

## CONCERN FOR WILD ANIMAL SUFFERING AND ENVIRONMENTAL ETHICS: WHAT ARE THE LIMITS OF THE DISAGREEMENT?

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Résumé de l'article

Le présent article examine l'étendue de l'opposition entre les environnementalistes et ceux qui se préoccupent de la souffrance des animaux sauvages, afin de déterminer s'il existe des points sur lesquels ils peuvent être en accord. L'article débute en présentant les raisons permettant de conclure que la souffrance et la mort prématurée l'emportent sur le bien-être positif dans la nature. Ensuite, il explique plusieurs façons d'intervenir afin d'aider les animaux et de prévenir les maux dont ils souffrent et plaide pour la mise en oeuvre de celles-ci. Plus précisément, l'article préconise un plus grand nombre de recherches afin de déterminer les meilleures façons d'intervenir sans causer davantage de maux à d'autres animaux ainsi que pour prioriser des interventions en des endroits que l'action humaine a significativement transformés. L'article examine par la suite les positions que les conceptions environnementalistes peuvent adopter quant aux interventions dans la nature pour le bien des animaux. L'article propose que, bien que des visions écocentriques et naturocentriques s'opposent vivement à l'intervention dans certaines circonstances, elles ne devraient cependant pas s'y opposer dans les cas où les valeurs qu'elles promeuvent n'entrent pas en jeu ou peuvent avoir moins de poids que d'autres facteurs. L'article soutient ensuite que, contrairement à ce que l'on pourrait penser à première vue, les théories biocentristes devraient fortement appuyer l'intervention. Il pose la question à savoir si certains problèmes pratiques peuvent faire l'objet d'une approche commune parmi les environnementalistes et ceux qui se soucient de la souffrance des animaux sauvages, par exemple s'opposer à l'écologisation des déserts. Enfin, l'article propose que la tâche la plus pressante pour ceux qui se préoccupent de la souffrance des animaux sauvages consiste à accroître la sensibilisation à ce problème.



# CONCERN FOR WILD ANIMAL SUFFERING AND ENVIRONMENTAL ETHICS: WHAT ARE THE LIMITS OF THE DISAGREEMENT?

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## ABSTRACT:

This paper examines the extent of the opposition between environmentalists and those concerned with wild-animal suffering and considers whether there are any points they may agree on. The paper starts by presenting the reasons to conclude that suffering and premature death prevail over positive well-being in nature. It then explains several ways to intervene in order to aid animals and prevent the harms they suffer, and claims that we should support them. In particular, the paper argues in favour of carrying out more research to learn the best ways to intervene without causing more harm to other animals and to intervene first in areas significantly transformed by human action. It then examines what positions environmentalist views can have towards intervention in nature for the sake of animals. It claims that, while ecocentric and naturocentric views will strongly oppose intervention in certain circumstances, they should not do so in other cases in which the values they promote are not at stake or might be outweighed. The paper then argues that, contrary to what it might seem at first, biocentric views should strongly support intervention. It then discusses whether there may be certain practical issues about which those concerned with wild animal suffering and environmentalists may support the same approach, such as opposition to the greening of desert ecosystems. Finally, it claims that raising awareness about wild animal suffering seems to be the most urgent task now for those concerned about it.

