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Citation: Kopnina, Helen, Gray, Joe, Lynn, William, Heister, Anja and Srivastava, Raghav (2022) Uniting ecocentric and animal ethics: Combining non-anthropocentric approaches in conservation and the care of domestic animals. *Ethics, Policy and Environment*. pp. 1-22. ISSN 2155-0085 (In Press)

Published by: Taylor & Francis

URL: <https://doi.org/10.1080/21550085.2022.2127295>
<<https://doi.org/10.1080/21550085.2022.2127295>>

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To cite this article: Helen Kopnina, Joe Gray, William Lynn, Anja Heister & Raghav Srivastava (2022): Uniting Ecocentric and Animal Ethics: Combining Non-Anthropocentric Approaches in Conservation and the Care of Domestic Animals, Ethics, Policy & Environment, DOI: [10.1080/21550085.2022.2127295](https://doi.org/10.1080/21550085.2022.2127295)

To link to this article: <https://doi.org/10.1080/21550085.2022.2127295>



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Published online: 02 Nov 2022.



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Uniting Ecocentric and Animal Ethics: Combining Non-Anthropocentric Approaches in Conservation and the Care of Domestic Animals

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ABSTRACT

Currently, there is no non-anthropocentric guide to the practice of nature conservation and the treatment of invasive species and domestic animals. In examining the so-called 'ecocentric' and 'animal' ethics, we highlight some differences between them, and argue that the basic aspiration for support of all nonhuman life needs to be retained. We maintain that hierarchies of value need to be flexible, establishing basic principles and then weighing up the options in the context of anthropocentrism, industrial development and human population growth. Acknowledging the role of these conditions creates space for combining individual-based and collective-based ethics in practice.

KEYWORDS

Animal rights; animal welfare; anthropocentrism; compassionate conservation; ecocentrism; environmental ethics; invasive species

All animals are equal, but some animals are more equal than others.



— *George Orwell, Animal Farm.*

The last word in ignorance is the man who says of an animal or plant, "What good is it?" If the land mechanism as a whole is good, then every part is good, whether we understand it or not.

— *Aldo Leopold, RoundRiver: From the Journals of Aldo Leopold.*

Introduction: The Golden Mean of Treating Animals and Habitats

While diverse histories of environmental philosophy and environmentalism can be traced to different cultures (Kopnina, 2015), the origins of Western ecological thought lie in the transcendentalism of Ralph Waldo Emerson, Henry David Thoreau, and John Muir. Muir observed, 'There is a love of wild nature in everybody, an ancient mother-love ever showing itself whether recognized or no, and however covered by cares and duties' (Muir, in Teale, 1954, p. 311). The 'land ethic' emphasized that an action is right or wrong to the degree that it benefits or harms the integrity of an ecosystem (Leopold, 1949). Philosopher Naess (1973) distinguished between shallow ecology (motivated by anthropocentric assumptions) and deep ecology (motivated by ecocentric assumptions) and elaborated an eco-philosophy supporting the latter. Highlighting oneness and

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interconnectivity, deep ecology emphasizes compassion for all beings, self-realization, and what Naess called biospherical egalitarianism – all ideas developed further in ecofeminism and nature ethics (Kheel, 2008; Peterson, 2013). Building on the Deep Ecology platform, with the motivation of developing an even more fully ecocentric position, Mosquin and Rowe (2004) wrote ‘A Manifesto for Earth’.

Animal ethics has gained prominence since the late 1970s with the work of Singer (1977), Midgley (1984), Regan (1986). The ‘exceptionalist’ view within the prevalent anthropocentric paradigm in the West was challenged by Bentham in the early 19th century, but the prevailing view since Aristotle, in western moral philosophy, continued to privilege humans as agents and animals as ‘instruments’. More recently, animal ethics has expanded into various fields, such as critical animal studies and animal rights law (Bisgould, 2008; Borràs, 2016; Sykes, 2016). In conservation, this takes the form of compassionate conservation (Batavia et al., 2020; Bekoff, 2017a, 2017b; Wallach et al., 2018, 2020).

There are differences between a stringent ‘rights’ approach, which categorically prohibits killing, and less stringent ‘welfare’ positions that seek to ameliorate but not reduce or end harm to animals, such as allocating of a few inches more space for chickens or a bit of straw on the steel cage floors of pigs. For many compassionate conservationists, although not all, the ‘Do No Harm!’ rule is followed by ‘individuals matter’, valuing all wildlife and peaceful co-existence (Bekoff, 2017a, 2017b; Mikkelsen, 2019; Wallach et al., 2018). Some compassionate conservationists challenge current conservation practices, such as invasive species eradication, use of poison, biocontrol, conservation fencing, translocation, contraception of wild species, captive breeding, disease control, and genetic introgression (Callen et al., 2020). However, not all compassionate conservationists think in terms of rights, nor would all compassionate conservationists remove killing from the list of possible actions (e.g. Lynn, 2018). Alternatives to ‘no-kill’ approaches include a structural change to human lifestyles, including change of diet, prioritizing nonlethal approaches, and using the least intensive and least harmful interventions whenever possible (Mathews, 2012).

Ecocentric ethics and animal ethics have important common ground, in particular converging in their critiques of human exceptionalism, instrumental use of nature, and exploitation of nonhuman beings. However, many authors significantly diverge when conflict or trade-off situations arise, resulting in what Parke and Russell (2018) have described as ‘a now-classic debate in environmental ethics’ – a debate they trace back in the literature at least as far as the early 1980s. For example, how do we think about the increased suffering of animals confined in factory farms in concentrated animal feed operations (CAFOs) if such operations support decreased emissions or lower risks of extinction? Does safeguarding the climate and biodiversity exonerate mistreating farm animals, or to mention another example, exterminating invasive species? Let us consider two examples in detail.

First, Zaraska (2020) writes in the *Breakthrough Journal* that the environmental footprint of animal products differs from country to country, depending on the extent of land use for farm animals and how long they are allowed to live. She poses a choice between ‘happy chickens’ or ‘happy penguins’. The UN Food & Agriculture Organization (FAO, 2020) estimates that we could reduce farmed animals’ emissions by approximately 30% if all producers were to follow the ‘best practices’ (including intensive feeding operations and close confinement) of the top 10% most efficient agro-industries. Cattle fed on

energy-dense food emit less methane compared to open-air grass. If the floors of pigs' stalls are concrete, it is easier to collect manure than if the animals are kept on cozy straw. Methane digesters, furthermore, work best in large-scale, confined conditions. Unfortunately, Zaraska reflects, many of the agricultural practices that have allowed for reduced emissions are at odds with animal welfare goals. 'Pastoral frolicking', as the *Breakthrough Journal* commentary calls it, means more land use, which means less land for biodiverse forests.

