

The Predominance of the Human Species and the Rights of Non-Human Animals

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Abstract

This paper examines the evolutionary and cognitive foundations of the predominance of *Homo sapiens* in the biosphere and the ethical consequences that follow from it. Through its capacity to generate symbolic culture and to transform the natural world technologically, the human species has assumed the role of custodian of living beings, a role that entails responsibility for biosphere integrity and for the welfare of non-human animals. At the same time, comparative neurophysiology shows that many animal species possess the neurobiological substrates required for conscious experience, particularly in the form of primary affective consciousness. The basic tenet of anthropocentrism that denies non-human consciousness is therefore unfounded. Rejecting speciesism entails recognizing the principle of equal consideration of interests, grounded in the capacity to suffer, and requires expanding the ethical and legal community beyond the boundaries of the human species by acknowledging a shared existential condition — animality. This condition unites all sentient beings.

Keywords: speciesism, animal ethics, consciousness, equal consideration of interests, normativity.

1. Introduction

The question of the moral status of non-human animals has become increasingly central in contemporary ethical reflection, not only due to the development of the life sciences but also to the unprecedented degree of ecological and technological influence exercised by *Homo sapiens* on the biosphere. The human species is no longer merely one living form among others, but has become capable of transforming ecosystems, modifying evolutionary trajectories, and determining the conditions of life and the extinction of countless other species.

This position of predominance does not authorize domination, but rather entails responsibility. To understand the ethical implications of such responsibility, it is necessary to clarify both the cognitive-cultural features that distinguish the human species and the forms of consciousness and vulnerability that humans share with non-human animals. Only by acknowledging a common ground of animality — and thus the capacity to

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suffer — can one adequately address the question of whether and why non-human animals are bearers of interests that require moral consideration. Speciesism can therefore be understood as a specific form of moral subjectivism, insofar as it grounds normativity in the standpoint of the human subject or of the human species, rather than in constraints imposed by reality itself (Singer 1975, 1979, 1985; Regan & Singer 1976; Linzey 1976; Midgley 1983; Rollin 1992; Ryder 2000).

The notion of predominance does not designate a form of moral superiority or a legitimate right to domination. Rather, it refers to an objective asymmetry of causal power within the biosphere. Human predominance consists in the capacity to affect, modify, preserve, or extinguish other forms of life on a planetary scale. It is therefore a descriptive fact grounded in evolutionary, cognitive, and technological conditions. Precisely for this reason, it constitutes a source of normative constraints rather than of privileges. Predominance, in this sense, names a condition of exposure to responsibility imposed by reality itself, not a status conferring moral sovereignty.

2. *Humans as custodians of life*

The particular structure of the central nervous system of *Homo sapiens* has enabled our species to acquire a dominant position on the planet and to exercise an unprecedented degree of control over the biosphere. Indeed, the CNS of *H. sapiens* can generate a range of neural strategies exceeding those strictly required for species survival, whereas non-human animals typically possess neural structures primarily oriented toward survival and group life. In this sense, it is legitimate to read human history from a strictly naturalistic point of view, regarding it as humanity's path toward predominance within the biosphere. This cognitive-cultural predominance was achieved by *Homo sapiens* relatively recently in evolutionary terms.

The human species won its primacy in the biosphere primarily through cognition — understood as the capacity to transform sensory stimuli into knowledge about the environment — and through culture, understood as a set of values, symbols, conceptions, beliefs, models of behaviour, and material practices. This predominance does not merely consist in overpowering non-human animals and reducing them to a minority; rather, it results from the human species' full awareness of its capacity to influence the physical and biological world, even though it cannot prevent its eventual decay, which is governed by the second law of thermodynamics.

Recent research in affective neuroscience shows that the neurobiological foundations of primary emotions are widely shared among mammals. Panksepp (1998) demonstrated that fundamental emotional systems — such as fear, care, seeking, and play — are homologous in the brains of humans and many other species. Damasio (1999) further showed that emotions constitute the very basis of embodied subjectivity, preceding any linguistic or conceptual elaboration. These findings converge in recognizing that affective consciousness

— the capacity to experience pleasure and pain—is not an exclusive feature of the human species but an emergent property of the neurophysiological organization common to a broad range of animal life.