## RÉSUMÉ :

Le présent article examine l'étendue de l'opposition entre les environnementalistes et ceux qui se préoccupent de la souffrance des animaux sauvages, afin de déterminer s'il existe des points sur lesquels ils peuvent être en accord. L'article débute en présentant les raisons permettant de conclure que la souffrance et la mort prématurée l'emportent sur le bien-être positif dans la nature. Ensuite, il explique plusieurs façons d'intervenir afin d'aider les animaux et de prévenir les maux dont ils souffrent et plaide pour la mise en œuvre de celles-ci. Plus précisément, l'article préconise un plus grand nombre de recherches afin de déterminer les meilleures façons d'intervenir sans causer davantage de maux à d'autres animaux ainsi que pour prioriser des interventions en des endroits que l'action humaine a significativement transformés. L'article examine par la suite les positions que les conceptions environnementalistes peuvent adopter quant aux interventions dans la nature pour le bien des animaux. L'article propose que, bien que des visions écocentriques et naturocentriques s'opposent vivement à l'intervention dans certaines circonstances, elles ne devraient cependant pas s'y opposer dans les cas où les valeurs qu'elles promeuvent n'entrent pas en jeu ou peuvent avoir moins de poids que d'autres facteurs. L'article soutient ensuite que, contrairement à ce que l'on pourrait penser à première vue, les théories biocentristes devraient fortement appuyer l'intervention. Il pose la question à savoir si certains problèmes pratiques peuvent faire l'objet d'une approche commune parmi les environnementalistes et ceux qui se soucient de la souffrance des animaux sauvages, par exemple s'opposer à l'écologisation des déserts. Enfin, l'article propose que la tâche la plus pressante pour ceux qui se préoccupent de la souffrance des animaux sauvages consiste à accroître la sensibilisation à ce problème.

There is an optimistic view of the wild that is relatively widespread today, according to which animals in the wild lead lives that are on the overall good, as long as we do not interfere. This notion seems to be connected to environmentalist ideas of nature as an idyllic place. There are very strong reasons, however, to conclude that this view is mistaken. Animals in the wild suffer due to many nature causes. These include, among others, malnutrition, hunger and thirst (Zimmerman, 2009; McCue, 2010), diseases, accidents and injuries (Cooper, 1996; Wobeser, 2005), hostile weather conditions (White, 2008), attacks by other animals and parasites and psychological stress (McGowan, 1997; Moberg, 2013 [1985]). In fact, many animals live short lives, enduring significant pain due to these causes (Animal Ethics, 2016a). These animals would benefit greatly if we took action to help them. For this reason, a growing number of theorists have argued in favour of intervening in the wild to reduce the harms suffered by nonhuman animals, whenever that can be done without causing more harm to others (see, for instance, Ng, 1995; Nussbaum, 2006; Tomasik, 2015a [2009]; Horta, 2010; Sözmen, 2013; Faria and Paez, 2015; McMahan, 2015; Faria, 2016; Ryf, 2016; Garmendia and Woodhall, 2016; for early precursors of this idea, see also Gompertz 1997 [1824] and Sapontzis 1987; for defences of moderate forms of intervention, see Næss, 1991; Kirkwood et al., 1994; Palmer, 2010; Donaldson and Kymlicka, 2011; for a review of the literature see Dorado, 2015).

This paper will defend this view and examine the extent to which it conflicts with environmentalist positions. To do this, section 1 presents the reasons to claim that suffering and premature death prevail in nature, by explaining that most animals have painful deaths shortly after coming into existence. Section 2 presents some of the ways in which humans are currently intervening that are positive for animals in nature, as well as other more significant forms of interventions that could be carried out. Sections 3 to 5 seek to determine the cases when these interventions would meet opposition from different views, traditionally identified as environmentalist, on what entities are morally considerable. Section 3 examines this in the case of ecocentrism, and section 4 assesses it in the case of wilderness-focused positions (which we can refer to as “naturocentric”). Section 5 argues that biocentrism must fully support intervention in nature. Then, section 6 discusses whether there may be certain practical issues on which those concerned with wild-animal suffering may have stances similar to those of environmentalists’. Section 7 concludes by pointing out some practical implications the arguments in this paper have.