The second example concerns the control of invasive species in Australia. Invasive feral animals in Australia include rabbits, cats, goats, pigs, camels, horses, cattle, buffalo, cane toads, carp, and many others (Van Dooren, 2011; Washington, 2019). All have caused major impacts in different ways. Rabbits and goats have denuded native vegetation and in some areas, such as Mutawintji, threaten the extinction of Belah plants. Wild horses (brumbies) have caused serious erosion in places such as the Australian Alps high country (Washington, 2019). Pigs damage wetland areas, digging up groundcovers; camels overgraze desert areas, and cane toads threaten local populations of goannas, quolls, and other predators in north Australia (ibid). Carp disturb river sediments and displace native fish species (Bomford & Hart, 2002).

Invasive plants in Australia include blackberry, privet, *Mimosa pigra*, lantana, balloon vine, Patterson's curse, willows, tree of heaven, Scotch broom, African marigold, Himalayan honeysuckle, and many more. While naturalization is in the process of occurring with *some* introduced species (e.g. St John's wort is not invading new areas), others cause damage to native species (e.g. blackberry and African marigold took over many groundcover areas, contributing to the local extinction of the wombats). In Australia, massive campaigns were organized to eradicate invasive species (<https://invasives.org.au/strategy-invasive-species-australia/>). The use of myxo and calici virus in Australia was justified to remove rabbits. Continuous campaigns have led to the extermination of millions of nonhuman animals (hereafter 'animals').

Following lines of inquiry developed by Van Dooren (2011) and Mathews (2012), this article explores the problematic notion of human decision-making as it applies to both wild and domestic animals and the role that dichotomies between animal ethics and ecocentric ethics play in positioning various species as more or less worthy and more or less expendable. This article is concerned with the questionable ethics involved in prioritizing some animals over others or forming a rigid hierarchy that valorizes some while villainizing others. We argue that instead of letting ourselves be forced into triage decisions, and 'playing God' in forming hierarchies of beings, humanity can choose to substantially downscale its demands from and presence within nature thereby freeing and expanding wild habitat. Below we discuss the differences and similarities between individual- and collective-level approaches to conservation. We argue that most of the conservation decisions regarding individual animals or habitats are forced and can be traced to one source – namely, the expansion of our numbers, presence, and behaviors. By operating under an anthropocentric paradigm that excludes a value system or moral decision-making processes that include animals, we do not scrutinize our behaviors.

Instead of the spurious choice between individual and collective ethics, this article supports combined non-anthropocentric ethics that aim to respect the implications of animal ethics and ecocentric ethics, both practically and ethically. Non-anthropocentric scholars (Crist, 2017; Curry, 2011; Shoreman-Ouimet and Kopnina, 2016; Piccolo et al.,

2018; Washington, 2019) argue for superseding the blinkered perspective of human ascendancy. To achieve this, they deploy biospheric egalitarianism (Naess, 1973), ecological justice (Baxter, 2005), multispecies justice (Santiago-Ávila et al., 2018), and eco-democracy (Gray & Curry, 2019). The downscaling and restraint of human activity for the common good, as we see enabled by governments during the COVID-19 crises, makes such a position feasible.

To conclude this introduction to our argument, we will define a few terms. The 'golden mean' is one of the Delphic maxims inscribed on the ancient Temple of Apollo. It counsels 'nothing in excess' as discussed in Aristotle's *Nicomachean Ethics* (II.1). We use the concept to highlight a fruitful intersection between non-anthropocentric ethics of nonhuman animals (hereafter, animals) and nature, and the avoidance of the fruitless extremes that arise out of binary opposition between animal and conservation ethics. 'Animals' in this article refers to nonhuman animal life and will be used as short-hand for animals, plants, fungi, and other living beings (or 'greater-than-human') species. By anthropocentrism, we mean a human-centered valuation and practice that is based on the assumption of human superiority or specialness and a lack of intrinsic value or moral standing in animals. Non-anthropocentrism, by contrast, contests human supremacy and takes several forms. These include ecocentric (ecosphere-centered), topocentric (place-centered), biocentric (biosphere-centered), and zoocentric (animal-centered). Ecocentrism and topocentrism tend to focus on collectives (e.g. species, ecosystems, biomes) while biocentrism and zoocentrism tend to focus on individuals within collectives. These axiologies align with environmental and animal ethics, respectively. Taken altogether, these axiologies find intrinsic value in people, animals, and nature as individuals and communities. This is a geocentric (earth-centered) axiology expressed in some ecofeminist 'nature' ethics. Biodiversity refers to the variety of nonhuman life, globally or in particular habitats, at various levels from genes, through species, to ecosystems. By geodiversity, we mean the variety of the geological features and geochemical processes that play indispensable roles in sustaining the community of life (e.g. the hydrological cycle, oceanic carbon sinks). The relationship between these concepts is further explored below following the 'methods' section which explains how we selected the literature.

Methods

The review approach used was integrative or a critical review approach, with the aim to assess, critique, and synthesize the literature in a way that enables new theoretical perspectives to emerge from combining existing frameworks (Snyder, 2019; Torraco, 2005) – in this case, the literature on ecocentric and animal ethics approaches. Among all of the papers found in the data base searches, a subset we have chosen to analyze focused on both so-called mature (or previously discussed) topics such as environmental ethics, and emerging subjects or topics. In the case of established subjects, following Snyder's (2019) methodology, our intention was to overview the historical knowledge base, to critically review and potentially re-conceptualize, and to expand on the theoretical foundation of both types of ethical 'camps' or 'streams'. Our literature review of emerging topics was based on selection of relevant themes that emerged from content analysis, with coauthors of this article independently identifying segments and then identifying themes that emerged in our selection, and then focusing on mutually selected

or complimentary themes. These themes included integrated ethics applied in present-day situations such as industrial farming or the threat of extinction of multiple species.

The following two sections have thus synthesized and present the most relevant 'classical' literature on ecocentric or animal-focus ethics. For newer integrated theory in the context of present risks of wildlife extinction or animal abuse in intensive farming, our purpose was rather to create initial conceptualizations that result in the 'golden rules' outlined in concluding sections. This novel literature review did not cover all relevant literature but rather combined perspectives and insights from different 'streams' (Snyder, 2019). For the purpose of this literature review, the terms and their synonyms defined in the section above have been used to search interdisciplinary databases such as Google Scholar. We note that some terms, such as 'nonhumans' sometimes overlapped with other terms such as 'animals', or topocentric sometimes overlaps with physiographic, but in some sources referred to the same entities. Hereby these terms are arranged in alphabetical order: animal ethics (or rights/liberation/welfare), anthropocentric, biocentric, biodiversity, compassionate conservation, geocentric, geodiversity, ecocentric, nonhumans (or greater-than-human), topocentric (or physiographic), ecocentric, zoocentric. These terms were then arranged in themes and structured along the lines of relevant theories.