Knowledge, values, symbols, conceptions, beliefs, customs, and material practices have no intrinsic meaning except insofar as they enable the human species — particularly through science and technology — to strengthen its predominance over other animal species and to exert a significant influence on the biosphere. By virtue of its cognitive capacities and the culture it has produced, *Homo sapiens* can thus reflect upon the position and role it occupies in the world and evaluate its choices not only in relation to its own interests, but also with regard to the future of the planet. In this way, the human species has attained full awareness of its condition as the agent primarily responsible for the destiny of the biosphere, the integrity of which is fundamental to the well-being of individual biotic communities.

Aware of its position as “custodian” of living beings, the human species acquires a distinctive form of autonomy in relation to the world: it becomes an autopoietic system that preserves its unity and organization through the interactions of its components, such that its domain of existence coincides with the topological domain of those components. This custodial role does not imply moral sovereignty over nature, but designates a responsibility imposed by asymmetries of power and vulnerability. By virtue of this autonomy, humans do not merely adapt to the world, as other animal species do, but actively modify it in order to pursue their biological, social, and cultural aims. They manipulate and transform their environment through technology, thereby expressing a persistent tendency to transcend the limits of biological naturalness.

Humans not only participate in evolutionary processes but can also orient them, by modifying or preserving existing species, generating new ones, or even recreating the conditions for the reappearance of extinct forms of life. The biosphere is therefore not a fixed entity: the organization of living matter is not immutable, but subject to continuous transformation.

For this reason, the human species must possess a clear awareness of the axiological and projective background of its actions and correctly interpret its role as the cognitively and culturally predominant species—one capable of intervening in biological processes that affect the conservation, evolution, and modification of other species, as well as the emergence of new ones.

Within this framework, the question of the relations between humans and other animal species becomes central. If our species has evolved so as to assume the role of “custodian” of other living beings, then it must determine what forms such relations should take, and which principles ought to govern them. Speciesism designates the prejudicial view according to which the interests of members of one’s own species are morally significant, whereas those of other species may be disregarded. From a speciesist perspective, *Homo sapiens*, as the dominant species on the planet, is held to be superior in status and value to other animals, and thus entitled to sacrifice their interests in pursuit of its own aims. The crucial philosophical issue is therefore not

whether *Homo sapiens* is the predominant species in the biosphere, but how such predominance constrains normativity. The asymmetry of power that characterizes the human position generates obligations that do not depend on subjective choice, cultural convention, or moral sentiment. Rather, they arise from the objective vulnerability of other living beings exposed to human action. The recognition of non-human animal consciousness is not introduced here as an independent moral foundation, but as a condition that renders this asymmetry ethically imputable. When this asymmetry is misconceived as a ground for entitlement, it gives rise to the idea of privilege. This privilege is structurally analogous to that claimed by slave traders, who exploited Black Africans with impunity on the assumption that they did not belong to the “white race.”

3. *Non-human animals are conscious*

The nervous systems of non-human animals have evolved in ways broadly analogous to that of humans. In many respects, the evolutionary divergence between humans and other animals —especially other mammals— occurred only after the principal constitutive elements of the human central nervous system were already in place. Comparative neurophysiology shows that multicellular organisms share fundamental neurophysiological functions, making it possible to compare mental experiences across species on the basis of similarities in neuronal properties, synaptic organization, and neuroendocrine mechanisms. For this reason, it is difficult to maintain that non-human animals possess a lower degree of sensitivity merely because of their evolutionary position: with the exception of the complexity of the neocortex, the nervous systems of many animals are physiologically comparable to that of humans.

In particular, the great apes (chimpanzees, gorillas, orangutans, and gibbons) share approximately 98% of human DNA and exhibit complex cognitive capacities. They use tools to solve problems, display empathy (even across species boundaries), manifest self-referential abilities, express emotions such as joy, and show forms of kin solidarity. They are also capable of deceptive behaviours, including the denial of another’s perceptual access.

