support for this matter is so important, focusing on educational programs is essential.

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[11] Sanctuary – understood as permanent homes; the first priority of a sanctuary is animal's comfort and safety. And the hardest thing is balancing freedom and safety.

[12] Shelter – structured around a model of rescue driven by the aspiration that the animals will eventually find permanent homes with human companions. Ideally only a temporary stop in the animal's rescue journey.

Stray and feral cats or simply community cats

The borders between wild and domestic, tame or feral, or free-living and so on are a little blurred when it comes to cats, and I think it's beneficial to try clarifying this. We should also keep in mind that the behavior of cats varies quite a bit between different categories. But there is also a very fine line between these categories; sometimes even the terms are used interchangeably depending on the context. Also, the status of a cat may change depending on life situations and conditions.

It is important to keep in mind that most of the time, in most countries and situations, those terms are not well defined, they are still elusive. The definitions are the most pronounced in New Zealand and Australia[13] mainly because the large population of free-roaming cats is considered a huge risk and threat for native species. Thus, there is a very high demand there to control and/or eliminate the population of feral cats (separate and different from companion and stray cats) and from here the need for precise definitions. But, in general, terms may be not as sharp. Various definitions are accepted, and some may even be mutually exclusive. In fact, the basic criteria for defining categories of cats are guardianship status and level of socialization. "Strictly speaking, feral cats are defined as untamed and evasive. They are either born in the wild and lack socialization or are returned to the wild and become untrusting of humans" (Levy 2004, 377).

[13] **Domestic cat** – by this term I will understand all the cats that belong to the *Felis catus* species; different from their still wild relatives (*Felis Silvestris*). **Companion cat** – these are cats living in the close proximity of humans, having all their requirements provided by humans. Thus, they do not rely on hunting for food and have their reproduction usually manipulated by humans. **Stray cat** – these cats rely only partly on humans. They may obtain food and shelter that has been provided intentionally or not by humans. This category includes cats roaming cities (some of them even abandoned pets), cats kept on farms for rodent control, etc. Most of the times (with the exception of TNR programs) the reproduction of these cats is not controlled by humans. **Feral cat** – these are free-living cats with minimal or no reliance on humans. They survive and reproduce on their own and are weary and shy of humans.

There is a very large variation in the way we can meet and/or see cats all around us. There are feline colonies, street cats, barn cats, feral, semi-feral, pseudo-wildcats, and a host of all other categories in-between. Names and the way we frame this situation are extremely important and we should always be in guard not to reinforce old stereotypes about cats. Moving with care in this yet uncharted territory is essential. "Feral cats likely exist everywhere where humans have travelled, whether deliberately introduced to control rodents and other pests, when they accidentally escape the home, or when they have been deliberately abandoned" (Slater and Shain 2005, 43). There are multiple sources for renewing the free-roaming cat population. Many times, cats get lost or are deliberately abandoned, and if they were not neutered or spayed, they may become the nucleus of new stray, and later feral, cat colonies.

> "... despite the enhanced status of cats as human companions, millions of unwanted cats are admitted to animal shelters each year, and the vast majority of these are euthanatized each year, and the vast majority of these are euthanatized because homes cannot be found. Debate about the true impact of free-roaming cats on the environment, on feline health, and as a reservoir of both feline and zoonotic disease is ongoing, often emotional, and fueled largely by a lack of sound scientific data on which to form credible conclusions" (Levy 2004, 377).

The way we are framing the issue on free-living cats is influencing not only the way we study them, but also the way we treat them, and we should keep in mind that the real difference between these categories is not as great as their lifestyles imply. All the cats "unowned"[14] should simply be considered free-roaming cats or community cats. We have a duty of care toward all of them; and all further distinctions may serve for behavioral observations only.

[14] Or maybe we should just refer to all as free-roaming, to avoid the problems with "unowned" as no one can actually own a living being. But I keep this form just to stress the current matter of fact; how we legally stand.

It is hard to document the quality of life of feral / outdoor cats in general but there have been attempts[15]. As we may have expected the results vary greatly depending on the place and method of assessing cat welfare. But any way we frame this problem, either we believe that they have a pretty good situation, or that they are living in a constant crisis, it is impossible for us, humans, to decide if their life is worth living.

"Feral cats are still viewed in many quarters as liminal beings existing on the borders of civilization. The existence of these feral cat populations tends to reinforce cats' peripheral status, reminding us of their wildness and separateness" (Slater and Shain 2005, 43). And because of this separateness, wilderness, feralness of theirs, it is easier to imagine and think about ways of human control over them instead of seeing them as part of our communities, as our co-citizens, and try to find ways to coexist.

In communities, confusion and resentment surrounding this free-roaming cat population may be raised from different sources and reasons. First and foremost, today cats are a problem for exactly the same reasons they were treasured in the past: their exquisite hunting skills. They are adept predators who know how to take advantage of their ecological niche, and this is making them a threat for different native species in certain locations, and also an invasive species in the eyes of the humans.

In this complex issue of cat predation of wildlife, things are extremely complicated and also varied between communities and places. It is very important to keep in mind that cats are both opportunistic hunters and rodents specialists, and the ways to balance their interests and those of wildlife is a delicate undertaking. There is apparent conflict in dealing with this between conservationists and animal rights representatives. But we need to go beyond this; in fact, both parties are animal lovers, and we should be mindful when drawing up solutions. We need context-sensitive

[15] See Zito et al. 2019 and Bilski 2015 and Beall 2019.

evaluations and context-sensitive solutions (see more on this in the next section).

The usual portraying of stray cats is either as victims or nuisances. But maybe is high time to see them in a different light. It is of utmost importance to pay attention to the different ways these cats have been and still are seen and portraited. The perception about feral cats is very varied and to my surprise I discovered that there are people who claim they love their cats at home but still consider the stray cats vermin. Connected to this, public health concerns may arise, zoonotic diseases such as the very well-known rabies, or other zoonoses and parasites; and also, these cats are many times considered a threat for the health of pet cats.

"Accompanying growing awareness of feral cats is increased controversy about their impacts, welfare and place in society" (Levy 2004, 381). First and foremost, it is the issue of colony cats care. Despite the opinion of many, including PETA, free-roaming cats can, and some of them even do, enjoy quite a good quality of life. But this is also very varied and dependent on particular situations. It is dependent on the community, human community, that they belong to and the level of care some cat loving people and organizations provide. This is why, in general, "it is important not to punish those people who are trying to take responsibility for cats no one else wants" (Slater and Shain 2005, 47). We all need a network of support and always better support and better connections equate to better care and quicker response in emergency situations. The problems that stray cats have, and the ways they can and choose to live their lives, are many and varied, but taking care of them can help bring people together. People who love cats and work hard to keep them from harm need each other, they need collaboration, they need a network of support. To document and monitor cat colonies is a cooperative effort and sharing information and resources is crucial. We need community wide efforts for the community cats and thus

we need to re-shape peoples' views and reactions towards the free-roaming cats[16] for the better.

"Caretakers have reported a strong bond with the feral cats they care for, even though they do not consider them as pets" (Levy and Crawford 2004, 1355). Taking care of cats is a work done with love. But even so, there are complicated issues to solve that demand well and delicately balanced solutions. Sometimes it is necessary to carefully manage cat colonies. Overcrowding can be a very serious risk for cats, and in these situations infectious diseases spread like wild fires. Thus, the importance of Trap-Neuter-Return programs must be acknowledged. Neutering is not only reducing the cat numbers, thus reducing the risks associated with overcrowding, but also improving, according to some authors, the situation of the cats themselves. "Neutering of feral cats improves body scores and is also said to improve health, make them less likely to roam, and friendlier" (Robertson 2007). And "Trap-neuter-return programs enhance the welfare of the species by preventing the birth of kittens that would be marked for every death in the wild (....) one year after sterilization, these cats were significantly heavier and had higher body fat (...)" (Levy and Crawford 2004, 1359). After sterilization "cats were significantly fatter than they were at the time of neutering, indicating that feral cats, like their tame counterparts, experience enhanced fat accumulation following neutering" (Levy 2004, 379). But a well-managed cat colony situation may attract a different kind of problem: "the presence of highly visible, well-fed cat colonies encouraged illegal abandonment of additional cats" (Levy and Crawford 2004, 1358).

Another difficult issue is that many veterinarians are not used to treating feral cats and don't know how to approach them, have difficulty to understand what to do with them. This also needs to change, and we must also strive to better inform vet students. The

[16] Not "unowned" because we tend to get to a view where nobody can actually own a living being. Thus, we need the replacement of the term owner, we need to find ways to care and take responsibility for our animal friends without owning them.

secret to approaching a feral or semi-wild cat is "patience. Cats have their own timetable, and gaining a cat's trust is a slow process" (Beall 2019, 68). Also, it is important to create special veterinary clinics dedicated to these free-roaming animals where veterinarians are skilled in dealing with them and their treatment is free of cost for the humans that bring them in from the streets. This will encourage people to be more responsive when they see animals in distress close to them. And from this we all have to gain: the other animals will get the veterinary attention they deserve and we will get to have more empathetic and compassionate co-citizens.

The idea of self-domestication refers to the mutualistic bonds created and existing between people and cats. But this doesn't simplify the issue, it is just bringing more nuances to the debate. The theory brought forward by Donaldson and Kymlicka in *Zoopolis* (2011) may be seen as stressing the different statuses of cats: the ones with guardians – citizens, the stray ones – denizens and the feral ones – foreigners living in their wild sovereign communities. Thus "cat ferality is central to anti-cat conservation" (Lynn, Santiago-Avila and Stewart 2022, 699). The way we frame, represent and understand the issue is central to how we can and choose to relate and interact with the cats. But still, no matter the framing, "the intrinsic value of individual animals generates moral obligations on the part of people" (Wald and Peterson 2020, 77). We have "duties of assistance" to domesticated animals, but "ferals"[17] are seen somewhere in the "contact zone" between wild and domestic[18]. To these animals, who are in our cities and gardens, displaced from their native / natural settlements, disturbed by urban development, we also have duties. We certainly have a duty to be less disruptive and intrusive.

[17] The importance of "ferality" when it comes to control and elimination is not to be overlooked; it looks like the more wilde and remote we see them, the more we think of ways to eradicate them. Instead, if we see them as simply community cats, then we might realise our responsibility to them and we might reconfigure our approach towards compassionate coexistence.

[18] There have been suggestions that carefully studying the way cats become feral and thrive away from human management and control could serve as a valuable lesson on the re-wilding process (even for other species).

"As with other species with which we share urban and suburban environments support and education can be provided to mitigate nuisances and reduce risks associated with cats" (Hurley and Levy 2022). We must find and develop strategies for coexistence and "in the case of cats, coexistence strategies can be combined with education of cat caregivers to feed appropriately, manage waste, and most importantly, to access available services to get cats sterilized" (Hurley and Levy 2022). Also, and very important, cat guardians/caretakers should get the support of a kind of safety network, and this network should assist everyone who does not afford to keep their cats and provide information on cat / kitten care and social services of veterinary care, cat sterilization information and facilities, and free sterilization for people in need. Also, there should be given assistance for people in need of finding new homes for the cats they truly cannot keep. All this should foster better adoption programs and better care programs for all cats and people in need of that. "We must all be more generous and supportive of adoption and fostering programs" (Jessup 2004, 1382).

"We are beginning to ask not why we should care about feral cats but rather how we can make a difference" (Slater and Shain 2005, 52). The most important thing to do is to "increase the value of cats in the minds of the public" (idem). We must provide the community with information, resources, knowledge to understand the cats, to empathize with them, to no longer find leaving them behind acceptable, to help cat carers take care of them, to strive all of us to do the best we can. "Ultimately, the issue of feral cats is a social problem" (Lepczyk et al. 2010, 2). We need social change. "Because the feral cat problem was created by humans, concentrated educational efforts on responsible pet ownership and the intrinsic value of animals is an integral part of the solution" (Robertson 2007). It is also very important to recognize that "reliance on public participation for management of most cats means that attitudes toward cat control must underpin any successful strategy" (Hurley and Levy 2022). If we rely on the public support for the care of community cats than we'll be able to identify long-term solutions.

The most important aspect is to educate the public as to who these cats are, what are their needs, and most important of all, how to pay attention to them, support them, understand them, in a non-intrusive way (if possible). "Feral cats are a result of human actions; we caused the problem and we should be responsible for the solution" (Robertson 2007). And these solutions should not focus only on management and control but also work towards building a peaceful coexistence.

Moral dilemmas

There are moral dilemmas or dilemmas of care each and every time we try to live differently with other species. We try something new and different and sometimes we are doomed to fail. But these failures are better than the usual, common, animal commodifying system successes in managing and controlling the animals. We are in new territory, try new kinds of relations, and most importantly we are trying to do this by taking the other animals as our partners and co-creators of these new relationships. Or, I would rather say, we acknowledge the active role the other animals are having in co-creating, co-shaping our interactions (because they had this role all along the way, but we failed to notice, give them credit for it, and let them the freedom to thrive).

"Feral cats are a boundary case that reveals the fragility of the hard and fast categories we have established to try to assign meaning, value, and territory to members of other species. They reveal the wildness that lurks in even our most intimate domesticated companions, and they also reveal the possibility of communication and care even with animals who reject close contact" (Wald and Peterson 2020, 81).

"Captive care" or our intrusion in other species' lives is always problematic because we try maximizing animal autonomy, but often we must put limits on the exercise of animal agency. We are still moving in a human dominated world and safety, on all sides, must sometimes prevail. But we need to try to find more equitable ways of

living with cats (and all other animals); and the important thing is that the relationship we are in with these independent, but also affectionate and human oriented cats may (hopefully) lead the way to forming "interspecies solidarity" (Coulter 2016).

This is why we should not work in the direction of building more sanctuaries where cats can live their lives protected from harm (mostly the harm brought to them by ill intended people), but to change attitudes and perspectives to the point where we accept that cats are a part of our multispecies cities, communities and societies. We are privileged to have them around and their presence is enriching our lives, is making them better, so we should also take care of them in return. Also, "there is an increasing recognition that community-based care and services are often more equitable and humane as well as preferable to the costs and risks associated with shelter impoundment" (Hurley and Levy 2022).

Moral dilemmas with cats are many and varied ranging from territorial problems, cats as hunters of wildlife, and implicitly cat diet, captivity, etc. "Although much has been written about feral cats, most reports are based on observations and extrapolations that do not follow well-established rules of scientific enquiry" (Stoskopf and Nutter 2004, 1361). For the sake of keeping the text in reasonable limits I shall refer only to the three most debated moral dilemmas regarding cats: the problem of territory and control – should they be kept inside or left to roam freely outside; their diet issue, because they are strict carnivores thus other animals should be killed to feed them or they should be left to hunt for themselves; and last, but not least, the matter of cat predation and the protection of wildlife.

There is widespread advice on keeping cats inside / indoor and doing this both for their own safety and the safety of wildlife, to stop them to hunt. But the safest life is not always the best life and we have learned this ourselves by experience during the pandemic lockdown. Thus "cats provide a sort of ethical loophole since they cannot be stopped from hunting unless they are looked inside" (Abrel 2021, 169) and a life isolated indoors is highly controversial as best cat life. Also, a very challenging issue is the cat diet itself as cats

are obligate carnivores. Either inside or out, cats need to eat meat-based food to survive. In shelters and sanctuaries they are fed regular cat food. This is generating real moral distress in a sanctuary environment where all animals are persons. But unfortunately, we need to understand and accept that life cannot exist without death, and "fostering the life of certain animals sometimes requires sacrificing the lives of others" (Abrel 2021, 147).

Discussions about the impact of feral cats on wildlife are usually very emotionally charged, fueled by different perceptions and life experiences, interpretations of facts and insufficient data. "In other words, highly charged polemic disagreements are often fueled by insufficient, reliable, objectively collected, and properly analyzed data to support a unified solution" (Stoskopf and Nutter 2004, 1361).

There are perspectives that work in favor of cats and perspectives that put them in a bad light. It is always important to stay local and be attentive to the particular details of a context and setting. There are no universal solutions, but the way we frame the problem is always influencing the debate. For instance, we should see the non-native, invasive species perspective. In general, native animals, like wolves, were eliminated because they created problems for the non-natives, like our livestock. All is biased by our interest. Also, we need to keep in mind the meso-predator effect in a food chain: meso-predator (rats, for example), super-predator (cats). In this case, the eradication of the super-predator, the cats, is not the best solution in protecting insular wild birds. Even the introduced predators may have a beneficial effect (see Robertson 2007, 369). "Untargeted removal of cats and other litter-bearing mammals leads to a destabilization of age and dominance structures, resulting in a paradoxical increase in numbers as well as potential harms" (Hurley and Levy 2022). But any way we frame it, in fact the elimination of cats is not solving the problem. So, we must "interpret data without prejudice" (Turner 2022).

Sometimes choosing to let some animals live does not mean life prevails; there is a possibility that some rat (that was spared from death by the elimination of cats from an area) may spread an

infectious disease that will get other animals sick and dead. It is just too big of a picture for us to comprehend. Sometime death fosters life and sometimes we need just to step back and let nature know better. Cats, as exquisite predators, may have a very important role in the balance of the ecosystem, a role that we are still trying to better understand.

In the world of community cats, death is just part of living. No matter how well fed they may be, they still keep their killer instinct. It is not something that can be bread out of the cats. This is who they are, and this is their place and role in life, they are predators, obligate carnivores. Many debates on how feral cats are damaging the wildlife and driving birds to extinction are placing these small but fierce predators in a bad light. But in fact, we should learn to adjust our perspective to fit it better with the order of things in the natural world. Death is just part of life and with no death there will be no life, all is transformation.

"Today, the most heated conflicts over cats occur in conservation and animal protection" (Lynn, Santiago-Avila and Stewart 2022, 695). They are blamed today for the same reason they were treasured in the past: they are skilled predators. Balancing the interests of cats and wildlife is a delicate business. Their impact on wildlife, as controversial and hotly debated as it is, is varying greatly from place to place. So, no general or universal solutions should be looked for. "…the best way to resolve moral conflicts is not to oversimplify and polarize, but rather to understand the diverse values at stake and seek to honor as many of them as possible" (Wald and Peterson 2020, 88).