Triangular Affair

'Triangular Affair', an essay written by Callicott (1980), suggested that in a wild biotic community the importance of collectives (ecosystems and species) overrides the interests of individual animals when the two conflict. Addressing the direct drivers of biodiversity destruction implies active environmental remediation and intervention. However, many thinkers in animal ethics and compassionate conservation, including Mathews (2012) and Wallach et al. (2020), urge that management and control in the case of wild animals be avoided as much as possible as nonintervention is preferable. In cases of farm animal or pets' welfare, more human intervention might be unavoidable as these animals' living conditions are dependent on their human owners. As Mathews (2012) sums up the divergence in perspective, animal ethics tends to acknowledge the moral status of individual animals but fails to encompass, and by implication protect, ecosystems or habitats, while ecocentric ethics tends to protect the environment as a whole but fails to respond to the moral status of individual animals. Similarly, Mark Sagoff's 'Animal Liberation and Environmental Ethics: Bad Marriage, Quick Divorce'. (Sagoff, 2017) article has pitched ecocentric, biocentric, geocentric, deep-ecology ethics, and animal ethics against each other. Callicott's and Sagoff's essays also provided fuel for those eager to point out that ecosystem- and biodiversity-concerned conservationists and those defending animal rights or welfare fundamentally disagree. It is worth noting that Callicott (1998) has softened his position, but polarization had already occurred. For example, Callen et al. (2020) have argued that focusing on individuals is unscientific, and protecting individuals can lead to the extinction of native species. Callen and colleagues also fear that because of their defense of individuals of invasive species, animal liberationists can stymie the conservation efforts required to meet Aichi biodiversity targets. In response, compassionate conservation proponents point out that control of 'bothersome' species is normally justified by human interests (Wallach et al., 2020). In the case of wildlife-human conflict,

for example, it is easier to 'control' elephants than to address human expansion (Kopnina, 2016).

Attempting to unite 'rights', 'welfare', and ecosystem concerns, many compassionate conservationists argue that the well-being of individual animals deserves consideration alongside that of species and ecosystems. The core norm of reducing human impact, as we shall elaborate on in this article, provides an insight about the arbitrary exclusion of certain areas and individuals from moral consideration, and as a result, fails to address pragmatic solutions that could aid both entire habitats and individuals within the species. A middle way of this 'core norm' refers here to what two seemingly disparate factions can agree on, and which can be used to help divergent factions move forward by identifying a point of agreement that might have gone unnoticed before.

Arbitrarily excluding expanding pasture areas, and billions of cattle and other domestic animals, from the category of 'invasive species' manifests human exceptionalism at an ethical level (Lynas, 2011), but also removes responsibility for pragmatic action, for example, the need to scale down animal farming. Heister (2015) has critiqued the overall anthropocentric nature of the term 'invasive species' and also noted the inconsistency in calling some nonhuman animals invasive, but not those we eat, such as cattle. It also testifies to the inconsistent ethics of 'moral schizophrenia' toward animals (Bisgould, 2008). Replying to the moral challenges with the rhetorical appeal to 'scientific' or 'in-practice' rejoinders attempts to hand-wave difficult problems away when in actuality certain moral values are being taken for granted (Coghlan & Cardellini, 2020). Playing into the divisions between environmental and animal ethics is that we tend to form a hierarchy of values.

Hierarchy of Values

The hierarchical value system is associated with Western thinking as other cultures are likely seeing this differently (Shoreman-Quimet and Kopnina, 2016). By synthesizing some of this Western thinking, Washington (2019) has developed such a hierarchy of values within the broad categories of biodiversity and geodiversity, stratifying collectives and individuals according to different degrees of importance:

Biodiversity

- The living planet itself and diversity of life
- Biomes (a large naturally occurring community of flora and fauna occupying a major habitat)
- Ecosystems in the landscape
- Threatened native species
- Endemic native species (a species found only in a particular area)
- Other native species or 'provenance' species locally-evolved to place
- Genetic diversity within a native species (subspecies and distinct populations)
- Introduced species to an area
- Individuals within a species

Geodiversity

- Geodiversity of the Earth
- Unique geodiversity of large areas (e.g. desert dunes)
- Threatened unique geodiversity (actively threatened by human actions)
- Unique geodiversity that can only be replaced on a geological timeline (e.g. flowstones in caves, protuberant ironstone banding on platy pagodas)
- Unique geodiversity that can be replaced on shorter timelines
- General geodiversity such as soils

As Washington (2019) elaborates, while all of the categories in the hierarchy have value, their importance decreases as we move downwards. Ecosystem decline, and the loss of endemic biodiversity, Washington argues, must be seen as a greater evil than the loss of a species or individuals. Controlling introduced species, he reasons, is thus a conservation imperative, especially regarding feral animals and nonnative plants that humans introduced in the first place. Washington argues that since life evolves within a specific place, endemic species are the primary architects of a whole food web of local life – an ecosystem in dynamic balance. If, however, they are moved to places where they did not evolve, then they do not have predators or other processes to control them, and hence may take over native ecosystems and threaten native species. Washington acknowledges that introduced species do have intrinsic value, but maintains that this does not mean they should be left uncontrolled as they are now in the wrong place and may imperil native biodiversity. Individual animals are dependent on wholes, which include individuals – but cannot be reduced to them. If we abandon this priority then we open the door to many additional extinctions of native species and move toward a homogenized, depauperate world, dominated by just a few common species of animals and plants (Washington, 2019). Until the time that invasive species have natural controls, as Washington argues, some feral animals and invasive plants, such as Burmese pythons in the Everglades in Florida, will need to be exterminated or otherwise controlled, to protect native biodiversity.

This is an area where animal ethicists and compassionate conservationists come into conflict with ecocentric ethics. As Will Travers reflects, ‘at the heart of compassionate conservation lie individuals: individual animals, individual species, habitats and ecosystems and the need for their support and protection’ (<http://compassionateconservation.net/about/>). Killing should be the last-resort solution, and it should be acknowledged that all life has intrinsic value and deserves moral consideration (e.g. Bekoff, 2017a, 2017b; Wallach et al., 2018). We need to note that compassionate conservationists allow no place for bizarre fantasies about eliminating natural predation in nature. According to the land ethic (Leopold, 1949), the lion is no worse than an antelope just because he is a carnivore – natural predation may not show much ‘compassion’ but it is biologically necessary (Chapron et al., 2014). The claim, however, that some species have less value just because they were at some stage introduced by humans begs uncomfortable questions about matters of personhood and responsibility for human-inflicted suffering (Wallach et al., 2020).