For a long time, it was believed that the human brain contained more neurons than any other animal brain. It is now known, however, that the elephant’s brain contains almost three times as many neurons (approximately 257 billion), most of which are concentrated in the cerebellum (Herculano-Houzel et al. 2009 and 2014; Azevedo 2009). The human brain can therefore be described as a primate brain of proportionate size (Semendeferi et al. 2002). As stated in the *Cambridge Declaration on Consciousness* (2012), the absence of a neocortex does not in itself preclude the experience of affective states. Substantial evidence indicates that many non-human animals possess the neuroanatomical, neurochemical, and neurophysiological substrates required for conscious experience and for the display of intentional behaviour. Consciousness, therefore, is not

exclusive to humans but is shared by several classes of non-human animals, including mammals, birds, and even phylogenetically distant species such as cephalopods.

Can non-human animals have conscious experiences, and if so, of what kind? For a long time, attempts to attribute consciousness to animals were dismissed as anthropomorphic. Yet such accusations often rest on a fallacious assumption: that attributing cognitive processes to non-human animals necessarily involves projecting uniquely human properties onto them. This line of reasoning amounts to a *petitio principii*, since it presupposes precisely what it seeks to establish — namely, that consciousness is an exclusively human trait (de Waal 2016). When employed in this prejudicial way, the charge of anthropomorphism functions as a conceptual barrier that excludes *a priori* the recognition of shared cognitive or affective capacities between humans and other animals (Griffin 1992).

There are, by contrast, strong indications that the behaviour of many animal species expresses features of a conscious and evaluative mind. Anthropoid apes, for instance, appear to possess a conscious neuronal workspace that enables them to assess both themselves and their environment (Dehaene 2014). The phylogenetic emergence of the capacity to evoke a coherent mental “scene” gave rise to primary consciousness, that is, the capacity to construct a unified representation of the present. This form of consciousness, shared by *Homo sapiens* and all mammals, does not require language or reflexive self-awareness. It depends instead on older neural structures, such as the limbic system and the reticular formation, which regulate homeostasis, attention, the sleep–wake cycle, and basic emotions (joy, sadness, fear, anger, surprise), all of which guide immediate and vital decisions essential for survival (Denton 2005).

By contrast, it remains an open question whether anthropoid apes also possess higher-order cognitive (or access) consciousness — that is, the capacity for reflective access to one’s own mental states and for the construction of complex representations of the self and others. Nonetheless, even in animal classes phylogenetically distant from humans, such as birds, sophisticated cognitive processes are well documented, including working memory, social learning, and problem-solving abilities. Importantly, the presence of such processes does not require a linear correlation with the level of consciousness attained by a given species.

Many non-human animals do not merely react to stereotyped stimuli but respond to meaningful objects that they are capable of recognizing across highly variable perceptual conditions. A Thompson’s gazelle, for example, can identify a lion regardless of viewing angle, distance, or partial occlusion, and can discriminate between a predatory threat and a non-threatening presence (Walther 1969; Griffin 1992). This capacity to abstract relevant features from complex sensory input presupposes an advanced ability to evaluate information and to guide behaviour accordingly. The widespread assumption that genetically programmed behaviour excludes conscious processing is therefore unfounded: species-specific behavioural patterns do not rule out learning or environmental modulation during development (Griffin 1992).

It is fully legitimate to claim that human lives may be considered “higher” in virtue of self-consciousness, abstract reasoning, long-term planning, and complex social communication. Yet these differences, however significant, do not provide a valid basis for denying that non-human animals possess interests or moral standing. Cognitive and existential asymmetries cannot justify the exclusion of non-human animals from ethical consideration.

4. *Equal consideration of interests*

The rejection of speciesism does not *ipso facto* imply that the lives of non-human animals have the same value as those of human beings. Rather, it entails adopting the principle of equal consideration of interests as a fundamental ethical requirement. According to this principle, interests must be given equal moral weight regardless of the species to which they belong: an interest is an interest, whether human or non-human. Equal consideration does not imply identical treatment, but impartial evaluation.

Human predominance must therefore be understood without recourse to the notion of moral sovereignty. To be predominant does not mean to be entitled to legislate unilaterally over the living world. It means, rather, to occupy a position in which one’s actions systematically affect the conditions of existence of others. Responsibility here does not derive from autonomy, rational agency, or membership in a privileged moral community, but from the asymmetry between power and vulnerability. In this sense, ethical obligation is not grounded in the self, but in the structure of relations imposed by reality.