There is huge variation regarding feral or stray or community cats collectives. And different situations will require different solutions. Thus, a great level of plasticity and open-mindedness is required to deal with this "problem". We should never forget that "conservation can be broken down into simple components: care and love" (Wald and Peterson 2020, 99). The most important part in dealing with these kinds of intricate issues is working together to find the right solutions for the community cats challenges.

Sanctuaries around the world

Cats are very much loved. We can say that if we see their extraordinary success in the media and online. Watching them relaxes us and fills us up with joy. Our preoccupation for their care and our love of them brings us together both on site, in an effort to help them, and online, in different communities of cat admirers. But unfortunately, cats are also one of the most abused animals. They are small and defenseless in the face of human rage.

So, all around the world people get together to find the best possibilities to care for their beloved cats. The first cat sanctuary, in fact a home for stray cats, was built by mameluke sultan Baybars in Cairo in the 13th century. We can say that, even if the cat lost her sacred status in Egypt, people never stopped loving, admiring, and considering them special. Also, Islamic tradition, in general, is very protective of cats as the Prophet himself was so fond of this very special animal.

Cats also have a special place in Istanbul. Both locals and tourists love them, and they are everywhere to be seen. The most beautiful part is that most cats look in very good health and body condition, they have their homes (sometimes with their names written on them) and food stations. Also, locals love them and welcome the cats to their shops and many of the local businesses, restaurants, etc. More than that there are public feeding stations and fountains. So, the cats never go hungry or thirsty.

Another famous example is the Roman Torre Argentina Cat Sanctuary. The ancient ruins of Largo di Torre Argentina, where legacies of the Roman Republic have been unearthed, started to attract local feral cats. As people began to feed them the place started to develop into a cat safe place. "Cat ladies", the famous *gattare* were devoted to taking care of these cats, some of them very famous, and it gradually developed into what it is today: a place that is home to more than 150 cats. Some of the tamer cats are adopted and, of course, one of the main targets of these cat people is to have all cats neutered as to keep their numbers in check. Also, all disabled or

elderly cats, for whom life on the streets may be too hard, have a place in sanctuary's headquarters[19]. All cats are registered, vaccinated and all their medical problems are taken care of.

Cats are also an interesting and beloved (most of the time) presence on islands. Malta is one of the most cat friendly islands, home also to an open-air cat sanctuary where both locals and visitors admire and care for the cats. Their presence is something no one can miss in leaflets advertising for Malta as a holiday destination. And, for cat people like myself, being there and being surrounded by friendly and attention seeking cats is a dream vacation.

In Japanese islands like Aoshima or Tashirojima the presence of cats is just overwhelming. These are known as "cat islands". Local fishermen feed the cats in the ports and the way they are waited by the cats to return from fishing is just amazing. In general, Japanese people love cats, we know that the idea of cat cafes that is so popular all around the world now, started there. According to some, the population of cats in these islands is numbering more than the human population. It is tourists, who come here mainly for the cats, that bring income and attention. Also, in Japanese tradition, the maneki-neko or "beckoning cat" is a very common symbol and can be seen virtually everywhere as it is believed to bring good luck and fortune.

In other islands, like Cyprus or Syros, cats were initially viewed as nuisance or vermin. Thus, their fate there was not so happy. But fortunately for the cats, cat loving people came up to take care of them and to spread useful information about neutering and controlling the cat population, and the available veterinary services (there are wonderful local vets that work for the benefit of these cats pro bono) led to a gradual change of minf of the locals. This is the key to peaceful coexistence. There is room for all of us, and with care and respect critical issues can be solved. We must understand that we cannot always have all that we want but, with careful

[19] Since 2000 the Sanctuary got international fame due to their site www.romancats.com and their presence on social media.

considerations of the others' needs, we can get to a place and point where we can all have all the essential things, all that we need; we can all be respected and have our most urgent needs be cared for.

Also, it is important to keep in mind that cats (and other animals) were not forgotten even in times of crisis, in times when people were fighting to survive and keep their loved ones safe. We have wonderful examples of situations when cats were rescued and not left behind in war zones (both in Syria and Ukraine recently). The sanctuary created by Alaa Aljaleel in Aleppo in the time of the Syrian war and city siege (Aljaleel and Darke 2019) kept safe not only the large cat population in the city, but also the human inhabitants and other animals in need. Donations were collected from around the world as people were impressed by this man's resilience and determination to protect all the living souls that he could.

Care in crisis situations

All cats, but especially those living away from close observation and veterinary care, are facing many difficulties and problems: fractures, wounds and accidents, fights, skin wounds, parasites, infectious diseases, eye problems caused by cat flu, ear cancer caused by hot sun (especially white cats), etc. Cats are very resilient and tough and more than that, they are also prey to larger animals. For this particular reason, evolution has modeled them to hide their suffering and thus make the situation for us, those who try to relieve the suffering of the cats in need of care and attention, very difficult. It is important to learn how to watch and also, because we are talking of community cats, to promote careful and loving ways of interaction and educate the public to be empathic and sensitive to cats in distress[20].

When it comes to community cats it is challenging to know how best to treat them in case they have disabilities, incurable and debilitating diseases, in general if they cannot fend for themselves. It

[20] When they show signs of distress, for all the reasons listed above, is when they are suffering a lot; too much to be able to hide it.

is really difficult to assess if life in captivity, in a sanctuary, is a good option. And this will not depend only on the way the sanctuary is designed, but also on the individual cat's personality. Is it hard to know how we can decide what is best for another individual and also from a different species. Lori Gruen is talking of "entangled empathy" and this "requires an awareness of the differences between empathizer and the other animal as well as an understanding of the animal's species-typical behaviors and individual personality" (in Abrel 2021, 79). If we use the similarities between us to bridge differences and truly feel for the other animal, then we should always be in guard not to anthropomorphize them completely. Taking care of disabled cats challenges us to think about their happiness, what makes life worth living in general and also think of the diversity of life and life forms. Disabled cats can have full, happy lives despite their unique challenges (deaf, blind, mobility limitations, etc.). but it is still very challenging when it's up to us to decide their fate.

Euthanasia moral dilemmas are also coming up in these kinds of situations. End of life care and decisions need to be taken and sometimes are really tough and have a huge impact on the caregivers. Only animals with medical issues that are untreatable and impair their quality of life are taken in consideration for compassionate euthanasia, but how exactly we determine if some cat or another is in this situation is very hard to say, it is very subjective. The veterinarians' opinions about the issue are crucial, but even for them it is difficult to assess for instance when the severe pain becomes impossible to alleviate.

In our interactions with the community cats, we always need to make "efforts to engage with animals as fellow subjects" (Abrel 2021, 63). Only in this way we can learn from them, be attentive to their needs and thus re-think animal wellbeing and protection not only in shelters and/or sanctuaries but in society at large. Only in this way we will re-imagine the model of animal companion welfare and wellbeing. Answering, or making an effort to answer, the question of

how to keep cats happy we need to discover cats' own sensibilities. And this opens the way to "the possibility for nonanthropomorphic yet still intersubjective relationship with animals" (Abrel 2021, 75). They need far more than rescue from harm and the "five freedoms", they need their psychological needs also be addressed and "caregiver concern for animals' emotional states" is "creating opportunities for animals to have greater than usual influence over their own care" (Abrel 2021, 74).

We need to re-think, re-imagine, and re-interpret the idea of the need of separating free-roaming cats from the community. They belong here just as we do. We need support for people to care for their cats and help to stop abandoning them. We also need support for the community cats, and for all the people who take care of them; these cats belong in the community, belong to all of us and should be our common and shared responsibility. Considering free-roaming animals out of place, inappropriate, just because they do not fit our standard view, and blaming the people who do not take appropriate care (whatever that may mean) of them is not helping clarifying and solving this issue. In fact, what we need is support for people to care for their own cats and stop abandoning them, but also, and very important, support for the community cats that are already living freely among us and belong to all of us all, to our community.

The idea that the public safety[21] and order are dependent on the removal of the free-roaming cats from the public domain should be seriously questioned. Because "if cats are viewed as belonging to nature rather than to civilization, it becomes easier to see them as health threats or nuisances rather than individuals and companions and to recommend their elimination when they present a "problem" to human society" (Slater and Shain 2005, 43).

[21] They are often seen as a threat because they are considered to spread disease, parasites, etc., but this idea, that unconfined animals pose a threat for public health and safety, should be seriously reconsidered under the One Health perspective: healthy animals, clean environment, healthy people – everything is connected.

If we acknowledge that breaking the human-cat bond is traumatic, both for the humans that love them and the cats themselves, then also taking cats away from the community, where they belong, must be also traumatic. We need to understand and accept that community cats belong in the community, among us. And figure out how to constructively work for our common welfare and for our common rights[22]. Also, we need to become more attentive, more in tune with the world and beings around us, start listening to the animals' voices (create interspecies democracies, like Eva Meijer 2019 suggests) and get a place at the table of decisions regarding them, and us, to the animals themselves.

A few closing lines

Our relationship with the community cats should be a model for future multispecies assemblages, arrangements, and cities. Feral cat colonies could be the first step in learning about rewilding our communities and reclaiming our place in nature as "a part" of it, and not "apart" from it (as Sir David Attenborough so nicely puts it). We are given the possibility to explore a new kind of sanctuary, not a place but an idea, a state, a way of being. The sanctuary movement and the existing sanctuaries have taught us to relate to the other animals as subjects, co-producers of knowledge, teachers, and co-citizens. Caregivers there engage with animals like ethnographers attempting to understand different cultures. Thus, sanctuaries create the ideal situation to examine new patterns of human – animal interaction that are starting and prevailing out of the cultural shift in attitudes towards animals (Abrel 2021) and they are really important in observing "how the subjectivity and agency of animals influence the way humans understand, value and interact with them" (Abrell 2021, 13).

It is necessary to "move away from ideas of sanctuary as refuge, to sanctuary as a new kind of intentional community whose future

[22] See Stucki 2023.

directions can be shaped by all its members" (Donaldson and Kymlicka, 2015). The current system is not working for the animals and the people that love them; in fact, it looks like it is failing us all. It is of utmost importance to re-imagine and re-think our lives and the whole current paradigm in order to promote connection instead of separation, unity in place of division, acceptance and understanding in place of control. We are just a part of a huge network that for a brief moment in time we imagined we could control. Now we need to start from the basic idea that we all need support, we all need all the others, we are a community that needs to work together so that we all can thrive. Separation and division is making us weak and miserable. For our own peace of mind, we need to work to keep people and animals together. We need to think how communities can best take care of both humans and non-humans, and we need to understand that we stand together, that our wellbeing, and welfare, and health, and rights are united and go hand in hand. Care, community, empathy, and love should guide all our actions. When we support each other, when we keep people and non-humans together, we strengthen the bond.

Sanctuaries are a tool for educating people about the better treatment of animals. "As an act of rescue transforms animal objects into animal subjects, the sanctuary's advocacy mission simultaneously reinscribes them as different kind of object in service to an alternative value system" (Abrell 2021, 138). The mission of the sanctuaries is to transform human relationship with other species and create "new possibilities for living with animals as subjects worthy of ethical regard" (Abrell 2021, 177). They are a tool for educating the people about better treating the animals, finding (more) respectful ways of interacting; designing new ways to co-exist and thrive together. In sanctuary, the old cultural imagery is reframed into one that recognizes animals as subjective beings with interests worthy of ethical consideration and legal protection, teaching us to "recognize animal residents as full and equal members of the community" (Abrell 2021, 140), and to treat them as "agents, as

members, and as co-creators of on-going, shared communities" (Abrell 2021, 177).

We need to get to the point where humans and cats and the other non-humas sharing the community "are co-creating new kinds of human-animal political ecologies that are adapted to the constraints of trying to live more harmoniously with other species" (Abrell 2021, 196). We need to find companionship without ownership and new ways to engage with animals without making them our own. We need to make efforts to expand our "compassion footprint", to increase the umbrella of compassion and respect to include all beings and all the nature around us. The moment when we will stop seeing nature as a resource to be plundered and used but as a protective mother that is nurturing us, the moment when we will abandon the old paradigm, we will discover that "saving animals is a project that can only truly be complete when we can save ourselves as well" (Abrell 2021, 197).

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Yes, we love horses! Do they love us back? Correlations between the neurobiology of behaviour and traditional horsemanship - a scientific approach to conventional beliefs about horse welfare and well-being

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Abstract. *For centuries, our relationship with horses was based on various forms of partnership: for work, war, or travel. This amazingly reliable creature has offered humankind the means for progress: strength to build, speed to conquer, and stamina to explore. Still, it is only in the last couple of decades, humans have started to engage with them in a different style. More than ever, the current generations of children are affectionately looking at horses with love and care, considering them as companions and friends worthy of our most intimate emotions. Hence, one can notice the fundament of the horse-human dyad built over millennia is changing right in front of us. This qualitative review of the literature aims to explore reflectively the field of emotions in horses and their interaction with us. Multiple studies are showing how equines, like many other non-human animals, can express a large variety of emotional states and how a lot of the manifestations of emotions are driven by our interaction. Horses can read human body language, perceive their odours or listen to human voices, depicting whether the humans that they are interacting with are furious or calm, energetic or submissive, attentive or careless,*

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and shape their emotional response accordingly. We aim to overview the status of knowledge on the equine emotional states, especially the emotional states of horses when interacting with humans, in order to find directions for further studies in the field, and to better understand the emotional needs of horses concerning their well-being.

Keywords: horse-human interaction, interspecific emotional contagion, horse behaviour, horse cognition, horse-human bond

Introduction

Horses, as we know them today, are the product of an evolution of 60 million years (Anthony 1996). We domesticated this species about ten thousand years ago and have since used them for work, war, and travel. However, only in the last couple of centuries have humans started to focus on leisure and sport (Boyd & Keiper 2005). Horses became companion animals only in the last couple of decades, when people started to focus more on the partnership than on their usefulness (Outram 2023).

In millions of years of evolution, *Equus caballus* developed features that are difficult to change without human intervention. Natural selection created physiological, behavioural, and cognitive characteristics that resist even directed artificial selection and reproduction (Feh 2005). As a consequence, domestication had little impact on the neural fundaments as sensations, perceptions, or emotions (Levine 2005).

And yet artificial selection implemented over centuries aimed not only at increasing horses' physical characteristics, but also improving behavioural, cognitive, and communicational abilities. This paved the way for an exceptional and lasting partnership (Anthony 1996).

Horses are prey animals, which means many behavioural/ cognitive features are distinct from other species or humans. They feel safe in herds and wide open spaces, not in confined boxes. They will never accept a human as a dominant member of a herd and always look at us as predators (Leblanc 2013).

As all psychological expressions have a neurophysiological basis, it becomes crucial to understand the foundation from which they originate. Sensations, perceptions, cognition, and interactions are the building blocks of emotions.

In 1872, Darwin published *The Expression of Emotions in Man and Animals*. In this book, he argues that animals and humans display emotions in similar ways, and therefore the evolution of emotion can be traced across cultures and species (Darwin 1998 [1872])

Unfortunately, Darwin`s statement was followed by decades of fixedness imposed by American behaviourism, according to which all behaviour shall be explained by operant conditioning, leaving no room for unlearned predispositions. It was Skinner's contention that emotions were "excellent examples of fictional causes often attributed to behaviour." (Skinner 1965) It is a fact that until the last century, researchers were unable to obtain funding unless they rephrased their questions in terms of learning and memory to study emotions (Panksepp 2002).

Even though animal emotions were often dismissed as unimportant, denying their existence was rare (De Waal 2011). Therefore, we face a situation in which "a widely recognized aspect of animal behaviour is deliberately ignored or minimized" as Frans de Waal explains it.

What are emotions?

As pointed out, the study of emotions didn`t start with animals following a standard evolutionary route, but with humans. Even so, there is currently no scientific consensus on a definition, because emotions are often intertwined with mood, temperament, personality, disposition, or creativity (Damasio 1998; Ekman & Davidson 1994; Cabanac, 2002). Some authors define human emotions **as mental states caused by neurophysiological changes, and can be associated with thoughts, feelings, behavioural responses, and pleasure or displeasure.**

Even humans' emotions were not always accepted as they are today. In Cartesian theory, neither emotions, nor the body, were considered part of cognition. In today's world, it is impossible to separate emotion from cognition. In the brain, the cognitive and emotional pathways overlap because of the need to coordinate processes and functions that are tightly linked (Niedenthal et al. 2005; Goleman 1995; Davidson 2003).

If there is a debate about how to define human emotion, and there is no widely accepted consensus about it, it is obvious that animal emotion is even more blurred. Therefore, animal emotion may be defined as a state associated with measurable physiological changes in neural activation patterns (Sachs et al. 2018).

In contrast to humans, the study of animal emotions cannot follow the linguistic insights into their emotional state, so other pathways of inference have to be used to reveal indicators of emotion. These pathways are neural, behavioural, physiological, and cognitive (Mendl et al. 2022).

A world-leading neuroscientist, Jaak Panksepp (1986, 2011) identified seven basic animal emotions: SEEKING, FEAR, RAGE, PANIC, LUST, CARE, and PLAY, but he tried to indicate by the capital letters that they are not identical to human feelings. Even with all the distancing imposed on animal emotion, researchers are still accused of anthropomorphism (Horowitz & Bekoff 2007).

As long as we can measure physiological changes, see behavioural responses, and explore patterns of neural activation in the brain, it is impossible to avoid the conclusion that we are dealing with the same state. If humans report high anxiety when the amygdala is activated and likewise, rats exhibit flight and freezing responses when their amygdala is electrically stimulated, it means we are looking into a similar neuroanatomical and neurochemical pattern which confirms that primary brain processes generate basic emotions (Barrett 2017; De Waal 2019).

How emotions occur or the neurophysiology of emotions

Emotions are (1) triggered by the environment - external and internal stimuli, (2) are processed in the subcortical regions of the brain, and (3) are expressed in learned and innate behavioural traits. Therefore, all behavioural traits are expressions of the coordinated activity of the nervous system which is detecting, processing, and responding continuously to external and internal stimuli (Coria-Avila et al. 2022).