Santiago-Ávila et al. (2018) examine the ethical and scientific case for including individual animals in moral dilemmas and suggest that dismissing individual nonhuman interests is arbitrary and ethically inconsistent. If individuals within a species are at the

lowest of the hierarchy, this can, theoretically, justify anything from trophy hunting to culling of entire species. This position aligns with that deep-seated anthropocentric assumption that it is okay to kill an individual animal, for ostensibly good reasons, but never of course to kill a human (except under rare conditions of war, self-defense, or capital punishment).

Lynn (2018, 2019) notes that this hierarchical framing is vulnerable to being misinterpreted so that conservation and rewilding are about restoring ecosystem goods and services for primarily instrumental human purposes. It also sidesteps the open-ended deliberation needed to weigh moral and other values in conflict as they arise in specific contexts. It is certainly true that endemic species and wildness are to be valued, protected, and restored as a general principle. At the same time, over-emphasizing the differences between natives and non-natives resonates with Linnaeus proto-ecology of feudal analogies, not with challenges currently facing invasion ecology or the spatial ecology of movement associated with biogeography. It also has an element of species 'profiling' irrespective of whether immigrant animal lives have a positive, neutral, or negative roles in their niches. Thus, the hierarchy may underwrite overt or latent forms of speciesism, whether justified by anthropocentric or ecocentric approaches to moral value (Lynn, 2018, 2019).

While Washington (2019) writes from an ecocentric perspective, an analogous hierarchy of value is used to justify the anthropocentric position that regardless of how dire circumstances may be for a particular habitat, local communities should be allowed to access or use natural resources from that habitat (Inogwabini, 2020). Employing concepts such as trophic levels, keystone species, and species redundancy, Inogwabini (2020, p. 3) asserts that 'local human communities should be allowed to exploit resources within and near protected areas even if that exploitation by human local communities is harmful to biodiversity'. This claim is justified by a hierarchy of values, namely, that 'not all types of biodiversity are of equal value and do not matter at the same level; there are differences in functions; some species or ecosystems matter more than others' (ibid). Several strands of argument, including the sacredness of human life and social justice are used by Inogwabini in support of his position. Inogwabini (2020, p. 3) also claims that the most convincing argument in defense of biodiversity conservation is to appeal to instrumental values. This claim aligns with shallow ecology and the 'convergence theory' of Brian Norton (1984), according to which policies and motivations serving the interests of humans over the long run will also serve the interests of the environment and vice versa.

However, empirically it seems that anthropocentric motivation is insufficient to preserve those species that are not instrumentally useful to humanity (Kopnina et al., 2018; Piccolo et al., 2018; Washington, 2019). Instead of the assumption that only human life is 'sacred', geocentric, ecocentric, biocentric, and zoocentric ethics argue for recognizing intrinsic value beyond the 'human' (Doak et al., 2015; Miller et al., 2014). Traditionally, anthropologists have pointed out that Native Americans or Australian Aboriginals did not form hierarchies, but saw circles within which each part and participant has a place (Shoreman-Ouimet and Kopnina, 2016).

Another way of thinking about hierarchies is through the distinction between a 'hierarchy of values' and a 'situated constellation of values' discussed in hermeneutics (Lynn, 2018, 2019). This school of thought searches for situated moral understandings that

reveal the issues at stake and what to do about them using a praxis between a constellation of ethical insights and the actual context in which they are deployed. This promotes more nuanced thinking about people, animals, and nature as having distinctive kinds and degrees of value, moral and otherwise (Lynn, 2018, 2019). This hermeneutic distinction between a 'hierarchy of values' and a 'situated constellation of values' that distinguishes itself from androcentric, rationalist, absolutist, and rule-based ethics (see Peterson, 2013).

A Thought Experiment

Let us imagine the following tough questions, *as a thought experiment*. Why should humans who hurt nature the most, directly or indirectly (e.g. trappers, poachers, miners, road and parking lot builders, meat-eaters, car drivers, managers of oil companies) not be eliminated the way animals introduced accidentally (e.g. rats on ships) or intentionally (e.g. farm animals, feral pets) are? Does this mean that we are anthropocentric cowards (going for low-hanging fruit, as invasive species that are not going to fight back or put us in jail for murder)?

One can see many reasons as to why not:

- (1) Because we as humans (in most modern societies) have internalized the idea that any kind of killing under any circumstances is impermissible (deontological argument).
- (2) Because killing another human would defeat our cause. Anti-environmentalists will be given a perfect justification of their previously unfounded claims about environmentalists being misanthropic murderous eco-fascists (utilitarian argument).
- (3) Because killing humans would put us in jail or worse so we never see family and friends (egotistic argument).
- (4) Considering all points above, killing all other invasive species other than humans, seems more convenient (cynical argument).
- (5) Humans have culture, science, and technology that has allowed us to change the environment, move to other landmasses, and take other species (deliberately or not) to where they are not native. This technology also allows humanity to burn fossil fuels, to mine ores and create thousands of new chemicals each year. Humans are thus a sapient invasive species. As all ecocentric or compassionate scholars also hold to human ethics and are not 'antihuman', they stress that *we can* learn to change our actions as a duty of care and responsibility for the impacts of culture, science, and technology (humanistic argument).
- (6) Last but not least: Importantly, *none of the environmentalists or animal ethics proponents justify the use of lethal force on humans, unless they are mentally deranged*. The primary reason not to kill humans is a basic respect for all lives. Even most 'radical' groups like ALF and ELF have *not* hurt human beings when liberating chicken or burning property, respectively (ecocentric/animal rights argument combined).

Summarizing Differences and Similarities Between Ecocentric and Animal Ethics

Some argue that human responsibility toward the natural world includes controlling introduced feral animals and nonnative plants. However, as animal ethics and compassionate conservation suggest, we should be careful that the term 'control' does not become a euphemism for facile extermination. We have explored the logical implications and inconsistencies of hierarchical reasoning that put nonhuman individuals at the lower rung of the hierarchy than collectives, but do not hold individual humans responsible. In the context discussed above, the hierarchy of values prioritizes some species above others. As a practical example of this, we are all aware that the conservation movement directs more energy toward threatened species than non-threatened ones.