## **1. WHY ANIMAL SUFFERING PREVAILS IN NATURE: THE ARGUMENT IN A NUTSHELL**

Most adult animals living in the wild have to face some of the sources of harm mentioned at the beginning of this paper, such as hunger, diseases, weather

conditions, attacks, and distress. However, it appears that the main reason why suffering is widespread in the wild is that the majority of young animals have to endure these sources of harm without enjoying positive things enough to compensate for them. This is related to the fact that most animals have painful early deaths. To understand this, we must consider what reproductive strategies prevail in nature. Some animals have just one offspring, who is taken care of by his or her parents and has reasonable chances of surviving. But these animals are a tiny minority. Most nonhuman animals have evolved to have huge clutches or litters. In each generation, the number of offspring that come into existence can be several orders of magnitude larger than the number of adult individuals in the previous generation. For instance, animals such as frogs and many invertebrates can lay thousands of eggs, and others such as fish can lay millions of them (Sagoff, 1984; Stearns, 1992; 2000; Ng, 1995; Cappuccino and Price, 1995). Most of them, however, die shortly after coming into existence. On average, for stable populations, only one animal per parent survives.

The way these animals die is often very painful and sometimes slow. Many of them starve. Others die of cold or dehydration. Others are eaten alive (sometimes by parasites who may take a long time to do it). They thus suffer a great deal. In contrast, because the lives of all these animals are so short, they include very few opportunities for well-being. In fact, many of them experience little more than the pain of their deaths. Others can have some opportunities for enjoyment, but they are few and brief ones in comparison to the large amounts of suffering they endure while they live. This means that the proportion of positive well-being and suffering in their lives is radically asymmetric: these animals suffer a lot but experience little positive well-being. In other words, their lives include much more suffering than happiness (Ng, 1995; Tomasik, 2015 [2009]; Faria and Paez, 2015).

To be sure, some eggs are destroyed before a sentient animal gets out of them. Moreover, some of the animals that come into existence never develop into sentient beings, and some may be only barely sentient when they die. Nevertheless, in many cases, they are certainly sentient and suffer a lot. There are also cases in which animals may survive for some time even if they fail to reproduce. A juvenile fish can live for some weeks or even months before dying before reaching adulthood. Therefore, those animals may well live enough for their lives to include some happiness that can compensate for their suffering. But, in many cases, this does not happen, as they die when they are younger than that. We have reasons, therefore, to conclude that suffering prevails in nature over positive well-being. If, in addition, we consider that premature death is also a disvalue (see, for instance, Nagel, 1970; Bradley, 2009), we will have further reason to think that disvalue prevails over positive value in nature.

## 2. INTERVENTIONS THAT CAN HAVE A POSITIVE IMPACT FOR ANIMALS IN NATURE

There are different ways in which we can intervene to have a positive impact for animals in the wild. In fact, many of these interventions are being currently carried out in different places and circumstances. For example, the rescue of wild animals from ponds or frozen lakes is one such intervention that appears in the media every now and then. Cases of stranded marine animals or animals victim of natural disasters being helped are common, too. In many different places, there are also rescue centres for orphaned, sick, or injured wild animals (for detailed reports of this, see Animal Ethics, 2016b).

On a wider scale, wild-animal vaccination and feeding programmes are currently carried out in different countries (see, for instance, Rupprecht et al., 2003; Buddle et al., 2011; Reuters, 2002; Nepal Mountain News, 2011). These programmes have been implemented mainly to benefit humans (for instance, to prevent wild animals from passing certain diseases onto humans or from dying off in certain areas where they are a tourist attraction, such as some national parks). Still, the fact that they have been carried out successfully shows that it is perfectly feasible to implement them for the sake of nonhuman animals themselves.

Other forms of intervention that would have a much more significant impact on reducing the harms suffered by animals in the wild could be also implemented. In particular, environmental management and engineering programmes could be carried out not with the aim of furthering human interests or environmentalist aims, but of improving the situation of animals. To do this successfully, we would need more research, in order to apply the knowledge that we already have about how ecosystems work to achieve this new aim. A whole new field of study has been proposed for this. It has been named “(animal) welfare biology,” described as the study of the positive and negative well-being of living sentient beings in consideration of their interactions with each other and their environment (Ng, 1995). There is, however, a major obstacle to this field’s development and to the carrying out of interventions to aid nonhuman animals. It has to do not with epistemological or technical difficulties, but with the possibility that our moral views might conflict with the idea of aiding animals in nature. We will see this problem next.