Detection of stimuli requires afferent pathways (the sensory system) to the central nervous system (CNS), where information is processed, then efferent paths (the motor system) are activated entailing muscular, endocrine, emotional, cognitive, and behavioural responses.

The neuroanatomy of primary emotions occurs in the same subcortical brain regions as the thalamus, hypothalamus, and amygdala both in humans and mammals.

The neurochemistry of emotions is running on the same neurotransmitters: dopamine for seeking, opioids for care, adrenalin, cortisol, and other steroids for fear, panic, and rage, and oxytocin/testosterone for lust.

The neurophysiology of emotional responses is mediated by the autonomic nervous system (ANS) and hypothalamic-pituitary-adrenal (HPA) axis (Oggiano 2022). Adaptive physiological responses impact heart rate (HR), respiratory rate, pupil size, blood pressure, perspiration, and corticosteroid levels (Fraser, 1992).

As observed, the same mechanisms, the same brain structures, the same hormones and receptors, and the same afferent and efferent? pathways are responsible for similar behaviours that meet similar evolutionary needs (Panksepp 1998). Despite the diversity, both humans and horses share the same mechanisms of transmission and processing information in the nervous system, which can be seen as a common foundation of the neurobiology of behaviour (Davis 1992).

Thus, different evolutionary pressures imposed specific adjustments and capacities which explain how some animals respond diversly to certain stimuli. Specific emotional repertoires can be selected by evolution, and inherited throughout generations, or can occur due to secondary brain processes based on learning.

A group of neuroscientists showed that emotions are triggered in animals by external (conditioned and unconditioned) stimuli (Coria-Avila et al. 2022) (Fig. 1). Therefore, the assessment of the emotional component of horses` environment is crucial for their welfare and well-being.

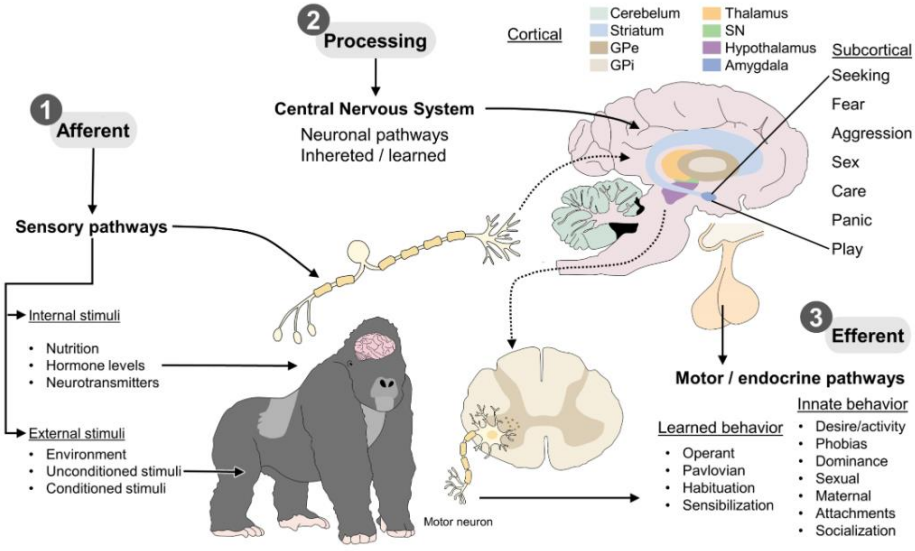

Figure 1. Pathways for the acquisition and processing of external stimuli *(apud* Coria-Avila et al. 2022*).*

What do horses really need?

Horses' cognitive and behavioural features are different from dogs and cats. Equids are in first instance prey animals, which implies their cognitive abilities, emotions, and behaviour are built to react to danger and to survive within the safe environment of the herd.

Even though the neuroanatomical, neurophysiological, and neurochemical fundament of emotions are similar in humans and horses, this does not mean that we shall regard all their behaviour through our lenses i.e., anthropomorphizing (Horowitz & Bekoff 2007).

As some studies reveal, what we think about the needs of a horse might be completely wrong, not only in terms of physiological needs, but also in the psychological cognitive requirements (Hockenhull & Whay 2014).

The Pyramid of Maslow for animals is different for every species, so applying human needs to animals / horses can lead to total failure (Marchesini & Celentano 2021).

Safety is a basic need laying at the fundament of the pyramid, and is probably the most misunderstood.

Avoiding predators is the first requirement of their survival and nothing could have been more important than this, neither feeding, drinking, or giving birth. As prey animals, horses needed and still need, safety to thrive and to be able to perform other behaviours (Hyland 1990).

That is why horses are also fearful of things that are not familiar. Anything unfamiliar may be perceived as dangerous to the horse, especially if the object in question is in motion and moving toward him. It is natural for horses to jump from a relaxed state of mind to an alert state, where adrenaline increases, and they are ready for flight. Herd safety relies on the vast spaces where they can avoid predators by running (McCort 1984; Feh 2005).

There is also security and comfort in numbers. Horses are most content if they can touch other horses, be near them, or at least see them.

Therefore, it is not normal for a horse to be taken away from his herd, and it is also not normal for a horse to live in isolation from other horses. Furthermore, living in confined square boxes is not by far the pinnacle of their safety, as many humans conceive it (Steglic 2017).

Food and water, as the second basic need, are a consequence of the fact that horses thrive on grass and water because their digestive system has evolved over millions of years as a nomadic grazer (Hill 2007). In particular, the time it spends each day eating may vary from 13 to 17 hours in a 24-hour period, and locomotion is an integral part of grazing behaviour (Fraser1992). Feeding behaviour is strongly correlated not only with locomotion, but also with psychical well-being. Horses who are not allowed to nibble may develop stereotypes and other behavioural conditions (Cooper & Mason? 1998).

There are a lot of misconceptions regarding other basic needs as rest, maintenance, exercise, movement, and exploring. Exercise and movement are essential not only for physiological fitness, but for mental well-being as well, and are related to curiosity and communication with conspecifics (Mills et al. 2020). Even if folklore says that horses sleep on four legs, recent studies show that they need to lie down on a side with the legs stretched for a good mental recovery in REM sleep (Greening 2018; Williams et al. 2008). Therefore space, cleanness, and safety are essential, as horses will never lie down if they are tethered, have not enough space, it is not clean, and are not safe.

What do horses perceive?

Despite sharing five common sensory modalities, horses and humans discern the world differently, so horses are unlikely to perceive their surroundings similarly (Rørvang et al. 2020). Therefore, it is crucial to understand equine perceptual abilities since they play a pivotal role in a horse's response to the environment.

To understand horses' emotions, cognitive states, and behaviour it is important to perceive the environment with their senses. Fear, panic, rage, play, lust, or care are triggered by what horses see, smell, hear, or feel.

Vision is one of the horse's most important interaction mechanisms with others and the environment, and is the one that triggers most of the emotional states (Saslow 2002).

As explained before, horses are adapted for vast spaces which means vision is also designed to be focused largely on more distant features and to have limited ability to focus on very close objects, less than about 1 meter away (McGreevy 2012). Nevertheless, in a domesticated environment, we tend to keep horses in surroundings that are very close to them ignoring completely their biological capacities.

Approaching horses is another key to a positive interaction. Disregarding their visual field, especially the blind spots under the horse's head, between the eyes, and in the hind, can result in injuries for humans and a negative emotional condition for the horse. At work, forcing an unnatural position of the head diminishes the visual field and can cause incidents that harm both humans and animals (Peters et al. 2012).

Also understanding how horses` eyes adapt to light can improve the handling in the moments of loading in a truck/horsebox. Accommodation from light to dark is slower than humans', that`s why even in places with shadows horses will be more attentive.

Studies have shown they are capable of cross-modal recognition of their conspecifics Proops et al. 2009). For example, they can associate a voice with the sight of a specific person.

Horses appear to be able to recognize individuals and faces. They can also express emotions through characteristic facial expressions (Dalla Costa et al. 2014; Lansade et al., 2020) and are able to differentiate these expressions (Wathan et al. 2016). Some studies have demonstrated that horses can identify human beings. Furthermore, a recent study investigated the response of the horse to human facial expressions (Smith et al. 2016) and claims to have demonstrated functionally relevant responses to angry faces, showing an increased heart rate and a tendency to look at the picture with the left eye, a response previously connected to the perception

of negative stimuli. This response was not obesrved when the horse was shown happy faces. The researchers concluded that these data supported the hypothesis that horses can both recognize and respond relevantly to human expressions of emotion (Cavanagh 2019).

In terms of auditory perception, horses can hear higher frequencies (pitches) than we can. They can hear low frequencies with their ears, and they can sense even lower frequencies through their hooves and their teeth when grazing. As for the volume, horses can hear sounds from greater distances than we can, which means their hearing is so keen that loud voice commands (yelling) are not only unnecessary, but even counterproductive. Some horsemen communicate using low-volume soothing tones that calm the horse – hence the term horse whisperer (Hill 2006).

Tactile stimulation of the surface of the skin is the main interface of communication between a horse and a rider, and also between a horse and a human handler (Rørvang et al. 2020).

The sensitivity of the skin is thought to vary across the body of the horse as the distribution of sensory nerve receptors varies, with areas such as the muzzle, neck, withers, coronets, shoulders, lower flank, and rear of the pastern typically being most sensitive (Mills & Nankervis 2013?).

Another tactile concern for the area around the nose and mouth of the horse is the use of restrictive nosebands. Recent studies have shown that nosebands in several equestrian sports are excessively tightened to the extent that natural oral behaviour is inhibited, stress can be induced, and tissue damage may occur (McGreevy et al. 2012).

When using stroking as a reward or a way of relaxing an animal, it should be kept in mind that touching only some regions of the body causes soothing and contentment, whereas touching other areas irritates and consequently elicits discomfort (Wakuri et al. 1995).

What do horses say?

As many other species of social mammals, horses are constantly communicating with each other and the environment. Being prey animals, horses are known for their multi-sensory alertness, herd vigilance, and instantaneous reactivity to the threat.

Postures and expressions in various combinations appear to be important visual elements of communication (Schoning & Grutzner 2016). A variety of vocalizations, as well as other sounds, are likely to serve as communication within the herd (Yeon 2012). Hoof sounds, from pawing, stamping, or contact with the substrate during locomotion, also appear to convey information among horses. Chemical cues also likely play a large part in communication within and between groups of horses, as well as in the perception of threatening predators (Guarneros et al. 2020).

An interesting behaviour that likely includes elements of communication is mutual grooming. Two horses stand facing one another, nibbling insects or tufts of shedding coat from the neck or back of a partner. In addition to obvious grooming needs, this behaviour may communicate trust and bonding among participants (Malavasi & Huber 2016).

Equids interact to a limited extent with other species in their habitat. In particular, communication of calm and alarm appears to transfer among species. Although not common, both adults and young can occasionally be seen interacting playfully or aggressively with small mammals and birds (McDonnell 2003).

The exchange of information by means of body language is widespread in nature. Numerous animals, as well as humans, use body language as a signal of their intentions, either alone or in combination with other forms of communication (Hauser & Konishi 1999).

Establishing an order of dominance and submission is important in the social order within and between groups of a herd. Dominant individuals can effectively direct the movement of other animals or can control a limited resource with a simple head toss

threat or threat gaze that involves a stare with the ears held back and the head lowered (Dahl et al. 2018).

Body language communication is important not only between conspecifics but also for interspecies communication, such as during the interplay between predator and prey. In social animals, body language is important for the cohesion of group members. Not only does it replaces physical aggression during conflicts to some extent, but it also invites group members to pleasurable behaviours such as play and allogrooming (Ladewig 2019).

This type of communication is important both for animals and for peoples' interaction with animals. For example, for social animals, body language communication during competitive situations may prevent subsequent physical interaction making life in the social group more peaceful. Domestic animals that have frequent contact with people learn to read human body language. Similarly, experienced animal trainers learn to read the body language of their animals. This exchange of information makes it safer and more efficient to work with horses (McGreevy 2018).

Tactile stimulation is the principal way riders or drivers communicate with their animals. Using stimuli developed for gauging human tactile sensitivity (Saslow 2002), it was found that horse sensitivity on the parts of the body which would be in contact with the rider's legs is greater than what has been found for the adult human calf or even the more sensitive human fingertip.

Horses can react to pressures that are too light for the human to feel. This raises the possibility that human instability in the saddle results in unintentional delivery of irrelevant tactile signals to the horse and a consequent failure in teaching the horse which signals are meaningful (Brandt 2016).

Equine vocalization and acoustic sounds can communicate a horse's emotional state, physiological state, and situation to other individuals, including other horses and humans (Yeon 2012).

Olfactory cues and signals comprise an important element of the biology of mammals. These vertebrate animals possess an

enormous chemosensory capacity, in part owing to the complexity of their olfactory system. Horses possess a relatively large olfactory epithelium and wide nostrils facing opposite sides, allowing an efficient localization of odorant sources.

Horses spend a considerable time sniffing objects and conspecifics of their herd. This sniffing behaviour allows them to obtain relevant olfactory information, but despite the strong presence of horses in human life, and the significance of olfactory communication in this species of equids, the number of studies on this topic is limited, and hence, little is known about olfactory behaviours in these animals (Péron et al. 2014).

Horse-human emotional recognition has been tackled by research (Sabiniewicz et al. 2020) providing evidence for a possible purely olfactory recognition of human emotions by horses. They found that the horses displayed some differential behaviour in response to human fear and non-fear odour. The horses lifted their heads significantly more frequently and for longer in the fear and in the control condition compared to the happiness condition. Similarly, the horses tended to touch a familiar person that was present during the test more frequently and for longer in the fear condition compared to the happiness condition (Sabiniewicz et al. 2020).

Conclusions and discussions

As it appears from the multitude of studies, emotions are not a monopoly of *Homo sapiens*. The complexity of emotions in the animal kingdom leads many times to misunderstandings or misinterpretations and therefore to the erroneous conclusion that animals, in our case horses, do not experience emotions or that animal emotions are primitive ones, and therefore completely different.

We have seen that neuroanatomical and neurochemical mechanisms that generate emotions have the same basis but also that their manifestation is particularized according to the species.

The triad

1. Triggering emotions
2. Processing emotions
3. Manifesting emotions

In understanding the first element of the triad, the ability to read the stimuli which can trigger emotions is essential whether they are internal (metabolic) stimuli, or external (environmental, conditioned, or unconditioned) stimuli. Basic knowledge about feeding, watering, or temperature needs is essential in order to avoid stress-related metabolic disorders. Ignoring or lacking knowledge about environmental, and social necessities leads to dysfunctional interaction and results in poor welfare.

As consistent studies revealed, processing emotions in the mammalian brain is similar in human and non-human animals. The same cortical and subcortical systems and the same hormones are involved in processing basic emotions such as seeking, fear, aggression, lust?, care, panic, or play.

The manifestation of emotions is not only different from one species to another, but also from each individual to another. This means there is a wide range of expressions and displays of behavioural traits triggered by the same emotions. Learned and innate behaviours are the exhibition of emotions and the only way of understanding them is by knowing and reading them correctly.

Loving them means knowing them

Hence, there is a reason why we have to know what emotions are and how they occur, but also what horses need, what horses perceive, and how horses communicate.

The ability to correctly read and translate the behavioural traits triggered by emotions not only facilitates communication, but also increases the well-being of both parties involved in the interaction. We are built to easily understand these relationships intraspecifically (from human to human), but when it comes to interspecific relationships, we tend to use the same tool, falling into the error of anthropomorphizing.

Misunderstanding simple sensations and perceptions cues, lacking knowledge about horse biology and needs, and disregarding their cognitive abilities, can have a negative impact on horse well-being. Our best intentions and emotional involvement are not enough to improve horses' psychical and even physical life, therefore the best method remains a constant and consistent growth of knowledge regarding our equid partners.

Do they love us back?

Horses' emotional lives are highly influenced by our actions, as vectors of change in their environment! Therefore, our inputs can create neural circuits for positive emotions or, on the contrary, for negative ones!

Memory (including emotional memory) consolidation theories state that neural pathways must be (1) generated; (2) stabilized; (3) consolidated; and (4) maintained (Kandel et al. 2014).

Generating positive emotions (creating neural pathways) is the first and most important step. Stabilizing and consolidating these emotions by repetition and maintaining them through long periods of time are the next compulsory ones (Bailey et al. 1996; Tronson & Taylor 2007). These steps can be regarded as the scientific method to induce an addictive phenomenon running on internal brain opioids which provides a sense of security called attachment. Or love!

With horses, what you get is what you give!
Unknown rider

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Narațiuni și creaturi inedite din mitologia vedică

Liviu-Adrian Măgurianu*, Daniel Măgurianu**

Abstract. *The paper deals with issues specific to cryptozoology - a name that defines a branch of zoology. It is sometimes regarded as a pseudoscience devoted to the study of animal species whose existence is not supported by empirical evidence, but rather by hypotheses based on indirect methods and unreliable information, including oral traditions, ancient texts, eyewitness accounts and inconclusive physical evidence. Srimad Bhagavatam, Ramayana, Mahabharata, the Bible mention wonderful places and fantastic creatures that may have once lived on this planet. Such creatures are the Timingila fish, Makara, Behemoth or Leviathan. Cryptozoology also studies creatures closer to the present day, some extinct, others thought to be extinct ('living fossils'): the dwarf elephant, Kraken - the giant squid, Megalodon - the giant shark, Moa - a large flightless bird, Mokele-Mbembe - a surviving dinosaur, Okapi - a creature resembling both a zebra and a giraffe, etc. Timingila is said to have been the fiercest predator of the oceans. It was enormously large, and its favourite food was whales. Temple art in India depicts Makara as a combination of many fantastic animals: crocodile jaws, elephant trunks, boar tusks, fish scales, peacock tails and monkey eyes. The Vedic scriptures were written in ancient times: the Bhagavatam in the 9th century BC, the Ramayana in the 4th century BC, and the Mahabarata between the 7th and 4th centuries BC. If this estimate is correct, how could the authors of these texts have known about a sea creature, its size or diet, if it disappeared 1.5 million years ago? Humans are said to have appeared on the planet 1,250,000 years after Timingila's disappearance. Who told them about these creatures? Did they really exist?*

Keywords: cryptozoology, mythical creatures, Timingila, Makara, Behemoth, Leviathan

Povestea înțeleptului Markandeya. Întâlnirea cu Timingila și Makara

În *Śrīmad-Bhāgavatam*[1] (*Bhāgavata Purāṇa*) găsim o narațiune plină de sensuri ezoterice referitoare la înțeleptul Markandeya.