A challenge is how to position 'time' in this ethical question. Are recently introduced species worth less ethical consideration than those that were introduced, for example, two hundred years ago? Is the pre-industrial (everything before mid-1700 in England) or even the pre-agrarian period a good cutting point for when the ethical 'good' is worth consideration? For example, climate change is already driving polar bears further south in search of food. Does this make them invasive species to be 'controlled'? What justifies killing a duck that was brought 200 years ago to England to save another introduced duck that has been around longer? How long does a species need to be present to be considered native or naturalized? Take the genet in France, brought by the Arabs in the 7th century, which used to be an alien species, and is now considered native. Consider also that in today's context introductions of nonnative species are happening at the same time as climate change, land clearing, and other instances when native ecosystems are already under the impact. The problems are all human-caused but that fact (along with the fact that humans could also be viewed as invasive) seems to never factor into the decision-making process and neither does our responsibility. Human overpopulation and overconsumption are forcing us into 'triage' and environmental engineering.

Similarly to the arbitrariness of 'time' is that of 'space'. According to hierarchical values, the same species will not have the same value in different places. For example, the raccoon dog can be perceived as an endemic in the Russian Far East and invasive in Sweden. Wolves might be seen as endemic in Russia but invasive in Sweden. While in Australia the definition of invasive is more clear-cut (at least since continental plates have taken their present position), in other places, it is not.

Associated with a reification of the nonhuman nativity is another tricky question about indigenous people. We can define the Indigenous as those that lived in one locality (for a long – undefined – period). Yet, by the same token as 'invasive species' are labeled, we would expect that groups that have (voluntarily) moved from a place (e.g. 'out of Africa' theory), slaves brought from Africa involuntarily, or contemporary migrants should have a 'lower' status in the hierarchy. Should, for example, all-white Australians be thrown out of Australia because they are not native to the local environment and even have destroyed, directly or indirectly, many native species, including their kind (the Aboriginals)? How about Russians living in The Netherlands – should they not be sent

back to Siberia? Should indigenous groups have special rights? While it is argued that the indigenous communities had not harmed biodiversity (Sponsel, 2013), evidence suggests that early humans might have caused extinctions (Barnosky et al., 2004). There is also evidence that as the population grows (supported by medical technology) and consumerist practices and anthropocentric ideology spread, both 'traditional' (e.g. hunting critically endangered wildlife for bushmeat) or 'modern' (e.g. intensive farming, industrial production) threaten the last remaining wild habitats.

An additional philosophical quandary requires to be addressed: about the situation of human action in an ecocentric approach, without according to the genus *homo* some distinct or higher ethical value owing to our 'sentience' – to add to the points raised by Watson (1983, pp. 245–256) regarding the apparently unique situation of humans in their environment. A response in addition to the alternative ontologies of nature and self (Anderson, 2020) may be made on the ground that human action toward an ecocentric world constitutes reparation and restitution, 'letting go' rather than 'doing' – which requires no privilege of place to justify.

On the one hand, the notion of an 'ecocentric hierarchy' seems to be an oxymoron, a logical inconsistency. Following Orwell's quote that all species have value but they do not have equal value, it appears that every living creature is morally considerable but not morally equal, humans with the most value, feral animals with less value than native ecosystems. Even without using labels like species racism or moral schizophrenia concerning animals (Bisgould, 2008), one can see that invasive control policy is morally inconsistent. Hierarchies might bring us quite close to economic accounting whereby what is rare is more valued while abandoning the shared intrinsic value as an underlying principle.

On the other hand, we can argue that while Washington's hierarchy may present a good rough guide, there is a need for nuance and flexibility in considering each habitat, species, or individuals in terms particular needs (Mathews, 2016) and also for recognizing that we are often presented with hard choices and complexities. In this aspiration, it is important to distinguish long-range goals – changing human society, including capitalism-driven consumerism, anthropocentrism, and other detrimental values, substantially lowering meat-eating, reducing the human population, etc. – from present goals of environmental management. Environmental managers are often forced to resort to non-compassionate means in some instances, for example, in Australia, to fumigate warrens to control rabbits and use herbicides to control wheel cactus. If at present, there are no practical alternatives to these lethal and dirty methods, they may need to be tolerated as *short-term* solutions, while fully acknowledging that they are deeply flawed interim measures – lesser evils – and working actively toward more ethical solutions. Eventually, some nonnative plants could naturalize as native species adapt to them. Some invasive species, such as the prickly pear, are kept in check by natural 'controllers', such as *Cactoblastis* moths. Feral animals are a more difficult issue. Many feral animals in Australia (e.g. cats, foxes, pigs, goats) are controlled by dingoes. Dingoes are predators of feral animals in natural areas, and hence help stop a further wave of extinctions of small and medium-sized marsupials. The problem is that most states still seek to wipe out dingoes because they can predate on sheep on private land. When Australian farmers use known ways of protecting sheep that do not involve baiting for dingoes, such as introducing donkeys, llamas, and marammas to sheep flocks, this improves things. Yet, if one owns a dog in Australia, which is invasive (and needs pet food made of the farm

animals) and that dog is attacked by a dingo, would one allow the loyal companion to be torn apart by the indigenous one?

We can easily support rangers who are risking their lives to prevent poaching. But should our compassion for some rhinos (and indeed, for entire species of rhinos struggling for existence) trump that of compassion for the poacher who might be shot on sight? The idea of an 'equal right to live and blossom' (Naess, 1973) may well be impossible to reflect in practice - one of the principal conundrums of deep ecology. This could be the reason why Naess dropped the principle of biospheric egalitarianism in the later deep ecology platform (Naess & Sessions, 1986). It is thus important to keep the hierarchies flexible, establishing basic principles, and then discussing trade-offs and necessary practicalities as challenges arise. Understandably, difficult ethical choices always present themselves between competing for moral goods, or enforced triage situations deciding on what trumps what in hard cases.

There is a need to weigh up the options in non-ideal conditions when wild habitats are already drastically reduced, invasive species dominate, the climate is breaking down, and win-wins are hard to come by. Refusal to form any priorities can be worrying if not properly approached – for example, the emerging field of recombinant ecology embraces the supposedly exciting emerging 'novel ecosystems' (for critical analysis of eco-optimism in conservation see Kopnina et al., 2021). Discounting introduced species as problematic in all cases, as a matter of principle, can lead to downplaying the loss of native diversity they often cause. In some cases, nonintervention might be worse than management. Hard choices are forced in situations where wilderness is so depleted or fragmented that some human intervention might be necessary. For example, *Rhododendron* that is suppressing native woodland flora in the United Kingdom might need to be controlled (Gray & Curry, 2015), and herbivores land-locked in the failed Dutch rewilding experiment need to be euthanized to avoid slow starvation (Shoreman-Ouimet & Kopnina, 2016). Coghlan and Cardellini (2020) argue that the inevitable movement of animal ethics into the field of conservation biology should be seen as an invitation to a serious dialogue about basic values and moral principles in conservation biology.