## 3. ECOCENTRISM AND INTERVENTION TO AID ANIMALS

While there are sound arguments in favour of the conclusions reached above, these conclusions will be quite counterintuitive to many people. This will be so in the case of those holding blatant anthropocentric<sup>1</sup> speciesist views, according to which we have no reason to be concerned with what happens to nonhuman animals. But this paper is going to focus in particular in what environmentalist

views have to say on this matter. It seems at first sight that intervention to aid animals in nature is at odds with what these views prescribe. Nevertheless, while this is so to some extent, it is less so than it might seem. We will see this in the case of some of the most representative positions traditionally identified as environmentalist.

Let us consider first what holistic views maintain (Leopold, 1949; Callicott, 1989). They may oppose intervention for the sake of nonhuman animals by arguing that wholes such as ecosystems or species, rather than individuals, are the locations of value we should care about.<sup>2</sup> In particular, ecocentric holists would claim that animal suffering and premature death are just consequences of many ecological interactions, which are what actually matters. This is because, according to ecocentrism, the entities that are morally considerable are entities such as ecosystems, biocenoses, or ecosystemic relations, not individual entities. Accepting this view would lead us to conclude that the harms suffered by nonhuman animals are either not disvalues at all or disvalues that are to be considered necessary results of more important processes. Therefore, we should not be concerned with them.

This view can be opposed by challenging the conception of value on which it is based. But there are also several reasons why, even if we accepted an ecocentric view, we may be less reluctant to accept intervention for the sake of animals than we may initially think. To start with, it is worth pointing out that ecocentrists see nothing wrong with intervention in nature as such. In fact, they often support it, though not to aid animals, but in order to conserve, restore, or recreate a certain ecosystem. So, it is not that those defending this view think that nature is sacrosanct and that we cannot interfere with it. It is just that they want nature to be in certain ways, rather than in others. However, even if we accept that ecosystems are valuable, if the harms suffered by nonhuman animals matter too, then that should give us at least *pro tanto* reasons to intervene (Cunha, 2015). Intervention would be problematic only when it transformed significantly the ecosystems where it took place. In addition, it can also be argued that, if what matters is the existence of ecosystems as such, then transforming a previously existing ecosystem into a new one with less animal suffering should not be really problematic. After all, a new ecosystem would be present afterwards (Johnson, 1981, p. 271).

This is a characterization of the implications that ecocentrism (as defined above) has. However, it is not the way in which those who typically claim to be ecocentrists think. Rather, those who identify with this view usually value *present* ecosystems, rather than future or past ones. They do not usually regret that old ecosystems previously existing on Earth were eventually substituted by current ones, and are not thrilled by the prospect of present ecosystems being substituted by new ones. Still, it is also the case that most of those holding this view

also reject the claim that only ecosystems are valuable. They typically accept that the positive well-being and negative well-being of humans are also valuable and disvaluable (see Callicott, 1990, p. 103; 2000, p. 211; Varner, 1991). If this is so, then, lest they hold a speciesist position, they would have to accept a similar stance in the case of nonhuman animals.

To be sure, supporters of ecocentrism can acknowledge this and yet claim that ecosystems have a special value that outweighs the importance of the interests of animals. But note that this view would be contingent on the weight those interests have. If, aggregated together, those interests were significant enough, they could outweigh the holistic value of the ecosystems they live in. Given the extent of the disvalue suffered by nonhuman animals in the wild, we may have reasons to conclude that this is actually so in the wild. If this is correct, then even defenders of this ecocentric view would be forced to accept intervention, too. The only way to avoid this would be to claim that ecosystemic relations possess a value that trumps any disvalue. This position, however, seems quite hard to accept. It is certainly not the one held by defenders of this view when significant human interests are at stake, and very few other people will accept it in that case, either (on this, see again Varner, 1991; for an exception, see Linkola, 2009). Again, if this is so, it seems speciesist to hold a different view when equally strong or actually stronger interests of other animals are at stake.