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Acesta era dedicat austerității și cunoștea foarte bine scripturile vedice. Prin *sadhana* (practica spirituală) a cucerit moartea devenind nemuritor. Chiar și îngerii, zeitățile și alte spirite coborau să vadă practicile sale spirituale zilnice. Într-o zi Indra[2] a devenit tulburat de puterea lui Markandeya și a încercat prin diferite metode să-l tenteze pe Markandeya. La trimis chiar pe Kamadeva[3] cu cele cinci săgeți mistice și cu dansatoare din planetele superioare. Energia spirituală a lui Markandeya obținută prin *tapas* (austeritate, disciplină spirituală) este mult mai puternică și Indra înțelege acest aspect. Într-o zi Markandeya se afla în ashramul său și i-a primit pe Nara și Narayana Rishi. Pentru a-l corupe, cei doi îi oferă posibilitatea de a-i îndeplini orice dorință materială. Solicitarea lui este de altă natură: „Deși sunt *amara* (nemuritor), eu nu am înțeles cum funcționează

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[1] Dintre toate colecțiile de învățături spirituale din literatura vedică, *Srimad-Bhagavatam* este considerată una dintre cele mai importante scrieri. Se spune uneori despre literatura vedică că este un „copac al dorințelor", un copac care poate oferi soluții la orice poate dori o ființă umană, iar din acest copac se spune că *Srimad-Bhagavatam* este fructul copt și cel mai savuros. *Srimad-Bhagavatam* începe de unde se termină *Bhagavad-Gita*, deoarece merge chiar mai departe în natura realității și în relația dintre toate ființele și divinitate. Cele optsprezece mii de versete din *Bhagavatam* constau în sute de conversații - rostite între yoghini, înțelepți și regi autorealizați din lumea antică - despre cum să atingi perfecțiunea supremă a vieții. Întreaga lucrare a fost compilată de Vyasadeva – „editorul Vedelor".

[2] Zeul antropomorfic Indra este o figură majoră în hinduism și o divinitate importantă în budism și chiar în alte tradiții. Pentru arieni era zeul național și era considerat protectorul aristocrației militare și al războinicilor *Kshatriyas*. Formidabilul Indra, care mânuiește fulgerele, are o figură impunătoare dar ca „prim-ministru" al zeilor, este în general binevoitor, fiind generos cu devoții săi, garantând pacea și prosperitatea și provocând ploi benefice pentru a pune capăt secetei. Poate fi chemat în vremuri de război pentru a oferi sprijin cu armele sale divine și intervenții favorabile. În tradiția ulterioară, Indra se transformă dintr-un zeu venerat într-o figură mitologică implicată în diverse aventuri, uneori neplăcute, în timp ce zei precum Vishnu și Shiva îl înlocuiesc în fruntea panteonului hindus. Cu toate acestea, Indra a continuat să fie asociat cu furtunile și cu ploaia.

[3] Kamadeva este zeul hindus al iubirii și al dorinței, numit uneori Cupidon indian sau vedic. Numele său provine din sanscrită, *kama*, care înseamnă „dorință senzuală", și *deva*, care înseamnă „ființă divină". Fiind una dintre cele mai populare zeități hinduse, se crede că zeul Kamadeva trezește dorințele carnale umane în rândul celor pe care îi țintește cu săgețile sale. Kamadeva este adesea reprezentat cu pielea verde (sau uneori roșiatică), cu un arc din trestie de zahăr și săgeți din flori. El călărește un papagal și poate fi însoțit, printre alții, de zeul primăverii, de colibri și de consoarta sa, Rati.

Maya[4]. Aș vrea să înțeleg". Cei doi frați au zâmbit și au spus: „Tathastu!"[5] („Așa să fie!"). Într-o zi, când Markandeya era în *samadhy*[6], a început un vânt și o ploaie torențială. Oceanele au inundat pământul. El înțelege în scurt timp că este singura entitate vie care a supraviețuit potopului devastator. Părul lui Markandeya se despletește și plutește în apele acestui ocean, chinuit de foame și de sete. Dar Markandeya este *amara*. Încearcă să se sinucidă, să se înece dar se ridică la suprafața apei. Nu înțelege care e scopul său, nu poate diferenția cerul de pământ în întunericul infinit. Uneori este înghițit de marile vârtejuri, alteori înghițit de valuri, alteori monștri acvatici Makara, Timingila și Timi-Timingila îl amenință să-l devoreze și se atacă unii pe alții. Uneori simte lamentarea, mizeria,

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[4] *Maya* este iluzia că lumea este așa cum este percepută prin simțuri: vedere, sunet, atingere, gust și miros. Este realitatea aparentă a lumii materiale. Termenul este strâns legat de *avidya*, diferența fiind că *avidya* este individuală, iar *maya* este universală. În yoga, *maya* se referă la lume și la toate distracțiile sale. Prin meditația yoghină, individul trece dincolo de *maya* și ajunge la iluminare și adevăr. *Maya* poate însemna, de asemenea, aparența a ceva, cum ar fi un obiect sau o situație, care pare a fi într-un fel, dar este de fapt altul. De exemplu, în întuneric, un obiect poate părea a fi un șarpe încolăcit, dar la lumina zilei este evident că este de fapt doar un furtun de grădină. La un nivel mai profund, *maya* reprezintă percepțiile create de credințele, simțurile și educația cuiva - lucruri pe care el/ea sau societatea în general le consideră adevărate. Acestea pot fi rezultatul unor forțe politice, spirituale, sociale, religioase sau economice. Această prejudecată - impresiile pe care cineva le are despre experiențele sale - creează o realitate falsă. Maya consolidează ego-ul și definește legătura noastră cu lumea exterioară. Doar prin închiderea iluziilor acestei lumi externe se poate aspira la o cunoaștere reală.

[5] Este o credință în cultura vedelor conform căreia zeii ne privesc de sus și, indiferent ce spui de bine sau de rău, divinitatea va spune *Tathastu*. Asta înseamnă că ceea ce exprimi se împlinește.

[6] *Samadhi* este al optulea și ultimul pas pe calea yoga, așa cum este definit în Yoga Sutras atribuită lui Patanjali (2012). Termenul este derivat din mai multe rădăcini sanscrite: *sam*, care înseamnă „împreună" sau „complet", *a*, care înseamnă „spre" și *dhe*, care înseamnă „pus". Traducerile directe variază, iar interpretările variază de la „beatitudine" la „eliberare" și chiar „iluminare". În hinduism și budism, *samadhi* este considerat apogeul tuturor activităților spirituale și intelectuale, pe lângă faptul că este o condiție prealabilă pentru atingerea *samsarei* (eliberarea din ciclul morții și renașterii). În yoga, *samadhi* este considerat a fi starea în care conștiința individuală și cea universală se unesc. Este o formă de absorbție meditativă totală, la care se ajunge odată ce practicantul a parcurs pașii preliminari până la cea de-a opta cale a lui Patanjali. Semnificația spirituală a lui *samadhi* este profundă, deoarece cuprinde realizarea de sine și simbolizează legătura supremă cu divinitatea.

frica sau boala. Simte dureri groaznice. Și așa trece mult timp. Cum plutește în derivă, la orizont descoperă o insulă de care se apropie și acolo vede un copac banyan. Pe o ramură stă un copil întins pe o frunză din care radiază lumină, ceea ce nu mai văzuse de foarte mulți ani. Chipul copilului strălucește și este de o frumusețe rară. Simte că oboseala fizică și psihică se evaporă. Simte nevoia să îmbrățișeze copilul. În acest moment copilașul deschide gura și îl inhalează în corpul său. Acolo Markandeya găsește întregul univers, ființele virtuoase și demonice, vede întreaga creație materială în cele 64 de dimensiuni. Vede munții Himalaya și propriul său *ashram* (schit). Copilașul îl expiră înapoi, îl privește zâmbind plin de iubire și în acel moment dispare. Markandeya revine la ashramul său. El înțelege că aceasta a fost revelarea dată de Vishnu pentru a înțelege existența iluzorie, Maya.

Povestea lui Markandeya redată de noi pe scurt are multe înțelesuri profunde care pot fi decodificate doar de un bun cunoscător al textelor vedice. Fiecare moment prin care trece Markandeya are o anumită semnificație. În astfel de narațiuni pot fi identificate creaturi dispărute sau necunoscute. Sunt aceste creaturi rodul imaginației sau sunt entități care au existat și au fost semnalate sub diverse forme în texte care își pierd rădăcinile într-o istorie mai puțin cunoscută de noi?

Criptozoologia – basme populare sau știință?

Lucrarea abordează subiecte specifice criptozoologiei – o ramură controversată a zoologiei. Considerată uneori o pseudoștiință ea este dedicată studiului speciilor de animale a căror existență nu este susținută de dovezi empirice, ci mai degrabă de ipoteze prin intermediul unor informații indirecte și incerte, inclusiv tradiții orale, texte vechi, relatări ale martorilor oculari și dovezi fizice neconcludente. Sunt autori care nu sunt de acord cu abordările propuse de criptozoologie (Simpson 1984; Dubois și Nemésio 2007; Loxton și Prothero 2013), dar și autori care vin cu argumente cel puțin interesante în favoarea acestei discipline (Naish 2001; Paxton

2002). Primul cercetător care a folosit acest termen într-o lucrare, cu scopul de a stabili o nouă subdisciplină în studiul biologiei animale, a fost zoologul franco-belgian Bernard Heuvelmans (1965), cunoscut universal ca „părintele criptozoologiei". Cu toate acestea, primele încercări formale de definire a criptozoologiei și a metodologiei sale au fost publicate abia câțiva ani mai târziu, între 1982 și 1998, în revista *Cryptozoology*, care, deși îndeplinea toate cerințele unei publicații oficiale a avut un tiraj scăzut. Cuvântul „criptozoologie" a apărut pentru prima dată în 1959, când Lucien Blancou și-a dedicat cartea sa lui Bernard Heuvelmans, „maestru al criptozoologiei". Cu patru ani mai devreme, când Heuvelmans a publicat pentru prima dată „On the Track of Unknown Animals", termenul de „criptozoologie" ca atare nu exista (Coleman și Clark 1999). Abia după publicarea acestei cărți a început să își numească căutarea de-o viață „criptozoologie" și astfel s-a născut o posibilă nouă disciplină. De atunci a devenit parte a vocabularului modern și apare în aproape toate dicționarele. Dar ce este mai exact criptozoologia? Nu este o zoologie ocultă. Ea fuzionează trei cuvinte grecești: *kryptos*, *zoon* și *logos*, care înseamnă *ascuns*, *animal* și *discurs*. Criptozoologia poate fi interpretată din perspectiva unor nuanțe ușor diferite: „știința animalelor ipotetice și ascunse", „știința animalelor ascunse" sau „știința animalelor misterioase/necunoscute".

Criptozoologii preferă „ascuns" în loc de „necunoscut", deoarece pentru oamenii care trăiesc în apropierea lor, animalele nu sunt necunoscute. Dacă nu ar fi existat relatări ale nativilor, nu am fi auzit niciodată de ele. În 1982 Societatea Internațională de Criptozoologie a propus o definiție mai clară și mai precisă. Criptozoologia se referă și la „posibila existență a unor animale cunoscute în zone în care nu ar trebui să apară (fie acum, fie în trecut), precum și persistența necunoscută a unor animale presupuse dispărute până în prezent sau în trecutul recent". „Ce face ca un animal să prezinte interes pentru criptozoologie ... este faptul că este neașteptat" (Coleman și Clark 1999, p.15). Pentru ca un animal (sau presupus animal) să fie de interes criptozoologic, trebuie să aibă cel puțin o trăsătură „cu adevărat singulară, neașteptată, paradoxală,

izbitoare, tulburătoare din punct de vedere emoțional" (Coleman și Clark, 1999, p.15).

Pentru majoritatea persoanelor familiarizate cu acest termen, criptozoologia este văzută ca fiind studiul unor creaturi atât de spectaculoase și disputate precum Sasquatch, Yeti și monstrul din Loch Ness. Astfel de criptide (așa cum le numesc criptozoologii) cuprind doar o fracțiune din animalele ascunse, necatalogate sau neobișnuite. Prin definiție fiind animale necunoscute, ele trebuie să fie documentate cât mai atent și mai exhaustiv, printr-o căutare în cele mai diverse domenii de cunoaștere. Cercetarea criptozoologică necesită, așadar, nu numai o cercetare amănunțită a științelor zoologice, ci și o anumită pregătire în ramuri conexe, precum mitologia, lingvistica, arheologia și istoria. În consecință, documentarea se poate desfășura mai mult în biblioteci, arhive regionale, muzee, galerii de artă, laboratoare și parcuri zoologice.

Creaturi mitologice în texte fundamentale ale omenirii

Srimad Bhagavatam, *Ramayana*, *Mahabharata*, *Bhagavad-Gita*, *Biblia* și alte texte vechi pomenesc adesea despre locuri minunate și creaturi fantastice care ar fi trăit la un moment dat pe această planetă. Astfel de creaturi sunt peștele Timingila, Makara (menționate în textele vedice), Behemoth sau Leviathan (menționate în *Biblie*). De asemenea, criptozoologia studiază și creaturi mai apropiate de zilele noastre, unele dispărute, altele despre care s-a crezut că sunt dispărute („fosile vii"): elefantul pitic, Kraken - calmarul gigantic, Megalodonul – rechinul gigantic, Moa – o pasăre mare care nu zboară, Mokele-Mbembe – un dinozaur supraviețuitor, Okapi o creatură care seamănă și cu o zebră și cu o girafă etc.

Arta templelor din India îl înfățișează pe Makara ca fiind o combinație dintre mai multe animale fantastice: fălci de crocodil, trunchi de elefant, colți de mistreț, solzi de pește, coadă de păun și ochi de maimuță. În Iov, 40 și 41 sunt descrise două creaturi uimitoare: Behemoth și Leviathan. Iată doar câteva exemple inedite care merită atenția cercetătorilor și la care ne vom opri noi.

Vedele spun că Timingila era cel mai feroce prădător al oceanelor. Era enorm în dimensiuni și mâncarea sa preferată ar fi fost balenele. Unele balene din vremurile noastre ajung la aproximativ 15 metri în lungime precum Rechinul Balenă[7] din Oceanul Indian. Rechinul Balenă este de fapt o balenă care seamănă cu un rechin dar nu este un prădător. Pe de altă parte, Timingila era un prădător feroce care obișnuia să mănânce balene dintr-o singură înghițitură. A existat oare Timingila pe această planetă sau este doar în imaginația scriitorilor literaturii Vedice? Etimologia cuvântului „timingila" provine din sanscrită: „timi" înseamnă balenă iar „gila" înseamnă „a înghiți". Astfel, Timingila înseamnă literalmente „a înghiți o balenă" - și nu oricum, dintr-o singură înghițitură.

Referințe vedice la peștele Timingila

Referințe la peștele Timingila în antichitate se găsesc în multe locuri. În *Srimad Bhagavatam*, Markandeya Rsi întâlnește Timingila în experiențele sale fantastice în apele devastării și supraviețuiește acestei încercări prin grația Domnului Suprem:

> *ksut-trt-parito makarais timingilair upadruto vici-nabhasvatahatah*
> *tamasy apare patito bhraman diso na veda kham gam că parisramesitah*
> „Suferind de foame și sete, atacat de Makaras și Timingila, bătut de valuri și vânt, Markandeya hoinărea prin amărăciunea infinită ce îl acoperea. Răpus de oboseală, el a pierdut orice sens al direcției și nu își putea da seama ce era cer și ce era pământ." (*Bhagavatan* 12.9.16)

[7] Rechinul balenă este o specie foarte veche, originile fiind identificate acum 60 de milioane de ani; adaptat bine mediului în care trăiește prin dimensiunile care îl feresc de prădători precum și prin hrana pe care o alege, a supraviețuit nederanjat în timp ce lumea se schimba în jurul său. Nu rare sunt cazurile în care sunt găsite exemplare cu vârsta de 100 de ani. Deși s-au vehiculat lungimi de până la 23 m, indivizii care aparțin acestei specii nu depășesc 10-15 metri; cu toate acestea, rămân cele mai mari animale de pe planetă, cu excepția balenelor. Au corpul de o culoare cenușie spre neagră, cu numeroase pete albe pe spate (poate cea mai cunoscută caracteristică a lor). Primul gând la ideea unui rechin balenă lung de peste 15 metri ce poate ajunge la o greutate de 37 de tone ar fi însoțit de un fior de teroare însă „monstrul" este o ființă pașnică.