Interconnected Values

Beyond disagreements between those who advocate ecocentrism, and those who champion animal rights,, our endeavor is to combine their perspective on the basis of underlying continuities and resonances of values that can be foregrounded. This endeavor is supported by the realization that ecosystems as wholes are composed of species and populations, and the individuals who make up those species and populations are interdependent, and ultimately inextricable. These interconnections are illustrated in the series of personal essays written by various self-identified ecocentric authors for *The Ecological Citizen* journal (2017) under the theme 'How I came to ecocentrism'. Most contributors discussed how a connection with an individual animal -for many, in childhood – translated into recognition of the animal's personhood (animal ethics), played a key role in their eventual embrace of the entire natural world (ecocentrism). Empathy for all living creatures, starting from individuals within the species was highlighted in all the essays. Some examples are given below, with the author's emphasis in boldface:

Animals were key teachers about ecocentrism for several of us – the lyrebird for me, the moose and the toad for John Vucetich, the horse for Reingard Spannring, the dog Belisarius for Eileen Crist, and many animals for Marc Bekoff (2017b) and John Piccolo. Plants, or rather flowers, in particular, were key teachers for Ian Whyte. *(Washington, 2017)*

If moose and wolves have ‘lives’, then the toad and chickadee and squirrel that live in town (just outside our house) . . . have lives too. Being less familiar with the details of their lives in no way diminishes the fact; *they each have their own life*. **As I understand it, ecocentrism is to acknowledge and honor the intrinsic value of ecosystems, populations, and individual organisms** – the entire hierarchy of life **without prejudice for or against any rung in the hierarchy**. *(John Vucetich)*

Biophilia and biocentrism are natural partners. It would be schizophrenic to have one without the other. I can’t recall it ever occurring to me that animals, **at least, are fundamentally inferior to humans**. From my earliest memories, I had a strong intuitive feeling that all animals have intrinsic value. *(Reed Noss)*

On the personal, emotional level, I started to feel a strong **empathy, of being a part of and oneness with the Earth and Her creatures**. In many ways their joy is my joy, their loss is my loss. Their needs are, in some way, my needs. In some indefinable and indescribable way, I sometimes feel, strongly at times, that we are (at least partially) an integrated whole. *(Ian Whyte)*

My parents told me that when I was around 3-years-old I started asking them what animals – especially the dogs, squirrels, birds, and ants with whom I had contact outside of our apartment in Brooklyn – were thinking and feeling. They said I was constantly **mindng animals; not only was I attributing minds to them, but I also was very concerned with how they were treated**. *(Marc Bekoff)*

Children often sympathize with animals, for example, viewing them as they view other humans. They seem to recognize instinctively that **animals pursue a good of their own** – that they need food and shelter just like us. **I trace the stirrings of my ecocentrism to my childhood spent collecting fish, frogs, snakes, and salamanders** in the New Jersey woods, a stone’s throw from Manhattan. *(John Piccolo)*

But such a connection to nature also allowed me to feel pain, irritation, and sadness, as when my neighbors rescued a kitten and put it up with their cat ‘to calm down the kitten’, rather than taking it back to its mother. Or when I saw horses shut into little ‘loose’ boxes for hours, or **cattle chained to their troughs for months on end, or logged forests and meadows being eaten up by construction sites. The barrier to empathy and responsibility toward animals and nature lies in anthropocentrism**. *(Reingard Spannring)*

A dog named Belisarius taught me that betrayal is a great crime and that the one covenant with all beings is goodness. He showed me that goodness is not an ethical choice – it is an ontological condition stitched into the makeup of the universe. Sooner or later we discover that it’s the only choice. In that sense, neither the ecological crisis nor its solution is overcomplicated. Human beings (sooner or later) will recognize that killing the living world cannot produce wealth, any more than killing the king for the kingdom could make Macbeth king. *(Eileen Crist)*

. . . Until I had this critical thought: Can I not be *inside* the system and still **value all life-forms in the same way, as an equal player in nature?** Once the valuation barrier between humans and the rest of life had been broken, there were only two paths that *rationaly* made sense to me. One was to nihilism; the other to **measuring all life’s meaning with the same stick**. *(Joe Gray)*

Frameworks	(Intrinsic) value or moral importance is assigned to	Actions associated with maintaining this value	Main and subordinate 'adversary'	Relationship with other frameworks
Ecocentrism, deep ecology, land ethics	Native or endemic biodiversity, genetic, species and ecosystem variety, whole ecosystems, have greater intrinsic value and ethical standing than feral animals and exotic plants.	Invasive species need to be controlled by active management and intervention. 'Ecocentric ethics of land management' includes a hierarchy of values. Ambition: Establishing political and legal structures protecting biodiversity, rewilding	Anthropocentrism; Human population growth and industrial development; Invasive species that cause extinctions of endemic species, domestic animals that go feral, farm animals that take up ever more natural ecosystems	Misgivings towards some strands of compassionate conservation that argue feral animals and exotic plants are harmless. Animals released from laboratories by animal rights activists invade native ecosystems
Animal rights, animal welfare, animal liberation	All life, but often focused on individuals within the species, often focused on 'higher animals' such as mammals and birds, and to lesser degree insects, bacteria, etc.	The liberation of laboratory, farm, zoo, circus, etc. animals. Promoting veganism. Protecting individuals. Ambition: Establishing political and legal structures protecting animals (complementing existing or building new ones)	Anthropocentrism; Human population growth and industrial development; food, medical and other industries that directly or indirectly cause animal suffering	Misgivings against conservation management that culls predators, invasive species, or select animals such as horses or cats. Sometimes against the use of sterilization.
Combined ecocentric and animal ethics	All life, biosphere, biodiversity, <i>and</i> individuals within the species; the highest moral achievement we can attain	Ambition: Establishing political and legal structures protecting biodiversity and individuals complementing existing or establishing new institutions, eco-representation, ecodemocracy, eco-justice. Half-Earth and bio-proportionality	Anthropocentrism; Human population growth and industrial development; conversion of wild habitat into urban or agricultural areas, inhumane treatment of farm animals, and environmental damage	Attempting to reconcile and combine (make complementary) two frameworks above, combining care for habitats (ecosystems) with care for individual animals. Attention to 'common enemy' (human expansion)

The following table summarizes the differences and similarities in ecocentric and animal-centered perspectives.