Finally, it is important to note that supporters of ecocentrism are typically concerned not with all ecosystems, but only with those that exist in areas where human presence is not too significant, and that have not been too radically transformed in ways that bear little resemblance to other naturally existing ecosystems. This excludes at least urban, industrial, suburban, and intense-agriculture areas, and maybe also those used for extensive agriculture, as well as those radically transformed for recreation or other purposes. All versions of ecocentrism may accept intervention in these places. This leaves significant room for intervention, as together these places cover a very significant area, where an immense number of animals live.

Given all this, it seems that the environmentalist case against intervention in nature is not as strong as many people think, at least not when we consider ecocentric views. Let us examine now what wilderness-focused positions imply.

#### **4. NATUROCENTRISM AND INTERVENTION TO AID ANIMALS**

According to the views focused on the idea of wilderness, the value different entities have depends not (or not only) on the features they possess but also on how these entities got to exist and to be the way they are. In line with this, those who have defended this position hold that natural entities have value either just by virtue of being the result of natural processes not caused by human beings or

else by having certain features *and* by having them as a result of a natural process (Katz, 1992; Elliot, 1997).<sup>3</sup> We can thus refer to these views as “naturocentric” ones (even if this term has not been widely used in the environmentalist literature). Supporters of this view can argue that, while suffering and premature death are often bad, they are not so when they occur for natural reasons, as it happens in the case of nonhuman animals in nature.

The ways to oppose this argument are similar to the ones we have seen in the case of ecocentric views. We may object to the naturocentric view of what is valuable and argue that how some entity has become what it is, is not what makes it valuable. Or we may accept that being natural is a valuable feature, but deny that there can be no disvalue in something that is natural. According to this view, one thing can have value by virtue of its being natural (or both by having certain remarkable features and by these features being the result of natural processes), and yet be disvaluable in another respect. This may happen, for instance, if it causes suffering and premature death to animals. Again, this means that, if this disvalue becomes significant enough, it will eventually outweigh the value it possesses by being natural. As in the case of ecocentrism, we might think that the value that a certain ecosystem has by virtue of its being the result of natural history outweighs the disvalue of the harms animals suffer in it (this is a view similar to the one held in Rolston, 1992; see also Hettinger, 1994). But, once again, if this were so, then there might be a point at which, if those harms become too significant, then they may no longer be outweighed.

Finally, we must note also that, rigorously speaking, naturocentric views will in any case oppose intervention for the sake of animals only when it is carried out in those areas untouched (or at least only slightly affected) by humans. Naturocentrism as such gives us no reason to oppose intervention in ecosystems created or restored by humans. In this way, this position would allow helping animals in even wider areas than ecocentric views would. This would leave huge wild areas open to intervention, as many of the ecosystems currently existing are not the mere result of natural processes, but also the product of human action.

This is interesting in one respect. As naturocentric positions are defined by their opposition to human intervention in the wild, we might expect them to be even more reluctant than ecocentric ones to accept intervention to aid animals in nature. But the fact that many ecosystems are no longer natural implies that at the end of the day naturocentrists’ opposition will be less important. This is because such opposition, while stronger in untouched areas, will be restricted to those untouched areas and will not apply in other places (such as forests created by humans). There may be supporters of this view who disagree with this, but then it has to be for reasons different from that of the respect for untouched nature.