În *Ramayana*, Timingila este menționată ca locuind în apele dintre Ayodhya – capitala zeului Rama situată pe malul oceanului Indian și Lanka, capitala regelui demon, Ravana:

> *candra udaye samadhutam praticandra samakulam*
> *canda anila mahagrahaih kirnam timi timimgilaih*
> „Când luna răsărea, oceanul se umfla și imaginea lunii se reflecta nelimitat în el. Acel ocean era plin cu crocodili uriași ce erau rapizi ca vânturile feroce, precum și balene și Timingila." (*Ramayana*, Yuddha-kanda 4.114)

În mod similar, *Mahabharata* menționează Timingila ca aflându-se adânc în ocean, împreună cu alte creaturi uriașe:

> *timingilah kacchapasca tatha timi timingilah*
> *makarascatra drsyante jale magna ivadrayah*
> „Au fost văzute Timingila, țestoase, timi-timingilas și Makaras ce erau ca imense stânci cufundate în apă." (*Mahabharata*, Vana Parva 168.3)

Textul Ayurvedic din secolul 6 î.H.r. cunoscut ca *Susruta Samhita* apreciază că Timingila este una dintre formidabilele specii de viață marină:

> *timi-timingila-kulisa-pakamatsya-nirularu*
> *nandi-varalaka-makara-gargaraka-candraka*
> *mahamina-rajiva prabhrtya samudrah*
> „Timi, Timingila, Kulisa, Paka-matsya, Nirularu, Nandi-Varalaka, Makara, Gargaraka, Candraka, Maha-mina și Rajiva etc., alcătuiesc familia peștilor marini." (*Susruta Samhita*, Ch.45)

Referințe vedice la peștele Makara

Makara este de asemenea menționat în câteva astfel de versete. Makara la fel ca și Timingila este mai mult sau mai puțin legendă, mit, ficțiune. Totuși, în *Bhagavad-Gita* Krishna spune că dintre viețuitoarele acvatice El este Makara.

pavanah pavatam asmi ramah sastra-bhrtam aham
jhasanam makaras casmi srotasam asmi jahnavi
„Dintre purificatori Eu sunt vântul, dintre cei ce poartă arme eu sunt Rama, dintre pești eu sunt Makara și dintre râurile curgătoare eu sunt Gangele." (*Gita* 10.31)

Din povestea lui Markandeya putem deduce că Makara era un prădător sau cel puțin era agresiv, deoarece înțeleptul a fost atacat de către Makaras în ocean. Arta templelor din India înfățișează de obicei pe Makara ca fiind o combinație dintre mai multe animale fantastice. Asemenea picturi îl arată pe Makara ca având fălci de crocodil, trunchi de elefant, colți de mistreț, solzi de pește, coadă de păun și ochi de maimuță. Deși traducătorii și comentatorii *Bhagavad-Gitei* îl numesc des ca rechin, asta se întâmplă pentru simplitate și pentru a facilita înțelegerea. Dacă Krishna se compara doar cu un rechin obișnuit el ar fi folosit cuvântul sanscrit pentru rechin, anume *graha*. Krishna cu siguranță nu este obișnuit și poate fi comparat doar cu cele mai fantastice lucruri din experiența noastră. Makara, ca și Timingila, sunt cu siguranță entități mult mai măreațe decât un rechin.

Adevăr sau ficțiune?

Aceste relatări despre Timingila și Makara sunt adevărate sau sunt doar ficțiune? Dacă analizăm versetul amintit din *Bhagavad-Gita*, Krishna se compară cu o creatură despre care, să presupunem că nu există? Krishna spune că este vântul, Rama și Gangele. Sunt și acestea ficțiune?

pavanah pavatam asmi ramah shastra-bhritam aham
jhashanam makarash chasmi srotasam asmi jahnavi
„Dintre purificatori Eu sunt vântul, dintre cei ce poartă arme eu sunt Rama, dintre pești eu sunt Makara și dintre râurile curgătoare eu sunt Gangele." (*Gita* 10:31)

Cu toate astea, a descoperit cineva dovezi fizice ale prezenței unor astfel de monștri ai adâncului albastru? Un exemplu relativ

asemănător poate fi Megalodonul. Primele relatări ale dinților triunghiulari uriași înfipți într-o stâncă au apărut prima dată în Europa în perioada Renașterii dar se credea că sunt limbi pietrificate ale dragonilor și șerpilor. În 1667 un naturalist danez, Nicolaus Steno, a recunoscut aceste descoperiri ca fiind dinți antici de rechin. În 1835 un naturalist elvețian, Louis Agassiz, a dat acestei creaturi numele prin care este cunoscut astăzi, Megalodon - ceea ce în greacă înseamnă „dinte mare". Estimat la cel puțin 24 de metri, cântărind peste 70 de tone, cu dinți măsurând începând cu 18 centimetri și fiind capabil de o mușcătură de 18.000 kg forță *per inch* - Megalodonul este de departe recunoscut ca cel mai înfricoșător prădător al tuturor timpurilor. Fosile de Megalodon au fost excavate din multe părți ale lumii incluzând Europa, America de Nord, America de Sud, Puerto Rico, Australia, Noua Zealanda, Japonia, Africa, Malta și India. Studii medico-legale ale fosilelor de Megalodon arată că prădătorul era capabil de a mânca orice întâlnea, dar preferata sa era carnea de balenă. Conform estimărilor științifice Megalodonul a dispărut la sfârșitul Pliocenului (acum 2,6 milioane de ani), când planeta a intrat într-o fază de răcire globală. Nu se știe cu exactitate când a murit ultimul Megalodon, dar noile dovezi sugerează că acest lucru s-a întâmplat cu cel puțin 3,6 milioane de ani în urmă (Natural History Museum). S-a întâmplat cu mult timp în urmă, mai ales dacă luăm în considerare estimarea conform căreia *Homo sapiens* a apărut acum 300 000 de ani. Asta înseamnă că Megalodonul a dispărut cu peste două milioane de ani înainte ca primele ființe umane să meargă pe 2 picioare, să vorbească o limbă comună, să păstreze documente sau chiar să încerce să scrie ceva. Comparând mărimea, comportamentul și obiceiurile alimentare, Megalodonul și Timingila par să fie creaturi similare. Dar ce este așa uimitor sau interesant? *Bhagavatamul* a fost scris în secolul 9, *Ramayana* în secolul 4 î.H.r. și *Mahabarata* între secolele 8 și 4 î.H.r. Cum au știut autorii acestor cărți să prezinte o creatură marină, dimensiunile ei, dieta sa, dacă ea a dispărut acum 1,5 milioane de ani? *Bhagavatam*, *Ramayana* și *Mahabarata* menționează existența Timingilei. De unde au avut aceste informații autorii acestor texte? Când oamenii au apărut pe planetă la 1.250.000 ani

după ce Megalodonul și/sau Timingila au dispărut - cine le-a spus despre aceste creaturi? Dacă nu ar fi existat oameni prezenți pe aceasta planetă între perioada când Megalodonul sau Timingila au dispărut și acum 250.000 de ani, de unde au știut scriitorii textelor Vedice astfel de informații? Școlile tradiționale fundamentate pe înțelepciunea *Bhagavad-Gitei* afirmă că răspunsul este simplu - au existat întotdeauna ființe umane pe această planetă de la începutul creației și cunoașterea despre asemenea entități a fost transmisă pe cale directă de la maeștri la discipoli.

Behemoth și Leviathan - creaturi controversate

Am ales să exemplificăm și o serie de referințe pe care le întâlnim în *Biblie* pentru a completa tabloul creaturilor controversate care fac obiectul criptozoologiei sau a animalelor mai puțin cunoscute. Nu sunt narațiuni vedice, dar cunoașterea lor ne arată un tablou mai complex asupra textelor vechi care fac referință la animale inedite. Sunt și acestea rodul imaginației unui povestitor? Ce este adevărat și ce este fals în aceste descrieri? În Iov 40 și 41, Dumnezeu descrie două creaturi uimitoare pe care unii le-au comparat cu monștrii din mitologia păgână. Behemoth[8] și Leviatan[9] au devenit faimoase. Sunt aceste două animale - așa cum au fost descrise în ultimul discurs al lui Dumnezeu către Iov - doar niște monștri mitologici care ar trebui să fie considerați în aceeași lumină cu acele fiare cucerite de Hercule și Ulise? Sunt ele creaturi fictive ale unei epoci extraordinare în care zeii ar fi condus lumea? Cele două fiare descrise de Dumnezeu în Iov 40-41 sunt animale reale? Mai mult, dacă se poate stabili că aceste creaturi sunt reale, care este identitatea lor? Behemotul este un animal mare menționat în Iov 40:15-24 când Dumnezeu i se adresează lui Iov. Descrierea pe care Dumnezeu o

[8] Behemotul, spre deosebire de Leviatan, se găsește doar în Iov 40:15 și este descris în versetele 15-24.

[9] Numele „leviatan" (liwyatan) apare de șase ori în Biblie (Iov 3:8, 41:1; Psalmii 74:14; 104:26; Isaia 27:1 - de două ori. Excluzând Iov 41, Leviatanul apare o dată cu sensul de monstru marin natural (Psalmii 104:26) și de trei ori cu sensul de creatură mitologică (Iov 3:8; Isaia 27:1; Psalmii 74:14).

face acestui animal se concentrează pe mărimea și forța sa mare în comparație cu micimea și fragilitatea umană a lui Iov. Limbajul modern a preluat descrierea biblică și folosește cuvântul *behemoth* pentru a însemna „orice lucru de mărime sau putere monstruoasă". Modul în care este descris Behemothul în Iov 40 ne arată că acest animal, familiar lui Iov, era o creatură de neoprit, neînfricată. Este imposibil de identificat ce specie este Behemothul, dar știm un lucru: Behemothul este un mâncător de plante (Iov 40:15) care trăiește în apropierea apei (versetele 21-23). Este la el acasă chiar și într-un râu inundat și învolburat (versetul 23). Behemothul este foarte puternic și musculos (versetele 16, 18); de fapt, „este pe primul loc între lucrările lui Dumnezeu" (versetul 19) și numai Creatorul său îl poate stăpâni. Behemothul are o coadă masivă care „se leagănă ca un cedru" (versetul 17). Vânătoarea Behemothului este inutilă, deoarece nu poate fi capturat (versetul 24). Unii comentatori identifică Behemothul cu un hipopotam, un rinocer sau un elefant. Cu toate acestea, descrierea cozii sale asemănătoare cu cea a unui cedru din Iov 40:17 nu se potrivește prea bine cu cozile butucănoase sau asemănătoare unei frânghii ale acestor animale. O altă teorie este că Iov 40 descrie un tip de dinozaur, cum ar fi un diplodocus sau un apatosaurus. Astfel de sauropode erau cele mai mari dintre toate animalele terestre (de zece ori mai grele decât elefanții), erau mâncători de plante, iubitori de mlaștini, aveau cozi ca arborii și puteau fi numiți cu adevărat „regii" animalelor[10].

[10] Există o varietate de opinii cu privire la identificarea lui Behemoth. Unii cred că animalul este un fel de dinozaur: un brontosaur, un diplodocus, un apatozaur sau un sauropod. Dar aceste animale nu se potrivesc cu descrierea habitatului lui Behemoth. Aceste animale sunt prea înalte pentru a fi acoperite de plantele de lotus din apă (versetele 21-22). De exemplu, se crede că planta de lotus este din specia *Ziziphus lotus*. Acest copac creștea în „zona mlăștinoasă, înțesată cu stufărișuri sau pe mal, ascunsă de lotus și plopi" (Hartley 1988, p. 526). Înălțimea acestor copaci este de aproximativ 1,5 m. Acest lucru ne ajută să înțelegem că dinozaurii nu puteau încăpea sub plantele de lotus descrise în versetele 21-22. Adică, brontosaurus avea 8,5 m, diplodocus avea 5 m, apatosaurus avea cel puțin 9 m, iar sauropodul considerat cel mai înalt dintre dinozauri nu poate fi considerat ca fiind bestia respectivă. Hipopotamul iubește apa, motiv pentru care grecii l-au numit „calul de râu". Hipopotamii petrec până la 16 ore pe zi scufundați în râuri și lacuri pentru a-și menține corpurile masive răcoroase sub soarele fierbinte din Africa.

În timp ce Iov căuta să se justifice și să ceară un răspuns de la Dumnezeu cu privire la necazurile sale, Dumnezeu apare (Iov 38:1) și îi vorbește direct lui Iov. În cele din urmă, Dumnezeu este cel care pune întrebări: „Pregătește-te ca un om; te voi întreba și tu îmi vei răspunde" (Iov 38:3). Pentru a-l ajuta pe Iov să-și amintească locul său în lume, Dumnezeu îi arată două dintre cele mai puternice creaturi: Behemotul de pe uscat și Leviathanul din mare. Aceste animale erau incredibil de puternice și înfricoșătoare la vedere. Ele nu erau animale de companie. Mândria și gloria omului păleau în comparație cu puterea teribilă și de neîmblânzit a bestiei și a Leviathanului. Cât de umil este astfel omul în prezența lui Dumnezeu? Nici Iov și nici altcineva nu are dreptul să critice lucrarea lui Dumnezeu. Cel care l-a creat pe Behemoth este demn de reverența, admirația și închinarea noastră, ne arată textul biblic. „Oare cel care se ceartă cu Cel Atotputernic îl va corecta? Să-i răspundă cel care îl acuză pe Dumnezeu!" (Iov 40:2).

Ce ne spun fosilele?

Pentru că descrierea unor creaturi imense cum sunt Timgila sau Makara pare de domeniul fantasticului aducem în atenție noile descoperiri în materie de „mărime". Textele vechi spun că Timingila era mâncătorul de balene. Putem concluziona că Timingila era o creatură enorm de mare. Ei bine, cu toții știm că cei mai mari dinozauri aveau dimensiunile maxime între 10 și 20 de metri. Oare așa să fie? Oasele lor fosilizate se găsesc în multe muzee. Cu toate

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Hipopotamii sunt grațioși în apă, buni înotători și își pot ține respirația sub apă timp de până la cinci minute. La apusul soarelui, hipopotamii părăsesc apa și călătoresc pe uscat pentru a păștuna. Ei pot parcurge 10 km într-o noapte, pe trasee de un singur rând, pentru a consuma aproximativ 80 de kilograme de iarbă (www.nationalgeographic.com/animals/mammals/facts/hippopotamus). Aceste descrieri demonstrează că hipopotamul este atât un animal terestru, cât și unul acvatic și este vegetarian. Este un erbivor. Alte teorii cred că ar putea fi vorba de dinozauri sau cel puțin de fosile ale dinozaurilor. Cum ar fi reușit scriitorii Bibliei, de exemplu David în Psalmul 74, să scrie despre un dinozaur dacă acesta a trăit acum 65 de milioane de ani? Se presupune că existau fosile de dinozauri în vremurile biblice. Ele sunt în roci acum, deci trebuie să fi fost în roci și atunci.

acestea, publicul larg nu își poate forma o idee în ceea ce privește dimensiunile uriașe ale unor specii de dinozauri descoperite recent. Ce poate fi mai mare decât un dinozaur „mare"? Arheologii au descoperit fosile care arată că existau dinozauri cu mult mai mari decât suntem obișnuiți. În perioada Jurasic a existat un dinozaur care măsura pînă la 42 metri lungime numit Supersaurus (Lovelace, Hartman și Wahl 2007). Acesta este mult mai mare decât un Boeing 747. Allosaurus, un dinosaur din aceeași perioadă lung de doar 10 metri, dacă îl comparăm cu Supersaurus, arată ca un șoarece pe lângă un leu. Alt specimen de Supersaurus a primit denumirea de *seismosaurus hallorum* și s-a constatat că avea o lungime de 33 de metri (Foster și Spencer 2006), iar un alt specimen uriaș a fost denumit Titanozaur. Acesta are 22 de metri și a fost găsit în Argentina (Ibiricu, Lamanna și Lacovara 2014). Toate aceste descoperiri științifice ar fi fost clasate drept „subiecte pentru criptozoologie", subiecte pseudoștiințifice, dacă nu ar fi fost găsite oasele acestor monștri. Existența unor animale ca Timingila și Leviatan nu ar trebuie exclusă din start doar pentru că nu s-au găsit fosilele acestor animale. În momentul în care revoluția științifică sau marile schimbări de paradigmă din cunoaștere vor influența toate disciplinele vom începe să rescriem istoria așa cum în acest an, odată cu lansarea telescopului James Webb, astronomii încep să rescrie evoluția universului.

„Fosile vii"

Cartea pe care o propun Coleman și Clark, *Cryptozoology A To Z: The Encyclopedia of Loch Monsters, Sasquatch, Chupacabras, and Other Authentic Mysteries of Nature* (1999), ne aduce în atenție o serie de animale inedite. Unele dintre acestea sunt creaturi mai apropiate de zilele noastre, unele dispărute, altele despre care s-a crezut că sunt dispărute („fosile vii"): elefantul pitic, Kraken - calmarul gigantic, Moa – o pasăre mare care nu zboară, Mokele-Mbembe – un dinozaur supraviețuitor, Okapi o creatură care seamănă și cu o zebră și cu o

girafă, Rechinul cu franjuri – un rechin vechi de 80 de milioane de ani cu cap de șarpe etc. Iată două din lunga listă a criptidelor:

1) Kraken – calmarul gigant

Calmarul gigant (*Architeuthis dux*) este un prădător misterios de mare adâncime, cu ochi de mărimea unei mingi de baschet și tentacule care se pot întinde până la 10 metri lungime. Calmarul uriaș este una dintre cele mai mari nevertebrate din lume și aparține unui grup străvechi de moluște numit cefalopode, care include, de asemenea, caracatițele, sepiile și nautilii. Observarea calmarilor uriași este probabil ceea ce a inspirat poveștile despre Kraken care distruge navele din mitologia scandinavă. Adevărații calmari uriași trăiesc la adâncimi de cel puțin 900 m sub suprafața oceanului și nu sunt cunoscuți ca atacând navele. Oamenii de știință mai au încă multe de învățat despre viața calmarului uriaș. Doar de două ori cercetătorii au reușit să surprindă imagini cu acești giganți evazivi în mediul lor natural - de ambele ori în ultimii 10 ani, a relatat recent Live Science. Experții încă nu sunt siguri câți calmari giganți există sau câte specii diferite pot exista, potrivit Muzeului American de Istorie Naturală din New York. Calmarul uriaș este masiv, dar încă mai are concurență pentru titlul de cel mai mare cefalopod oceanic. Calmarul colosal (*Mesonychoteuthis hamiltoni*) trăiește în Oceanul Sudic la adâncimi de cel puțin 1.000 m și are un corp mai mare și mai greu decât calmarul uriaș, potrivit Muzeului din Noua Zeelandă Te Papa Tongarewa (https://www.tepapa.govt.nz/search/Mesonychoteuthis%20hamiltoni). Unul dintre puținele exemplare cunoscute de calmar colosal, păstrat la muzeul Te Papa, cântărește 450 de kilograme, în timp ce se crede că calmarul gigant cântărește doar până la aproximativ 275 kg. Calmarul colosal poate atinge lungimi de 45 de picioare (14 m), dar calmarul gigant poate crește și mai mult datorită celor două tentacule alungite, ajungând la 66 de picioare, potrivit Smithsonian (https://www.si.edu/search/all?edan_q=Mesonychoteuthis%20hamiltoni&).