The shared concept of intrinsic value has the potential to unite both perspectives and to genuinely inhabit the contradictions, making decisions on behalf of animals without the comfort of simple and absolute answers (Van Dooren, 2011). As Mathews (2012, p. 120) states, 'A different set of practices from those currently prescribed by environmental authorities needs to be devised to meet both the ethical and ecological requirements of our contemporary natural environment' – practices beholden to and instructed by the recognition of the intrinsic value of individuals as well as that of species and ecosystems. Intrinsic value, however, is more than philosophical concept, it can be used as a legal and political tool to protect nonhumans and their habitats from the 'common cause of harm' – industrial and agricultural expansion.

On the question of whether or not ecocentrism needs to acknowledge the intrinsic value/intrinsic moral standing of individual beings, Mathews (2016, p. 145) developed the following argument:

If conservationists are not prepared to uphold, in principle, the entitlement of living things to their own existence, whether they are endangered or not, then from whence does the commitment to preserving species diversity arise? Diversity per se cannot be deemed intrinsically valuable [...] One does not value diversity where evils or matters of indifference are concerned (a diversity of diseases, for instance, is hard to prefer over a single disease). Diversity is intrinsically valuable only in relation to goods. If life is considered good in its own right, then the greater the richness of life the better, where diversity in the forms of life is one measure of such richness. But if life is not considered good in its own right, then any value accorded to diversity, in the case of species, must be purely instrumental: species diversity must be figuring merely as a condition for ecological functionality, where ecological functionality must in turn be figuring merely as a condition for human amenity and survival. In other words, unless conservationists insist on the value of life in itself and hence the entitlement of living things, whether endangered or not, to their own existence, their commitment to biodiversity must ultimately be merely instrumental.

According to this argument, then, ecocentrism (which is of course opposed to anthropocentrism) does not make sense if it is divorced from an underlying valorization of living beings in their own right. This does not imply that a principle of the sanctity of individual life needs to be upheld by ecocentrists. But it does mean that the intrinsic value of every living thing *always needs to be taken into account* in ecocentric decision-making. Conservation based on an ecocentric perspective accordingly needs to keep seeking methods that accommodate the moral claims of both individuals and systems, since it is actually incoherent for ecocentrism not to acknowledge the intrinsic value of individuals.

Protecting habitats and their (nonhuman) inhabitants, and conserving wild nature while also caring for domesticated animals, do not have to be mutually exclusive tasks. We realize that in the real world, given the way society is structured and the anemic resources available to help non-human organisms and ecosystems, those charged with responsibilities in conservation have to make difficult decisions. In most cases where conflicts or the forcing of trade-offs arise, it has to do with human agency. To circle back to the example of ‘happy chickens’ or ‘happy penguins’, we can reject the choice and argue instead for we need to substantially lower the human population and reduce animal-product consumption. Then we can have ‘happy chickens’ and ‘happy penguins’. We note that this question of choice pits ‘food’ animals against wild animals avoiding the question of human behavior and the human interest of eating animal products, which are really the crux of most, if not all, major problems from contributing to climate change, ecosystem destructions, and water pollution. The essential H (habitat destruction) of HIPPO paradoxically excludes the largest perpetrators of harm. Crist et al. (2021) write:

‘[Much] habitat destruction’ is a human-mediated, deemed legitimate biological invasion of domestic species like wheat, corn, soy, rice, almond trees, palm oil, sugar, cattle, sheep, goats, pigs, and so on ... A huge portion of croplands is dedicated to feedstock for confined farm animals. Thus, once we loosen the grip of ‘habitat destruction’ and ‘invasive species’ as balkanized categories of impact, we can readily perceive that *the biological invasion of livestock*, driving habitat loss, as well as wildlife killing, pollution, and climate

change, is the foremost driver of biodiversity collapse. Of course, the problem is not farm animals [...] but the scale of this biological invasion, which is driven by human population growth in conjunction with the excessive and rising consumption of meat and other animal products.

As Curry (2011) notes, farm animals, companion animals, and other ‘domesticates’ fall under our responsibility, and thus a concern for their welfare is legitimate. As Zaraska admits, consuming less meat is one way to solve the win-lose of climate stabilization and animal welfare goals, yet she also acknowledges that it is not so easy: eating animals is deeply entangled with culture and history. However, we need to realize that this trend of ‘history’ is recent and largely Western-industrial (insofar as the eating is related to the eating of mass-farmed ‘livestock’)– with its offshoots of dominating, confining, controlling, managing, and consuming other animals, the view of them as property – since many Hindu and Buddhist countries (where consumption of meat has drastically increased) used to be traditionally vegetarian (Filippini & Srinivasan, 2019). There has been a marked shift in human relationships with animals which were consumed in prior societies as part of a cynegetic relationship, to a more ‘pastoralist’ and dissociated approach under the present system.

However, due to the rise of vegetarianism and veganism in Western countries (De Boer et al., 2017), a shift toward a different ‘modern’ diet is emerging. As Diehm (2012, p. 37) notes: ‘to embrace the ecological realities in which we are always implicated would be, at the same time, to reject any ecologically naïve vision of ourselves as indiscriminate consumers of sentient beings or a morally empty and dominionistic commodification of some of our closest biological kin’.

The emerging field of animal law also promotes the unification of ecosystem conservation and individual-level concerns, which can be seen as aspects of a single overarching principle of species/habitat protection. Sykes (2016, p. 61) writes that although international conservation law is concerned with species conservation, the ‘protection of individuals for their own sake – from unnecessary cruelty, or even outright protection from being killed – is reflected quite extensively in various treaties and other international instruments’. As Jamieson (1998, p. 50) pointed out:

Environmentalists and animal liberationists have many of the same enemies: those who dump poisons into the air and water, drive whales to extinction, or clear rainforests to create pastures for cattle, to name just a few. Moreover, however one traces the history of the environmental movement, it is clear that it comes out of a tradition that expresses strong concern for animal suffering and autonomy. Certainly both the modern environmental and animal liberation movements spring from the same sources [...]: a disgust with [...] the creation of a culture which views humans and other animals as replaceable commodities and the prevailing faith in the ability of science to solve all of our problems [...]. Even today people who identify themselves as environmentalists are likely to be as concerned about spotted owls as old-growth forests and to think that vegetarianism is a good idea. Many people are members of both environmental and animal liberation organizations and feel no tension between these commitments.

Ways forward would include promoting Half-Earth (e.g. Cafaro et al., 2017), bioproportionality (e.g. Mathews, 2016) and rewilding (Bekoff, 2017b).