Criticizing speciesism does not require claiming that all forms of life have equal value; it requires that suffering be accorded the same moral significance independently of species membership. As Singer (1975) famously argued, equality is a principle of consideration, not of uniform treatment: what matters is the unbiased assessment of the interest in avoiding suffering. Regan (1983) further maintains that many animals are “subjects-of-a-life”, endowed with integrated experience, memory, and preferences, and therefore cannot be treated merely as means. For DeGrazia (1996), evolutionary continuity renders any moral boundary grounded solely on species membership arbitrary.

By the term *interest* we refer to a condition or state of affairs whose function is to safeguard the good of a biotic community or of an individual living organism. Interests may be distinguished into primary (or diffuse) and secondary (or particular). The former correspond to general conditions or primary goods — such as security or safety — that make life worth living; the latter consist in specific ends pursued by individuals in accordance with their value system. Among secondary human interests, one may distinguish interests intrinsically incompatible with a respectful attitude toward the biosphere (e.g. killing animals for sport), and

interests intrinsically compatible yet extrinsically harmful to natural ecosystems (e.g. large-scale infrastructural development).

Jeremy Bentham (1789) famously identified the capacity to suffer — not rationality or language — as the criterion grounding equal consideration of interests. What morally matters, Bentham argues, is not whether a being can reason or speak, but whether it can suffer. In this sense, the capacity to suffer constitutes a necessary and sufficient condition for having interests at all — first and foremost, an interest in not suffering.

From this perspective, the exclusion of any sentient being from moral consideration is unjustified. While it is true that non-human animals do not suffer in all the ways humans do, this does not undermine the moral relevance of their suffering. Differences in cognitive complexity do not negate the reality of pain, nor do they justify disregarding it when it serves human purposes.

If the capacity to suffer is taken as the criterion for moral consideration, then the suffering of non-human animals must be weighed alongside comparable human suffering, within the limits of cross-species comparison. Refusing to take such suffering into account lacks moral justification.

Pain, understood as an unpleasant sensory and affective experience associated with actual or potential tissue damage, plays a fundamental biological role in preserving organismic integrity. Although pain as a mental state cannot be directly observed, its presence is reasonably inferred from behavioural, physiological, and neurobiological indicators — both in humans and in other animals. The absence of language does not preclude the experience of pain, as demonstrated by infants, aphasic individuals, and numerous non-human species.

Recognizing the capacity for pleasure and pain therefore requires extending ethical and legal consideration beyond the boundaries of the human species. Appeals to autonomy or linguistic competence as exclusive criteria of moral standing prove untenable once one considers humans who lack such capacities. Unless moral rights are conceived as an exclusively human prerogative, cognitive sophistication cannot justify the exclusion of non-human animals from ethical concern.

If suffering discloses a common ethical ground, animality reveals a shared ontological condition. As Jonas (1984) argues, every living being manifests an intrinsic orientation toward self-preservation, and this vulnerability grounds responsibility. Recognizing animality does not diminish humanity; rather, it situates it within a community of finite and vulnerable beings.

The unprecedented technological power of *Homo sapiens* amplifies this responsibility. Human agency now extends to the conservation, transformation, and extinction of other forms of life, and even to the modulation of evolutionary processes themselves. This condition calls not merely for ethical sensitivity, but for a reconfiguration of human self-understanding beyond the boundaries of species-centred normativity.

5. Conclusion

The analysis developed here shows that the moral status of non-human animals cannot be adequately addressed within a subjectivist or species-centred framework. The predominance of *Homo sapiens* in the biosphere, grounded in distinctive cognitive and cultural capacities, does not confer moral sovereignty over other living beings. Rather, it generates a heightened responsibility that arises from asymmetries of power, vulnerability, and impact.

Comparative neurophysiology and affective neuroscience provide substantial evidence that many non-human animals possess the neurobiological substrates required for conscious experience, particularly in the form of affective consciousness. The capacity to suffer thus emerges as a morally salient feature that underpins interests independently of species membership. From this perspective, speciesism appears as a specific manifestation of moral subjectivism, insofar as it locates normativity in the standpoint of the human subject or of the human species, rather than in constraints imposed by reality itself.