2) Mokele-Mbembe – un dinozaur supraviețuitor

Toată lumea știe că dinozaurii au dispărut cu ceva timp în urmă - de fapt, cu aproximativ 65 de milioane de ani în urmă. Masivi, puternici și înspăimântători, aceștia au fost populari ani de zile, apărând în nenumărate cărți și filme. Dar ce s-ar întâmpla dacă ar exista încă? Ideea unor dinozauri încă în viață a captat imaginația publicului de mai bine de un secol. Sir Arthur Conan Doyle, creatorul lui Sherlock Holmes, a publicat în 1912 un roman intitulat „Lumea pierdută", a cărui acțiune se petrece în jungla îndepărtată din Venezuela, unde dinozaurii încă supraviețuiesc în timpurile moderne. Filmele și cărțile de supraviețuire a dinozaurilor, cum ar fi „Jurassic Park", au fost inspirate de viziunea lui Conan Doyle. Regiunea este locul unde se presupune că trăiește Mokele-Mbembe, o creatură amfibie asemănătoare cu un dinozaur, despre care se spune că ar avea până la 35 de metri lungime, cu o piele gri-maronie și un gât lung și flexibil. Potrivit legendelor, trăiește în peșteri pe care le sapă în malurile râurilor și se hrănește cu elefanți, hipopotami și crocodili.

Concluzii

Criptozoologia este o mișcare științifică onestă pe care ar trebui să o luăm în considerare sau să o respingem? Se poate spune că cercetătorii implicați în criptozoologie sunt lipsiți de spirit critic? Studiind literatura specifică criptozoologiei devine confuz unde începe și unde se termină această disciplină. Există numeroase cărți și articole publicate care susțin o abordare mai credulă și mai puțin sceptică a relatărilor despre animale misterioase decât am putea considera acceptabilă pentru știință, dar există și un număr mare de articole care susțin sau folosesc scepticismul. Cu toate acestea, analizând textele străvechi despre creaturi inedite nu se poate să nu apară o interpretare rațională de tipul: „Aceste creaturi sunt descrise de mai multe lucrări. Sunt doar creații imaginare?" Dincolo de necesitatea unor dovezi „mai științifice", descrierea lor poate face obiectul unor dezbateri interesante despre astfel de texte. În prezent,

există numeroase cercetări care încearcă să demonstreze veridicitatea unor evenimente descrise de astfel de lucrări, inclusiv în *Biblie*. Încercăm astfel să ne poziționăm obiectiv față de un astfel de subiect controversat:

1. Criptozoologia reprezintă un domeniu de studiu al existenței și identificării potențialelor specii de animale sau creaturi neobișnuite și neconfirmate științific, cunoscute sub numele de criptide.
2. Criptozoologia se bazează pe mărturii oculare și dovezi circumstanțiale pentru a căuta informații despre criptidele presupuse. Cu toate acestea, lipsa de dovezi concrete și consistente înregistrate a pus sub semnul întrebării validitatea științifică a acestui domeniu (Radford 2006).
3. Criptozoologia este adesea criticată de comunitatea științifică, care susține că lipsa de dovezi solide și metodologie științifică riguroasă o plasează în sfera pseudoștiinței (Loxton și Prothero 2013).
4. În ciuda scepticismului științific, criptozoologia a jucat un rol important în descoperirea unor specii noi și rare, care au fost considerate criptide înainte de a fi validate științific. Un exemplu notabil este coelacantul, o specie de pește care a fost considerată dispărută de milioane de ani până când au fost descoperite exemplare vii în anii 1930 (Shuker 2016).
5. Deși unele criptide pot fi fundamentate pe mituri și legende populare, criptozoologia își propune să le abordeze într-un mod științific și să le investigheze prin metode și tehnici riguroase (Coleman și Clark 1999).
6. Criptozoologia rămâne un subiect fascinant pentru mulți oameni, dar necesită o abordare științifică riguroasă pentru a fi luată în considerare de comunitatea științifică *mainstream*. (Coleman 2012).

Studiul animalelor necunoscute menționate în *Biblie* sau în textele vedice poate fi o provocare, deoarece aceste scrieri nu sunt în mod direct orientate spre descrierea sau clasificarea speciilor

biologice. Cu toate acestea, există mai multe modalități de studiu pe care le putem aborda pentru a explora aceste teme:

- Studiul literar și teologic. Se poate începe prin a studia pasajele respective din *Biblie* sau din textele vedice care menționează animalele necunoscute. Se pot aprofunda înțelesurile și contextele culturale și teologice în care aceste pasaje au fost scrise și se pot consulta comentariile și interpretările academice ale acestor texte pentru a obține perspectiva specialiștilor.
- Analiza simbolismului și înțelesurilor alegorice. Multe animale menționate în texte religioase pot avea înțelesuri simbolice și alegorice. Explorarea acestor simboluri și semnificații ne poate ghida spre înțelegerea metafizică sau morală asociată cu astfel de animale.
- Cercetare antropologică și arheologică. Dacă este posibil, pot fi studiate culturile și societățile antice care au produs aceste texte. În acest sens, pot fi identificate aspectele animalelor necunoscute din perspectiva credințelor, practicilor și mitologiei acestor societăți.
- Interpretarea figurativă și alegorică. Abordarea animalelor necunoscute din punct de vedere figurativ sau alegoric din perspectiva posibilității de a reprezenta trăsături umane, lupte interioare sau chiar forțe cosmice.
- Comunicarea interdisciplinară sau multidisciplinară cu specialiștii. Dezbaterile cu teologi, cercetători în studii religioase, antropologi sau alți specialiști care au expertiză în interpretarea textelor religioase și mitologice pot oferi perspective și cunoștințe suplimentare pentru a înțelege mai bine animalele necunoscute menționate în aceste texte.

Este important să abordăm studiul animalelor necunoscute din perspectiva respectului față de tradițiile și credințele religioase ale diferitelor comunități. Acest respect față de astfel de scrieri considerate sacre în tradițiile din care provin ne deschide poarta spre teme profunde și spre înțelesuri neașteptate.

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Evolution and optimalism

Felicia Ceaușu*

Abstract. *Dennett admits that intentional strategy is in tandem with the program called adaptationism in the theory of evolution, which places as its main idea that natural selection is an "optimizing" agent. One of the best illustrations of the use of these models of optimism is in the "evolutionary game theory" proposed by authors such as John Maynard-Smith, who seeks to apply to individual and group behavior schemes of individual explanation of game theory and decision.*

Daniel Dennett, starting from reflections on the brain and consciousness, wrote a synthesis work considered one of the best presentations of strong Darwinism. For him, Darwin's central idea is that evolution is an algorithm, a blind, mechanical process, which Darwin called natural selection. Dennett places great emphasis on the idea of an algorithm, arguing that it does simple things, but in nature, all the features we observe were created by the Darwinian algorithm. Enthusiastic about the view that the simple could create the complex and that all forms of nature are the result of a simple algorithm that no one created, Dennett compares what he calls "Darwin's dangerous idea to a universal acid." As he dissolves all the materials he encounters, Darwin's idea dissolves all the concepts he encounters. Among them are Platonic ideas or "Aristotelian essences." Here, as in Dawkins, is a gradualist conception of evolution, in which one subtly shifts from one species to another, and where a species is an aggregate of very little different individuals as carriers of constantly evolving genomes.

It is important to understand why "adaptationist" reasoning is so essential to strong Darwinians. For them, natural selection is extremely effective, being able to cause extraordinary adaptations based on mutations made by chance, but which are beneficial for the body in certain contexts. In conclusion, most of the characteristics of a living being must be the result of adaptations.

Keywords: evolution, optimalism, adaptationist, Darwinism, natural selection

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The rules of communication in animals and humans

For the biologist Edward O. Wilson (Cf. Dinu 1997, 8) communication is "an action of an organism, not of a cell, that alters the likely behavior patterns of another organism or of another cell in an adaptive manner for one or both participants". But this definition will displease sociologists and psychologists, in whose view, communication is closely related to the existence of a subject that circulates information. But even if we limit ourselves to interpersonal communication a definition of communication is difficult to elaborate. Divergences of opinion appear on the issue of the intentionality of communication. The theories of communication are divided into two large classes, depending on how they consider communication to be strictly intentional, a conscious act, or whether they consider it equally unintentional and an unconscious act. The first class is illustrated by the semiology of communication, developed (especially in the francophone area) by semioticians such as E. Buyssens, J. Martinet, G. Mounine, and L. Prieto. All of them claim that we are not entitled to speak of communication except in the case of signs, of deliberate acts, carried out for a precise purpose; the study of indices, of acts of unconscious human communication, is reserved in this case for the semiology of signification.

The other class of theories is represented by the theories of Palo Alto School, which postulates that "non-communication is impossible" as long as our facial expressions, gestures, appearance, clothing and even our silences reveal to others the social condition, temperament, the habits, mood, attitudes or emotions we feel. It starts from the idea previously stated by Ch. Morris (Cf. Cucoş 1992, 115) that any human behavior can be signified, its sequences becoming "behavior signs" and therefore, have communicative value.

The Palo Alto school, through its representatives (Paul Watzlawich, George Bateson, E. T. Hall, Erwin Goffman, R. L. Birdwhistell) complained about the insufficiency of the mathematical, linear model of communication, and developed

another, more efficient model, metaphorically called "of the orchestra". Communication is placed in the category of relational phenomena and is approached through the prism of social behavior theories. It starts from the idea that any behavior is potentially significant and can modify the interaction data. Face-to-face communication was researched, real interactions were observed, and not communication out of context, laboratory experimental setups. "Activity or inactivity, speech or silence, everything has the value of a message. Such behaviors influence others, and others in turn cannot help but react to these communications and because of this they themselves communicate. It must be understood that the mere fact of speaking or not attracting someone's attention does not constitute an exception to what we stand for." (Watzlawik, Helmik and Jackson 1972, 46). Postulating the impossibility of non-communication, the representatives of the school dissociate communication from speech. Within the communicative phenomenon, the verbal represents only one part, the rest being represented by paraverbal, gestural, etc.

In the act of communication, the roles of sender / receiver are simultaneously shared by the speakers, as are the messages. The research undertaken by the representatives of this school started from the study of situations in which communication suffered from disturbances or blockages; some important principles of human communication were thus elaborated. In support of the first principle, "non-communication is impossible", the school representatives discuss silence. Silence can be seen not as a lack of meaning, but as a lack of some parts of the signifier, or of the whole signifier, more precisely of their obvious materiality. Beyond their margin of ambiguity, the "silences" can be coded, and the decryption of their meanings is done by mobilizing contextual elements that acquire the value of indices.

There are even typologies of silence. Hesitation consists of a type of silence and manifests itself through a variety of pauses with different functions. Pauses can be filled with sounds like "um", "ah" or "ă...", with repetitions, etc. Covered pauses have often been

considered dysfunctions or speech disorders, and this type of speech gaps has been associated with anxiety and other phenomena. In fact, most of the hesitations are related to the grammatical encoding-decoding process.

The first principle of the Paloaltist school cannot be automatically "transferred" to animal communication, due to the fact that we do not recognize, in principle, the existence of certain beliefs or attitudes in animals (not even in anthropoid monkeys).

The second axiom highlighted by the Paloaltist school is the one according to which communication takes place on two levels: informational and relational, the second providing indications for interpreting the content of the first. Speakers attach great importance to the relational plan, and if informational misunderstandings can be resolved by calling on sources, those regarding the relationship often generate conflicts. The third axiom defines communication as "a continuous process that cannot be treated in terms of cause / effect, stimulus / response". The messages are interconnected in a complex manner, and an intertextuality of communications appears. The fourth axiom postulates: "communication takes either a digital or analog form". The digital form of communication shows us that it operates with a binary logic, and communication is analog when it operates with a continuous infinity of values. The intonation with which the words are pronounced can vary continuously, from which we can conclude that the linguistic mode of communication is a digital one, and the paralinguistic communication has an analogical character. Also, the informational component of communication is mainly transmitted digitally, while the relational one is transmitted by analog means.

The fourth axiom postulates the irreversibility of communication: any act of communication is irreversible in the sense that, once produced, it triggers a mechanism that cannot be reversed. Acts of communication have the ability to influence us, we ourselves are the result of summing up over time the effects of constructive messages or not. The fifth axiom shows us that the act of communication "presupposes the balance of power and involves

symmetrical or complementary transactions". Full equality of communication participants is a condition of effective communication, but genuine equality is impossible to achieve. The sixth axiom revealed by the Paloaltist school states that the act of communication involves processes of adjustment and accommodation. The meaning of words exists only in the mind of the speaker, and the sound signifier can evoke this meaning to the receiver only to the extent that the receiver already possesses it. Because speakers have different life experiences, and different linguistic experiences, the meanings they give to words do not coincide. In order to achieve understanding, this adjustment and accommodation, a negotiation of meanings, is necessary.

These axioms come from the observation of communication phenomena located at very varied levels, they are heterogeneous, but their unity comes from their pragmatic importance. This, in turn, is based on the interpersonal connotations it advances.

We notice that the sequence of axioms two-six can be taken over, with changes primarily related to the signal system, in the vegetable and animal worlds as well. Although it "dilated" the relational dimension of communication, and the social content of the interaction, to the detriment of the sociological one, the merit of this school is indisputable. S. Moscovici introduces new values through the interactionist perspective on communication. The perspective on the functions of language is nuanced. It will have both creative functions, for affective adaptation of the speakers, but also functions intended to regulate the interaction (functions of adaptation to the mutual representations of the speakers). In this view, the classical linear model of communication theory is no longer relevant. Communication is no longer just an exchange of information. Communication is a relationship between interlocutors, information is subject to the projections and representations of the speakers, the social rules that "regulate" the relationship and the surrounding social universe.

About the intelligence of animals

The truth is that many of the amazing adaptations of the animal world defy human understanding. Once upon a time, we expected the basic part of life to be very simple. However, these expectations were dashed. Vision, movement, and other biological functions have proven to be as sophisticated as television cameras or automobiles. Science has made huge strides in understanding how the chemistry of life works, but the elegance and complexity of biological systems at the molecular level has paralyzed any attempt by science to explain their origins. In other words, we humans have our limits, but Nature is a true genius, in whose work we can look for inspiration. We can shamelessly plagiarize his ideas, rudimentary transposing them into various mechanical tricks. Did you notice that the helicopter looks like a dragonfly? Or that the invisible bomber mimics a chameleon?

Human architects are no match for termites. Compared to a termite mound, a skyscraper is decidedly substandard. Termite mounds are up to 7.5 meters high. For humans, the equivalent would be a skyscraper 6 miles tall. Some mounds last almost a century. The secret of durability is the unique construction material: soil mixed with termite saliva.

Infrasound technology detects Earth movements, warning of seismic activity and thus saving thousands of lives. But for an elephant, this mechanism is something natural. Ironically, elephants were once thought to have poor hearing. With such big ears, it would have been said that nature made a bad joke. In fact, elephants use advanced sound structures that allow them to communicate via infrasound over long distances. Not only do elephants hear and, as many researchers believe, even feel infrasound, they also emit it. In addition to the usual trumpet sounds perceptible to the human ear, they also have a second, secret language used for long-distance communication.

In terms of skill and ingenuity, you don't even compare to the incredible Hawaiian trapfish. When hunting the fish it feeds on, the

trapfish stands still, except for its dorsal fin. Thanks to a skillful natural design, this fin resembles a small and helpless fish with a mouth and eyes. Then follows a skillful dance, in which the trapfish moves its fin so that it seems that the "fish" closes and opens its mouth. The fin itself becomes transparent, except for the upper extremity, which turns red to complement the false image of another fish. To the surrounding fish, the trap looks like easy prey. Here, however, the approaching predator finds himself caught between the jaws of the coveted prey and becomes a prey himself.

On the scale of evolution, the trapfish is incredibly evolved. This sophisticated way of attracting its prey is guided by an extraordinarily complex "programming" system, carried out at the molecular level, which far surpasses the most efficient computer program.

The dolphin is considered a very intelligent animal, the next in order after man. The dolphin can not only imitate the signs made by humans but can also integrate them into a wider context.

For example, if the gestures made by the trainer are gestures that suggest jumping followed by greeting, then the dolphin understands that it must jump and then greet the audience. However, although dolphins seem to easily understand her gestures, they do not seem to have the ability to associate an action with a symbolic message.

In general, by intelligence we mean the faculty attributed especially to man, through which he is able to understand easily, to perceive the essential, to solve new situations or problems.

So, can we talk about the intelligence of animals, especially dolphins? Although we know what we generally mean by intelligence, an exact definition of it is difficult to achieve. Such problems arise if one tries to define it in such a way as to support valid comparisons between different species of mammals.

It is widely believed that dolphins are very intelligent. Probably the main argument in support of this theory is the size and complex surface of their brain. The idea that brain size and brain surface features were related to intelligence was widely held among

neuroanatomists throughout the last century, but received a major blow when it was discovered that the brains of several famous people (who had donated their bodies to science) did not present special characteristics and were, in fact, disappointingly common.

Studies carried out using various techniques on the internal structure of some well-preserved dolphin brains have led to the conclusion that these animals did not go through the last phase of brain evolution, characteristic of terrestrial mammals. Although the brain of dolphins did not follow the course of terrestrial mammalian evolution, still it present all the conservative characteristics found in primitive terrestrial forms.

Evidence of dolphin intelligence:

- mirror tests: the experiment was carried out on two captive dolphins in a Dolphinarium near New York and led to the conclusion that dolphins possess the ability to recognize themselves in mirrors, a quality discovered so far only in humans and monkeys. Moreover, it was observed that if they were marked with black ink on any part of the body, they immediately turned to the mirror and admired themselves, even expressing their disagreement. But it seems that they remained indifferent to the spots on each other's bodies.
- a "trash test": several captive dolphins were trained to bring food scraps, trash and other objects that don't fit in their pool to the trainer, receiving a reward in return. On a day when he skipped the training routine, the trainer found that the dolphin kept bringing him scraps from the pool to receive his "prize". It was then discovered that the dolphin had stored all its waste in a bag stuck to a wall of the pool and brought a piece each time. Moreover, he was shredding them in order to be rewarded as much as possible by the trainer. This behavior is extremely interesting because it shows that the dolphins were smart enough to understand that they were getting just as much for a large piece as they were for a small one, so why not just take small pieces to ensure their supplement to eat?