Ways Forward

The ‘Golden Rule’ is generally understood in ethics as the rule that ‘do unto others as you would have them do unto you’. Kant’s Categorical Imperative is perhaps the most famous version (and refinement) of it. What we are putting forward here, however, may perhaps be better described as a Middle Way – between ecological ethics and animal ethics – guided by a core norm of reducing human impact. Addressing human responsibility, as difficult as it is, through changing our diet, transport, and other behaviors, both on individual and collective levels, should be the key before ‘management’ and ‘control’ of animals. On this line of reasoning, Crist et al. (2021) arrive at an inexorable and hopeful conclusion:

That if we were to vastly reduce the number of livestock on the planet, we would contract the range of these ‘invasive’ species – both grazing and feedstock – freeing habitat for wild creatures. The reversion of habitat back to the wild could only facilitate the ecological negotiation between native and introduced species. Problems, losses, and dilemmas would not necessarily disappear, but they would become less acute and less pressing in a more spacious world for wild critters to work out their relations . . .

One rule of thumb involves which species to prioritize and on which of our activities to limit. Indeed, scientists, managers, and ethicists need to help environmentalists and animal-rights advocates reach a ‘middle path’ that can be acceptable to both and beneficial to their causes *that takes into account the invasiveness and damage caused by our own species* (Perry & Perry, 2008, p. 28). One manifestation of this middle path is a far more far-reaching international action to prevent the trade of animals that can become invasive and end the trafficking of native animals and endangered species. In some cases, having some human-directed areas can be a good option in the case of landscapes that have already been vastly human-changed, but attention to the root causes of change – often times, industrial or agricultural exploitation or extraction of resources – needs to be addressed first. If there is doubt about the best course of conservation action, we should be guided by what is likely to be best for the remaining fauna and flora and not economic profit. *Thus, we should seek ways of addressing human actions first through ecologically and socially just interventions, and, if necessary, find ways of controlling invasives through natural controls such as native predators.* As Mathews (2012) suggests, we should try as far as possible to restore functionality to ecosystems so that they can stabilize themselves in ways that maintain and promote biodiversity – without necessarily restoring exactly the same original mix of species. Instead of poisoning non-native plants (e.g. by using herbicides that kill Australian invasive blackberry but add to the toxic load of the soil), we need to aim to protect and increase wild habitats to facilitate the emergence and spread of natural controls.

In this sense, an ‘interventionist’ approach would mostly intervene in one-species-only dominated areas, such as making cities more hospitable to nonhuman flora and fauna, enabling the Half-Earth vision where natural areas are truly shared among all species (Cafaro et al., 2017). Intervention can be focused both on the increasingly battered areas of hybrid wilderness *and* in areas of urban and agricultural expansion. By contrast, rewilded areas should include little to no human management, as the successful reintroduction of predators and other keystone species creates a self-regulating and self-sustaining habitat, with near pre-human levels of biodiversity.

The middle path proposed here involves direct questioning of what type of human agency lead to ecologically devastating or immoral outcome for individual non-humans. We are very unlikely to reach a fair balance between all Earth's species given anthropocentrism, human overpopulation, and overconsumption. More is needed, such as shifting to an ecocentric worldview, acting seriously on the unmet need for family planning, and moving to a steady-state economy (Washington, 2019). As a sapient invasive species, we can reduce the impacts of the damage our society causes, for example by protecting forests, addressing climate change, ending pollution, and facing human overpopulation through voluntary birth control, education, and female empowerment. We can aspire to low energy, low resource use, low or no animal-product consumption, peaceful co-existence, and economic degrowth (Kallis, 2011). Practically and strategically, we need to find ways in which ecosystems *and* individual animals can be politically and legally represented (Baxter, 2005; Gray & Curry, 2019). This, admittedly, is more difficult than 'controlling' nonhuman species as it involves shrinking urban and agricultural areas, with associated hazards of angry industrial developers, farmers, road builders, politicians, corporate representatives, and some media opposing these efforts. However, we can hypothesize that most urbanites would welcome green planning of urban centers. Uniting over unambiguous moral support for all species, rather than internecine divisions between ecocentric and zoocentric 'camps', would be, in our view, an extremely positive development. Under the threat of climate change and pandemics such as coronavirus, we have an opportunity to find ways to change our value system, cultivating pro-social human traits such as empathy and compassion in order to dethrone anthropocentrism and foster equitable co-existence among all – nonhuman and human. Nature's intrinsic value, the ecological relations, and personhood of nonhuman others may be seen as entwined, emergent from, and continuous with our own powers of our sentience, sapience, and sociality. The further elaboration of these capabilities can help to deepen empathy and sharpen reason, turning us into full-fledged agents for the well-being of others and the world.

Luckily, there are many examples of best practices. Even in the case of 'difficult' animals (in terms of potential for human-animal conflict) such as carnivores, conservation successes have been booked thanks to protective legislation, supportive public opinion, and a variety of other convivial practices (Chapron et al., 2014). The merger of ecocentric/animal ethics concerns is reflected in the work of various organizations. The World Charter for Nature, for example, recognizes the good-of-itself that 'renders each organism morally considerable in its own right' and implies 'protection of individuals for their own sake' (Sykes, 2016). Some conventions and organizations, at least on paper, recognize the intrinsic value of both environment and individuals (Borràs, 2016). Protection of individual animals, as well as the collective rights of animals, are enshrined in, among others, the Convention on Biological Diversity; the International Convention for the Regulation of Whaling, the Convention on the Conservation of Migratory Species of Wild Animals, government organizations like Parties for Animals, and various NGOs associated with the Earth Charter.

Conclusion

For some, conserving as much of Earth's diversity of species and ecosystems is the fundamental goal: In such a holistic frame, lethal means can be construed as, ultimately, the most compassionate ones. But the aspirations for ecological justice and ecodemocracy emerge out of an ethic that encompasses biophilia or love for *all* life – humans and animals, species native or introduced, pets and farm animals, plants, fungi, and others as well as the habitats that sustain them. The biggest threat to a convivial interspecies coexistence comes from the self-appointed 'God species' (Lynas, 2011). In recognition of this threat, humility – and not necessarily 'control' or 'management' (weeding, culling, or killing) – should prevail. This requires a paradigm shift, and even a change in how we see human nature, in terms of our place in the world and the human journey. Most importantly, we need a new set of values to live by (White, 1967). Without addressing human demographic, agricultural and industrial expansion first, neither Aichi targets nor 'humane' treatment of animals used for consumption can be achieved. The combined non-anthropocentric ethics of ecologists and animal defenders exposes anthropocentrism as the root cause of environmental crises and nonhuman suffering. Humility in reducing our impacts, while cultivating the best of what our species has to offer – love and compassion, reason, and wisdom – can lead to the brighter path. If these recommendations do not seem pragmatic or realistic, we should remember the famous quote by Albert Einstein: 'We can't solve problems by using the same kind of thinking we used when we created them'.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

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