Rejecting speciesism does not entail erasing differences between humans and other animals, nor does it require attributing identical value or rights to all forms of life. It requires, instead, adopting the principle of equal consideration of interests as a minimal condition of ethical impartiality. Such a principle recognises that suffering, wherever it occurs, constitutes a normative fact that binds moral agents regardless of their preferences, identities, or forms of self-understanding.

In an age marked by unprecedented technological power and ecological instability, this decentring of the human standpoint is no longer optional. Human agency now extends to the conservation, transformation, and extinction of other forms of life, and even to the modulation of evolutionary processes themselves. This condition calls for a reconfiguration of human self-understanding beyond the boundaries of species-centred normativity.

To take non-human animals seriously, therefore, is not an act of moral generosity, but the recognition of a normativity that precedes the self and exceeds it.

References

- Azevedo, F.A.C. et al. (2009) 'Equal numbers of neuronal and nonneuronal cells make the human brain an isometrically scaled-up primate brain', *Journal of Comparative Neurology*, 513: 532-541.
- Bentham, J. (1789) *Introduction to the Principles of Morals and Legislations*, ed. by J.H. Burns and H.L.A. Hart with a new introduction by F. Rosen, Oxford: Clarendon Press 1996.
- Cambridge Declaration on Consciousness*, ed. by J. Panksepp, D. Reiss, D. Edelman, B. Van Swinderen, Ph. Low and C. Koch, University of Cambridge, 7 July 2012.
- Damasio, A. (1999) *The Feeling of What Happens: Body and Emotion in the Making of Consciousness*, New York: Harcourt Brace & Co.
- DeGrazia, D. (1996) *Taking Animals Seriously: Mental Life and Moral Status*, New York: Cambridge University Press.
- Denton, D. (2005) *Les émotions primordiales et l'éveil de la conscience*, Paris: Flammarion.
- Dehaene, S. (2014) *Consciousness and the Brain: Deciphering How the Brain Codes Our Thoughts*, New York: Penguin.
- Griffin, D.R. (1992) *Animal Minds*, Chicago: University of Chicago Press.
- Herculano-Houzel S. (2009) 'The human brain in numbers: A linearly scaled-up primate brain', *Frontiers in Human Neurosciences*, 9 November 2009, doi.org/10.3389/neuro.09.031.2009.
- Herculano-Houzel S. et al. (2014), 'The elephant brain in numbers', *Frontiers in Neuroanatomy*, 12 June 2014, doi.org/10.3389/fnana.2014.00046.
- Jonas, H. (1984) *The Imperative of Responsibility: In Search of an Ethics for the Technological Age*, Chicago: University of Chicago Press.
- Linzey A. (1976) *Animal Rights*, London: SCM Press.
- Midgley M. (1983) *Animals and Why They Matter*, London: Penguin.
- Panksepp, J. (1998) *Affective Neuroscience: The Foundations of Human and Animal Emotions*, New York: Oxford University Press.
- Regan T. (1983) *The Case for Animal Rights*, London: Routledge & Kegan Paul.
- Regan T., Singer P. (1976) *Animal Rights and Human Obligations*, Englewood-Cliffs, NJ: Prentice-Hall.
- Rollin B.E. (1992), *Animal rights and human morality*, 2nd ed., Buffalo, NY: Prometheus.
- Ryder R.D. (2000) *Animal Revolution: Changing Attitudes Towards Speciesism*, Oxford: Berg.
- Semendeferi K. et al. (2002) 'Humans and great apes share a large frontal cortex', *Nature Neurosciences*, 5: 272-276.

- Singer P. (1975) *Animal Liberation*, New York: Avon.
- Singer P. (1979) *Practical Ethics*, Cambridge: Cambridge University Press.
- Singer P. (ed., 1985) *In Defence of Animals*, Oxford: Blackwell.
- Waal F. de (2016), *Are We Smart Enough to Know How Smart Animals Are?*, London: W.W. Norton & Co.
- Walther F.R. (1969), 'Flight Behaviour and Avoidance of Predators in Thompson's Gazelle (*Gazella Thompsoni* Guenther 1884)', *Behaviour*, 34:184-221.