– clever hunters: dolphins use a wide variety of hunting styles adapted to each species of fish and invertebrates. The technique of hitting the fish with the tail seems to be a learned habit and not an instinct. An extremely interesting example is that of two captive dolphins trying to catch a pattern hidden in a crevice in their pool. One of the dolphins captured a scorpion fish and, holding it in his mouth, stung the pattern with the poisonous sting of the scorpion fish. The fish came out of hiding precisely to fall prey to the other dolphin that was waiting for it on the opposite side.

Communication is also a proof of the high level of intelligence, dolphins using two types of sounds: vocalizations and so-called "echoes".

During sleep, the dolphin's brain is half active, because breathing is not involuntary - like in humans - but voluntary, that is, the dolphin "thinks" to breathe, which we do instinctively, naturally.

There are clear similarities between certain animal behaviors and certain human behaviors. Hence the idea that there could have been an evolution from the animal brain to the human one.

The fundamental difference between the animal brain and the human brain is the facility that only the human brain has to build and operate symbolic models, something impossible for the animal brain to achieve. The similarity is that both the human brain and the animal brain can construct and operate image models. The construction and operation of purely symbolic models is the highest level reached by the human brain (this is at least the 4th level of evolution). Compared to the highest level reached by animals, the superiority of the human brain is absolutely immense.

D. Dennett's intentional strategy

Dennett's central idea regarding the "intentional strategy" is the same as that of the "verificationist" approach: beings have intentional states only in proportion to the normal properties of states that we can attribute to them. In other words, the beliefs of a

being are those that they should have, if it is assumed that it is rational, and its biological conditions are normal (Haugeland 1978, 163). It's a strategy that Dennett prescribes not only for humans, but also for artificial intelligence systems and animals.

How do these attributions of intentionality work? Ideally or optimally. For example, if we have reason to attribute to a being X the belief that p, then we will prescribe that:

If X believes that p, if X is rational, and if p implies q, then X would must believe that q.

To attribute this kind of belief to X does not imply that X is supposed to possess the logical rule modus ponens; or that he follows it in some sense. This consists only in prescribing, if we attribute the belief p, that the being also believes that q. If our empirical data allow us to assign the belief that q (on independent grounds), then our prediction will be confirmed. As Dennett (1978) put it: the "intentional posture" consists of making a "loan" from the system's intelligence, a loan that is repaid or not, as the case may be, depending on the results that arrive later. How does this strategy apply to animals? As in humans, it is a detective strategy. For chimpanzees, we have the laboratory experiments of Premack and Woodruff (1978, 532-535), which allow to test the existence of this kind of second-order capacities. If chimpanzees have second- or third-order intentional states, then they must be capable of tricks (misleading).

Premack and Woodruff put the female chimpanzee Sadie in the following situation: she places food in two boxes outside her door. Then a "cooperative" or "competitive" trainer enters the room where Sadie is. She learns that she has to point to the box containing food in order to get it. The "cooperative" trainer shares the food with her, the "competitive" trainer keeps it for himself. Will Sadie show the empty box to the latter? If so, one might say that chimpanzees have the concept of belief, and that they have something like a "theory of mind." We assume that one would install an empty transparent box and a box with food in an "opaque" box; if the "competitive" trainer walks in, and Sadie shows the opaque box, this demonstrates that

she lacks the subtlety necessary to mislead her trainer. That would certainly reveal the stupidity. Dennett's idea is that intentional posture is a kind of "black box" to characterize observable cognitive and behavioral competencies, which helps us test as many of these competencies as possible. But the main conclusion is that, since there is no a priori reason to forbid attributing to animals, at least methodologically and heuristically, intentional states such as beliefs, can also belong to the animal world.

Daniel Dennett's Intentional Systems Theory is primarily an analysis of the meanings of "mentalist" terms such as: belief, desire, expectation, decision, and intention, popular psychology terms used in explaining, interpreting, predicting the behavior of other human beings, animals or artifacts such as robots or computers. Ordinarily, we ascribe „mind" to things we interpret as such, and this gives rise to a host of questions about the conditions under which a thing can be said to have „mind", or to possess beliefs, desires, or other mental states. According to this theory, such a set of questions can best be answered by analyzing the logical assumptions and methods of attributive practices, when we adopt the intentional stance about something. Everything that is easy and fully predictable through the intentional stance is, by definition, an intentional system. Intentional stance can be defined as the strategy of interpreting the behavior of an entity (person, animal, artifact), treating it as if it were a rational agent that governs the choices it makes, by taking into account its "beliefs" and "desires".

The distinctive features of the intentional stance can be better seen in opposition to two more primitive prediction stances, the physical stance and the projective stance. The physical stance includes the standard methods of the physical sciences and takes into account the physical constitution of things to construct predictions. For things that are not even alive, the physical stance is the only valid strategy, although there are exceptions. Every physical thing, designed, organic or not, is an object subject to the laws of physics, which in principle can be explained and provided for the physical state.

Predictions of the projective state are riskier than predictions of the physical state, because of the external claims that must be considered: that an entity would be projected as I suppose it would be, and that it would operate without dysfunction, in accordance with the assigned prediction.

If we admit, according to Dennett (1987, VII), that "a being's beliefs are those which it ought to have given its evolutionary capacities and needs", does this not place the intentional instance in a biological perspective, and which is further along the lines of a very familiar biological thesis?

Dennett (1987, VII) admits that the intentional strategy makes a tandem with the program called adaptationism in the theory of evolution, which places as its main idea that natural selection is an "optimizing" agent. One of the best illustrations of the use of these models of optimality is in the "evolutionary game theory" proposed by authors such as John Maynard-Smith, who seek to apply to the behavior of groups and species individual explanatory schemes of game and decision theory.

Daniel Dennett, starting from reflections on the brain and consciousness, wrote a work of synthesis considered one of the best presentations of strong Darwinism. For him, Darwin's central idea is that evolution is an algorithm, a blind, mechanical process, which Darwin called natural selection. Dennett insists a lot on the idea of the algorithm, claiming that it does simple things, but in nature, all the features we observe were created by the Darwinian algorithm. Enthusiastic about this view that the simple could create the complex and that all forms of nature are the result of a simple algorithm that no one created, Dennett compares what he calls "Darwin's dangerous idea to a universal acid". (Dennett 1995, 71) As it dissolves all the materials it meets, Darwin's idea dissolves all the concepts it meets, among them Platonic ideas or "Aristotelian essences". One can find here, as in Dawkins, a gradualist conception of evolution, in which one subtly moves from one species to another, and where a species is an aggregate of very little different individuals as carriers of genomes in constant evolution.

Dennett has such confidence in the power of natural selection that he does not hesitate to write: "When scientists are confronted with what appears to be a strong objection to the hypothesis of natural selection, they are led to reason thus: I cannot yet imagine how it can be rejected this objection or resolve this difficulty, as I cannot imagine how any other cause could have these effects than that of natural selection, I will tend to say that the objection is empty; one way or another, natural selection must be sufficient in explaining these effects" (Dennett 1995, 54).

Dennett is aware of the enormity of what he has just written. He justifies himself by saying that natural selection has revealed so many challenges, brought so many successes, that "it is reasonable to believe that an idea that could ultimately turn out to be false, could succumb to such an obstinate campaign of critics. This is not a conclusive demonstration, of course, just a very compelling reason" (Dennett 1995, 54).

Another central idea in Dennett is adaptationism. "Adaptationist reasoning is not an option for us to choose: it is the heart and soul of evolutionary biology. Even if it can be improved and refined, to move it from its central position in biology is not only to imagine the downfall of Darwinism, but also to confront biochemistry and all social sciences, such as medicine" (Dennett 1995, 229). He compares adaptationism to "retro-engineering": when an engineer dismantles a competitor's product, he asks himself questions like: Why did he use this type of alloy in this place? And so on. Dennett admits that sometimes there is no answer to the question, and it is only by chance that one solution or another is chosen. But in the vast majority of cases there is an answer. In the same way, when we look at the different characteristics of a human being, in the vast majority of cases, they are not there by chance, they are adaptations of the organism to certain living conditions of the ancestors.

It is important to understand why "adaptationist" reasoning is so essential to strong Darwinians. For them, natural selection is extremely effective, being able to cause extraordinary adaptations

starting from mutations made by chance, but which are shown to be advantageous for the body in certain contexts.

In conclusion, most of the characteristics of a living being must be the result of adaptations. Dennett coined the concepts of "hooks" and "celestial hooks". Cranes are engines allowing the transport of objects from one point to another. In the evolutionary history of life, these would be physical mechanisms allowing species to overcome important "evolutionary distances" that they could not overcome by normal mechanisms.

"Celestial hooks" are mystical, miraculous, and impossible engines suspended in the void. Dennett constantly accuses non-Darwinians and those with a non-reductionist view of consciousness of being in search of "celestial hooks".

Finally, as far as religions are concerned, Darwin's dangerous idea threatens to be as toxic to them as modern civilization is to large mammals like elephants, for it is a universal acid capable of destroying everything. Elephants must be saved, but not at any cost. In the same way, religions must be saved, but not by accepting absolutely everything from them. He does not agree with the forced excision of women and the secondary status that women have in the Roman Catholic religions, Mormonism or Islam (Dennett 1995, 597).

The same logic must ban the teaching of creationism in private Christian schools in the United States (Dennett is subtle enough not to ban criticism of Darwinism in education, although he seems not too far off). The best place for religions is at the zoo: "What then is to be said of all the glories of our religious traditions? They must be preserved, just as languages, art, costumes, rituals, monuments must be preserved. They are increasingly considered today as second-rate shelters for endangered species, but at least these shelters exist and what they preserve is irreplaceable […]. What will happen, one may ask, if religion is preserved in cultural zoos, in libraries, concerts and demonstrations? This is already happening: tourists gather to witness the tribal dances of the American Indians and for the spectators it is folklore, a religious ceremony that must be treated with respect" (Dennett 1995, 601).

To the extent that adaptationism thus remains confined to the status of a heuristic and methodological rule of interpretation of living systems, there is nothing to object to, as long as the strategy remains fecund, and as long as the possibility remains to "download" the optimal features in terms of ultimate causal explanations (which is not always possible, especially with regard to the "neutralist" theory of evolution, according to which natural selection is only one of the factors of evolution).

In this sense, Dennett argues, there is nothing mysterious about the fact that we can attribute "motives" or "intentions" to nature just as we can to our fellow humans. In the two cases, our attributions of "motivations" or "intentions", and of mental contents in general, are indeterminate subjects: nature's motivations are "floating" and we can never be sure that we have correctly read the mind of Lady Nature (cf. Dennett), no more than, as Quine's translation indeterminacy thesis taught us, we cannot be sure of being able to read determinate contents into the minds of our peers. In Dennett's terms (Dennett 1987, VIII), intentionality is "extrinsic" and not "intrinsic", it is "derived" in relation to the "intentional and interpretative posture". There is no such thing as "primitive and literary" intentionality, because any form of intentionality is the product of interpretation. Here lies Dennett's official position, which often leads to the characterization of his position as "instrumentalist" on the question of intentionality and beliefs. But this official theory is contested by another, which appears clearly in the same essay by Dennett (1988, 229), *Evolution, error and intentionality*: our intentionality is derived by reference to a primitive and "original" intentionality, which is that of Nature, and which is contained in our genes: "We can call our intentionality real, but, we must admit, that it is derived from the intentionality of natural selection, which is just as real - but, which is less easy to spot, due to the great difference in temporal and spatial scale that it has in relation to us" (Dennett 1988, 117).

How is it possible to say that nature has intentions, if natural selection is a blind process, which excludes the possibility of such

motivations? Because, Dennett tells us, we are able to explain why this or that process evolved in a certain way and "succeeded". But, the goal, the goal in itself, has not been determined. There is a paradox here, because Dennett states that the intentionality of Mrs. Nature is primitive, original and real, and on the other hand that she is non-intentional, relative to our intentions, indeterminate and in this sense non-real. Many consider this to be a Dennett dilemma.

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Symbolic Ontologies in Crisis Biophotography

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Abstract. *Biography poses some risks of anthropocentrism in terms of human-animal representation, in so far as biophotography defines itself as a biopolitical discourse, and this feature is obvious in crisis biophotography, specifically when humans and animals are under the same state of emergency. In the case of a state of emergency, the mechanisms of representation and interpretation usually operate with a series of symbolic reductions that may have collateral effects in terms of overworking the meanings brought into play. Furthermore, under such circumstances, the symbolic action of representing the anthrozoological relationship faces the risk of objectifying the animal. Based on these issues, I am more concerned with bringing into discussion several ontological, metaphysical and biopolitical coordinates of these risks. Accordingly, and considering these coordinates, I think the possible solution to these anthropocentrism risks is provided by systemic critical thinking. Anthrozoology should embrace a systemic approach, particularly in these types of cases that are highly exposed to anthropocentrism risks. Technically speaking, as hermeneutic support for this endeavour, I will employ digital images available on social media related to the Ukrainian refugee crisis after Russia invaded Ukraine.*

Keywords: Biophotography, state of emergency, anthropological crisis, Ukraine, war, refugees, human-animal, anthropocentrism, systemic thinking, symbolic mechanisms

Everything is or can be a language

The idea of language having the very power to structure any world, system, or ontology is not quite recent. Such an idea brings about effects into the world of our thinking, at least from the time of the famous debates carried out in the Middle Ages and known as the quarrel of the universals. It even emerges straight in the latest traditions of thinking. I see it again in Walter Benjamin, for instance, when he claims that every manifestation of human life can be

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regarded as a language, and he goes further: "There is no occurrence or thing, either in the living or nonliving world, that does not in some way partake of language".

Burdened thus with innumerous interpretative challenges, such an idea triggers at least two speculative effects in photography within an anthrozoological context, or differently put, about biophotography.

One first effect is related to the kaleidoscopic function of discourses which becomes visible especially when we consider discourses as symbolic representations of the real. This effect commonly suggests the idea of simulation and dissimulation as well, and it is generated by the symbolic structuring mechanisms of the representations of the real. The kaleidoscopic function of biophotography becomes apparent mostly when the decision of representation relies particularly on the strategy of symbolic overloading since, in these cases, we are dealing with a rise in symbolic consumption. Accordingly, the intention of communication is doubled by this intention of symbolization which carries its baggage of risks. In these contexts exaggerations may occur, as well as deviations of meaning, and ideological manipulations.

I will briefly refer to such situations in the first part of this paper, by contextualising this matter in what may be very well named the symbolic ontology of crisis biophotography.

A second effect is related to the semasiological function assumed by any ontology at the very moment of its establishment. Accordingly, the idea of the world as text, as overturned representation (regarding the crisis biophotography and its nature of symbolic ontology) will be further explored in the second part of this endeavour. However, first and foremost, I should make a series of technical clarifications about photography regarded as an environment of expression and representation. It is quite customary that photography, be it street, wildlife, or landscape photography, stays in the area of photography. In other words, it stays quiet, represented, and understood primarily as photography and not as a speculative territory where we call into question representations,

practices, attitudes, ways of thinking, and ideologies as well. That is why I believe that I should take a minimum precaution, at least in the beginning, and say that I will not speak about photographs and the photographic meaning of images. My speculative exercise includes a transdiscursive action, and, based on it, I will discuss images and their ideological meaning. Photography is merely the imagistic reality, and I relate to it because it has grown into a language, culture, system, and ecosystem within the broader issue of biorepresentations. Particularly because I use this operational concept provided by the term biophotography developed by me in 2020 when I felt the urge to draw some limits of the photographic discourse in the corpus of biopolitics.

Nevertheless, let us proceed with the two functions I intend to bring into the discussion in the particular case of biophotography, namely the kaleidoscopic and semasiological functions.

As previously mentioned, a first speculative effect is delivered by a matter that is rather familiar and comes in different forms, through various ways. This concerns the power of language to translate anything, its capacity to talk about anything, transpose anything as some magic herb, the milkweed. Further, its symbolic energy is hardly restrained by any limits. Thus, here we are dealing with the absolute power of representation generated by the development of any language and its constitution into a discourse. This is particularly considered when we are addressing the function of simulation and dissimulation held by language in dealing with its references. Language endows the representative discourse with the power of mirroring, memorising, and even simulating the reality to which it refers. This kaleidoscopic function is also active when the crisis biophotography is concerned.

The semasiological condition of the bioworlds-like systems

As I have already mentioned, biophotography as discourse fuses with the semasiological nature of the bioworlds-like systems. A system becomes a bioworld in so far as it is constituted as a local

ontology (a particular one) where biopolitics has the role of structuring and substantiating bio discourses and bio representations. Accordingly, any bioworld, at an ontological level, gets all the functions and structures of a semasiology. In the bioworlds-like ecosystems, the realities and discourses match and identify at the level of the same ontology. In this context of the semasiological condition of ontological constituting of bioworlds, I should take into account two hermeneutical coordinates.

Firstly, the bioworlds-like systems should be considered and understood starting from their own hermeneutical instance. Differently put, a bioworld can be understood as such only in the semasiological horizon suggested by default as a bioworld. Not by comparison with other systems, not by translation, and not by reduction to other systems or discourses. Based on this hermeneutical coordinate, I should also consider that a bioworld constitutes itself as an organism and expands by self-generation, in the sense of a system constituting and developing through a phenomenon called autopoiesis by Varela and Maturana.

These two coordinates are essential because, based on these two, one can understand that a bioworld is self-sufficient both in meaning and reality (ontology). Furthermore, the systemic understanding of the bioworlds co-occurs with the systemic reality of them (and vice-versa). This fact, at the discursive level, translates as the systemic understanding of bioworlds, which, in an ontologic order, is the very reality of these bioworlds.

Crisis biophotography in the ontology of bioworlds

If we take into consideration the kaleidoscopic, semasiological, and autopoiesis functions which are visible in the relationships between bio-discourses and bioworlds, the crisis biophotography - as symbolic discourse - reveals its nature of allegorical decoupage in the anthrozoological discourse.

Biopolitics and crisis biophotography

Decoupages and delineations

It would be quite difficult, even in a speculative order, to talk about the representation space dedicated to the refugees and their anthrozoological revelations as if it were a space of symbolic reclusion. A camp of representations, albeit one found at the symbolical level.

Yet we would not be altogether far from the idea of symbolic isolation made at the level of representation when we are dealing with the refugee situation. Any crisis is a state of exception. In such cases, the mechanisms of qualification, enlistment, and delineation are activated. Thus, beyond all emotional and moral availability we manifest towards the alterity in need of our help, in symbolical order, we draw a definite territory for its new existence. It is not about an immoral gesture, as long as such a representation reflex stays simply as it is: an automatism of understanding and representation.

Things get further complicated when we consider the anthrozoological dimension. Because, in this context of the symbolic decoupage made in the case of the refugee, the pet of the refugee becomes the subject of extra decoupages and delimitations. As alterity of alterity, as being with a high degree of alterity, the pet of the refugee causes, at the biopolitics level, a second decoupage with effects of symbolic reclusion.

We should constantly take into consideration that these are automatisms of the representation mechanisms. They are structurally part of the symbolic constitution of discourses about refugees in our worlds. That is why such automatisms (which may very well become ideological catalysts) should be considered with a highly critical spirit when venturing into speculative exercises and interpretative projects. We should also not dismiss what is happening with the representations in the crisis situations, and all symbolical effects should be translated beyond their automatic nature and constantly

subjected to a critical exercise since they produce significant effects both at the biopolitics level of crisis situations and biopphotography that brings into question such situations.

Anthropocentric risks in the crisis biophotography

Starting from these issues, in terms of biopolitics, I have considered a series of anthropocentric risks to which we are exposed in symbolical order when we are dealing with crisis photography.

Emotional Reduction

A first anthropocentric risk comes from the very emotional success gained by biophotography in relation to the pets of the refugees. To some extent, I could say that biophotography, in such crisis circumstances, poses to risk to become the victim of its own symbolic success. It involves the symbolic role of the emotional shifter attained by the pet in the representation of the anthrozoological relationship with the refugee (who, quite often, is its "master"). In crisis situations, the suffering of the animal becomes a strong symbol of overall suffering, both of human and non-human beings.

This particular circumstance also presents the risk of symbolical speculation of the animal condition for addressing the overall crisis narrative. I think we are exposed, in this case, to a reductionism form since we may risk and introduce degrees of suffering Someone suffers more, others suffer less. Such grids are easily translated into more or less subtle mechanisms of an anthropocentrism form and even exclusion.

This is one of the first risks. I cannot but wonder which could be the hermeneutical solution to lessen this risk. I believe that the only solution, under the circumstances, could reside in contextualising the biophotographic discourse within the anthrozoological critical discourse. In other words, I must apply to hermeneutical tools that are constantly considering the critical tasks of the anthrozoological discourse. I could say that the solution comes

from the very point where the risk emerges as well. Accordingly, biophotography should consolidate the critical position of its own anthrozoological discourse (aesthetic, ethical, aetiological, and speculative). The symbolic order of biophotography is essential in all respects and I think it should be encouraged. However, biophotography should always keep the anthrozoological discourse as a discursive task.

Symbolical closing and overexertion

Another risk of anthropogenic contamination is evidenced by the reduction of the anthrozoological issue to the crisis situation only. A double mechanism generates this risk, the symbolical closing and overexertion.

When I refer to the symbolic closing, I consider the transformation of the crisis biophotography into a fundamental discourse for constituting the anthrozoological system.

From the biopolitical discourse to the anthrozoological discourse

All these issues developed around the crisis biophotography bring into focus the necessity of approaching and understanding the world in the data delivered by a systemic anthrozoology. I believe this is the first task of the overall project for establishing anthrozoology as an autonomous science we are still contemporary with. Anthrozoology is facing this task and challenge: the world of beings cannot be brought into question and understood unless this is based on systemic critical and speculative mechanisms. Biopolitics can become a practical anthrozoological discourse as far as it accepts the world of beings as a systemic one and can only be understood as a world system.

Beyond these considerations

To conclude these considerations, I would like to ask a question that may appear a bit far fetched, even considered in the economy of

interpretation. Whose voice is "heard" in all these photographs of suffering? The voice of the refugee or of the animal? Mine, the one who looks at their representation? The voice of the photographer? The voice of the photograph itself? Or is it the voice of the receiver?

It goes without saying that I am dealing with a chorus of voices expressing suffering. Each instance has and should have its own voice. However, in line with the symbolic order assumed by us, who should respond to all these instances?

All I can offer in this limited place is anything but the beginning of a more explicit and detailed answer. The very fact of being together can biome the legal authority and instance of all these voices of suffering. And in line with an anthrozoological order, this beginning of an answer can very well open the possibility of a promise.

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Psychology applied to Anthrozoology – Reflections on designing an interdisciplinary curriculum

Alina Simona Rusu *

Abstract. *Instructing students enrolled in animal-oriented study programs on how to analyze and issue recommendations to promote responsible human-animal interactions in cases of individuals and/or families deciding to adopt companion animals, for example, requires interdisciplinary knowledge and a multiperspective-based approach. In this paper, I present several reflections and ideas of curricular content that I proposed for a "Psychology applied to Anthrozoology" course, which is included in a curricular offering of a master's degree program. The curriculum was designed by taking into account the need to develop a humane education oriented mindset in the students enrolled in the first master's degree program in Ethology & Human-Animal Interaction in Romania, hosted by the Faculty of Animal Science and Biotechnologies, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania.*

Keywords: interdisciplinary, curriculum design, psychological interpretations, anthrozoology, human-animal interactions.

Introduction

Instructing students in animal-oriented study programs how to analyze and issue recommendations to promote responsible human-animal interactions in cases of individuals and/or families deciding to adopt companion animals, or planning a humane education activity, requires interdisciplinary knowledge and a multiperspective-based approach.

The aim of this paper is to present reflections and ideas on the curricular content that I have designed for a discipline entitled *Psychology applied to Anthrozoology*, which is included in the

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curricular offering of a master's degree program at the Faculty of Animal Science and Biotechnologies, University of Agricultural Sciences and Veterinary Medicine in Cluj-Napoca, Romania. The curriculum was designed by taking into account the need to develop a humane education mindset in our students, which are expected to become not only professionals in their field, but also agents of change in their proximate communities, as well as in their academic and societal networks.

Interdisciplinary curriculum design process

Literature in the area of sciences of education often addresses the challenges posed by teaching interdisciplinary fields (Woods, 2006). The process of designing an interdisciplinary curriculum implies competencies of teaching staff on sharing common educational vision and ideology (Woods, 2006, cited in Rusu, 2020). Based on the overview of the scientific orientations (for example, Modo and Kinchin, 2011, cited in Rusu, 2020), the following definitions are offered:

- *cross-disciplinarity* – more than one discipline work side-by-side on related problems without involving each other to solve their problems;
- *multi-disciplinarity* – more than one discipline work in an independent manner on a common problem, while there is little commonality in terminology and methodology to address the common problem; in other words, experts will only work within their discipline, but recognize that there are different facets/aspects to a common problem;
- *trans-disciplinarity* – more than one discipline work together on a common problem with some overlap in methodology and terminology; integrations between disciplines can occur that can lead to common concepts and potentially new models and theories;
- *inter-disciplinarity* – more than one discipline work integrally on common problems; disciplines are synthetized and extend

discipline-specific theories and concepts with potentially novel methodology that is relevant to all involved disciplines.

In the design process of the one-semester subject *Psychology applied to Anthrozoology*, which is included in the curricular offering of the master's degree program *Ethology & Human-Animal Interaction*, I took into consideration the heterogeneity of the students enrolled in the first generation (2021-2023). Thus, some of the students are graduates of social and humanistic sciences bachelor studies (e.g. psychology, anthropology, law, journalism), while others are graduates of animal sciences bachelor studies, such as veterinary medicine and animal husbandry. Also, it is important to mention that my own professional background as teacher of the subject, which is an interdisciplinary one (I have a double degree in biology and psychology, a PhD in Animal Behavior, and I am currently supervising PhD students in Sciences of Education), was a significant facilitating factor in the process of the interdisciplinary curriculum design of this subject.

The **general objectives** of the subject were formulated as follows:

- Familiarization with key concepts, theories and explanatory models in psychology in order to better understand the psychological aspects and processes involved in human-animal interactions;
- Understanding the applicability of the usage of psychological approaches, i.e., theoretical, and procedural knowledge, in identifying factors with potential consequences of human-animal interactions on aspects of human and animal psycho-physiological health and welfare.

According to the formulated general objective of the subject, the expected learning outcomes are listed below:

- At the end of this one-semester subject, students will be able to use basic concepts in psychology and explanatory models in the analysis of human-animal interactions in different contexts.
- Students will be able to demonstrate critical reflection skills regarding scientific investigations of attitudes towards animals,

by taking into account psychological aspects, such as individual, gender, cultural differences, social norms etc.
- Students will be able to understand the psychological processes involved in different types of human-animal interactions, indicators and predictors of the functionality of these relationships, attitudes, norms and behaviors.
- Students will demonstrate ability to access scientific sources (including standardized instrument sources) regarding the models and variables used in the literature connecting psychology and anthrozoology.
- Students will demonstrate abilities to present in an applicative way various topics associated with the subject.

Topics included in the interdisciplinary curriculum

This one-semester interdisciplinary subject involves a total number of seven meetings with the students (two hours lecture and one hour seminar / meeting). Therefore, the topics to be addressed during the whole semester are organized according to each meeting. I will present below the seven topics, indicating in some of the cases the relevant literature supporting the key concepts included in each topic.

Topic 1 – Psychological approach to the theory of biophilia – preferences to animals, selective attention, fear of animals

This topic covers a review of the approaches to biophilia theory (Wilson, 1993), such as: the role of learning in emotional reactions to animals, cultural modelling, evolved fears toward certain animal species (interpretation of phobias toward certain animal species), vigilance and selective attention to stimuli associated with danger; the assumption of living in child-animal interactions; the "cute response" effect and the proposed psychological mechanisms behind the reactions to the combinations of stimuli associated with cuteness in humans and animals. The *biophilia hypothesis* (Wilson, 1993) argues that human individuals possess an innate tendency to be attracted to

and interact in a neutral or positive manner with any living organism, including plants.

Topic 2 – Development and learning processes in understanding human-animals interactions

This topic covers the following themes: animals as agents of modelling and learning in humans, psychological aspects of contact and exposure to animals during life, psychological components of awareness of the ontogenetic development of animals, scientific methods of investigating the associations between attitudes and behaviors toward animals and the socio-emotional development of children, theories of transfer and generalization, the process of behavioral modelling, understanding the association between context, learning and the manifestation of animal abuse (abandonment, cruelty, neglect), mechanisms of manifestation of fear, disgust, hate and positive emotions towards animals.

Special attention is offered to the ways in which animals can contribute to shaping how children perceive the world and how children learn about their world through their interactions with animals. As suggested by several authors, animals can be interpreted as metaphors and emblems by children to define their own *personal strengths*, by using storytelling, interactive games, and meaningful learning exercises. Students will familiarize themselves with evidence-based studies investigating the animate–inanimate distinction in children, which can be later on investigated in the context of attitudes and compassion-based behaviors towards animals.

Contacts with animals during childhood are discussed in relation to various species of animals, including farm, zoo and wild animals. Hence, students are presented information about the ways positive contact with pets may fuel a larger interest toward animals over time, suggesting that concerns for pets as a particular type of animal can generalize to cover concerns for broader species of animals. This *generalizing effect* is supported by studies indicating

that interactions with companion animals early in life were associated with less negative attitudes toward non-pet animals, including wild animals such as snakes.

Students are also presented the importance of continuing education and psychoeducation in terms of constructing favorable attitudes toward animals. Such an example is a study on *farm animal education***,** where adolescents learned about chicken biology, welfare, and food labeling. The outcomes indicated that both **knowledge** of and **positive behaviors** toward poultry species increased immediately after the intervention, but then these aspects tended to diminish three months following the event (Jamieson et al., 2012).

Topic 3 – Attachment and empathy to animals – explanatory frames from psychology

This topic familiarizes the students with: definitions and explanatory theories of attachment (interpersonal and multispecies attachment), the components of empathy for animals, such as the affective and cognitive components, the connections between interpersonal and animal empathy in diverse categories of persons, the positive and negative consequences of attachment relationships (including functional and psychopathological aspects that are linked with the development of anti-social behaviors later on in the individual life), methods of psychological assessment of styles of attachment to animals and empathy for animals, and concepts such as emotional detachment from animals. Intensity of attachment to one's pet or animal is discussed in relation to consequences for the humans, the animal, and the relationship itself. For example, students become familiar with evidence-based studies indicating that, in adults, greater attachment to one's animal was found to be associated with a greater likelihood the animal stays indoors than outdoors (Hoffman et al., 2013). These findings stimulate the students to identify concerns over the animals' welfare.

Animals are known that they can become attachment figures with secure-base and safe-haven functions for their guardians (e.g.

Serpell, 1996). Moreover, students are being introduced to the dimensions of human-animal attachment, i.e. security and insecurity, which can be investigated in association with attachment dimensions in interpersonal relationships, while gender, type of animal owned, age, level of anthropomorphism, empathy, personality characteristics and mental health problems can modulate these associations (Zilcha-Mano, Mikulincer and Shaver, 2012; Rusu, Costea-Barlutiu and Turner, 2019).

Topic 4 – Attitudes toward animals and decision-making process in human-animal interaction management

In this topic, students will receive information and discover a series of aspects, such as: the operational definitions of attitudes toward animals: affective, cognitive and instrumental, gender differences in relation to attitudes and behaviors towards animals, cultural differences, beliefs and values in relation to attitudes and behaviors towards animals, ideologies in human-animal interactions, internalization of the attitudes and their manifestation at behavioral level, psychological aspects of animal myths, and attitude assessment tools, such as questionnaires and surveys.

In terms of psychological factors in decision-making processes in the management of human-animal interactions in different contexts, students will become familiar with the importance of understanding the behavioral indicators of emotional states in animals, the psychological aspects of the euthanasia decision, as well as moral values and conflicting emotions in human-animal interactions.

Topic 5 – Personality and the extensions of self in human-animal interactions

This topic covers a large range of themes, such as: models of personality traits in aspects of human-animal interactions: preferences, hatred towards certain species (with focus on cultural biases, memetic evolution and psycho-pathological conditions),

activism in animals rights and protection, the process of inclusion of animals in self / the concept of self-expansion, by giving examples of scales for evaluating the perceived inclusion of animals in the space of self-existence, such as Inclusion of Other in the Self Scale (IOS, Edinstruments).

Topic 6 – Anthropomorphism – psychological approaches

This topic introduces several themes, such as: definitions and psychological components of anthropomorphism, antecedents, benefits, and disadvantages of anthropomorphization of animals, the Maslow's pyramid of needs model applied to human-animal interaction, and several psychological tools (standardized questionnaires, surveys) for assessing the tendency of anthropomorphization of animals by various categories of human individuals, including children.

Topic 7 – Psychological aspects of pet loss

This topic covers various concepts associated to pet loss, such as: psychological patterns of trauma associated with the loss of pets, the intensity of grief depending on different psychological factors, and therapeutic and educational approaches in mourning for animals. As indicated by experts in the field of pet loss counseling, the factors that may influence grief responses after the loss of a pet include: previous losses, personal beliefs about the appropriateness of grieving, attachment strength and style, perceived social support, gender, age of the guardian, circumstances surrounding the death – e.g. traumatic pet loss – accident, euthanasia, natural causes etc.

Significant attention is paid to the concept of disenfranchised grief, which occurs when bereaved individuals are not permitted to grieve in terms of social desirability, i.e. the relationship is not recognized or regarded as valid, the importance of the relationship is not appreciated and acknowledged by all the members of the proximate social network of the guardian of the pet etc. The students become familiar with various forms of helping in situations of pet

loss from counselors, such as: normalize the experiences of the pet guardians by providing psychoeducation about human-animal bonds, grief processes, and grief reactions after the loss of a pet, support the grief in developing healthy coping skills for managing grief symptoms, inform the pet guardians that they can create a space (including a virtual one) in which they may share memories of their pet, support pet guardians in developing and implementing bereavement rituals, creative memorials and other types of outreach activities, refer the pet guardians to support groups etc.

Through interactive discussions during the meetings, the students are provided continuous interconnections among the topics and themes during the lectures and seminars.

Meaningful resources for fostering an interdisciplinary mindset

An important resource that is critically discussed with the students and presented as an example of good practices in terms of co-constructing an interdisciplinary mindset through the subject *Psychology applied to Anthrozoology*, is the article: "*Toward a psychology of human–animal relations*" (Amiot and Bastian, 2015). As indicated by the authors, this systematic review of the literature includes studies in which animals are not used as a testing ground for psychological (human) theories, nor are they attributed a passive role, but their behaviors, cognitions and affective states are rather investigated in the context of their interactions with humans.

This resource is a representative one for teaching this interdisciplinary subject, because it provides a comprehensive platform for thinking about human-animal interactions, aiming to trigger a range of research questions that are focusing both on the causes and the broader consequences of human-animal relations (Amiot and Bastian, 2015).

The article integrates interpretations from multiple areas of psychology (developmental, social, family and evolutionary psychology), allowing the students to become familiar in research-based manner with the topics that are included in the subject:

evolutionary factors that lead humans either to focus on and move toward animals or to fear some animals, developmental and learning processes related to human – animal relations (HARs) over the life span, the ways that normative factors shape human–animal relations, ways that individual differences, ideological beliefs, and gender can operate in human-animal interactions, evidence showing how the presence of animals is linked to human health and other way around (One Health, One Welfare perspective from a psychological point of view), and examination of HARs from an intergroup relations perspective.

The original aspect of this recommended resource is that, following each type of multidimensional interpretations offered for the psychological factors mentioned above, the strength of the prior empirical evidence is reviewed by the authors and **recommendations for future research** are made. These recommendations trigger insightful reflections in our students. Thus, several transversal competencies are being facilitated, such as the ability to reflect, as well as critical and perspective thinking.

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