## 5. WHY BIOCENTRISM SHOULD STRONGLY SUPPORT INTERVENTION

Finally, we can consider what biocentrism has to say about this. Claiming that the entities that are morally considerable are living organisms, biocentrism is, unlike the two positions presented above, an individual-focused view (Goodpaster, 1978; Taylor, 1986; Agar, 2001). The differences between biocentric views and those positions focused on the interests of sentient animals often rest on the views they have about what is valuable for individuals (Varner, 2002). That is, the differences often rest on the conceptions of what sort of things can be positive or negative for a being (as this is what determines which kinds of beings can be recipients or locations of that which is positive or negative).

Some biocentric positions may accept that suffering and happiness are negative and positive, while others may reject it. Consider first those that accept that merely being alive is good and dying is bad, but that having positive and negative experiences can also be good and bad. These views will support intervention out of a concern for the harms suffered by animals. But consider now those biocentric views that reject that anything else in addition to being alive and dying can be positive or negative. These views should also support intervention. The reason is that the same argument from population dynamics presented above applies when we consider not just sentient animals, but all living beings. The overwhelming majority of living beings have premature deaths, too. Consequently, it turns out that biocentrists also have strong reasons to support significant intervention in nature. The only difference would be that they would not (or not only) do it to reduce suffering, but (also) to prevent the huge amount of premature death that there is in the wild.

We might think that intervention would be problematic for biocentrism, since, if successful, it would result in less living entities existing. But this claim fails to understand properly what biocentric positions defend. Biocentrism is the view that morally considerable entities are living beings. This means it is concerned with what is good for living beings, not with how many living beings there are. Note that an anthropocentric view focused on achieving what is best for human beings need not resolve whether it is better if more, rather than less, human beings exist. It would conclude this if the level of well-being of any human who came into existence were above the zero level at which the value that is present in one's life exceeds the disvalue that there is in it. But it would reject bringing into existence human beings whose level of well-being fell below zero, as that would be bad for humans. Similarly, a view concerned with sentient beings would also oppose raising the population of animals if (in line with what this paper is claiming) their lives were net negative. Biocentrism would hold the same view in the case of living entities in general. As a result, we can conclude that in the discussion concerning intervention in nature biocentrism must side

together with animal defenders. This may be a conclusion that some (or maybe many) of those who see themselves as supporters of biocentrism may not want to accept. But, again, if they reject this view, it needs to be for reasons other than the moral consideration of living entities. As such, biocentrism does not oppose intervening to reduce the disvalues those entities may suffer, but actually supports such intervention.<sup>4</sup>

## 6. CAN THERE BE PRACTICAL CASES OF CONVERGENCE BETWEEN ENVIRONMENTALIST AND SENTIENCE-FOCUSED APPROACHES?

Once we have seen what kinds of environmentalist positions may accept or reject intervention for the sake of animals in the wild, we can consider the question of whether there can be further examples of divergence and convergence between supporters of helping animals in nature and environmentalists. Cases of divergence are not difficult to find. There are different circumstances in which environmentalist views typically support measures that are harmful to animals. The most visible of them is possibly the killing of animals of certain populations for the sake of ecosystem conservation or restoration, or other measures that harm animals in other ways for this purpose (Shelton, 2004; Horta, 2010). Another example of this is the promotion of animal experimentation to test the impact of chemicals on the environment, which has been lobbied for by big environmentalist organizations such as the WWF, the Sierra Club, and Friends of Earth (Environmental Protection Agency, 2004; Warhurst, 2004). Clear cases of convergence are less easy to find. Still, one where both approaches may agree is the following one.

*Opposition to the greening of desert ecosystems.* Certain interventions have been carried out to increase the productivity of certain areas where primary production used to be quite low, such as desert or semidesert areas (see, for instance, Richmond, 1987; Issar, 2010). These interventions include planting certain types of vegetation and installing irrigation, among other measures. They are often referred to as “regreening” efforts, partly because similar efforts have been carried out in areas where desertification has taken place recently due to human action. However, there are cases in which they aim at greening areas that have been arid or semiarid for natural reasons and for significantly long periods of time.

These measures can be very useful to human beings. But let us consider what should be said of them from a non-anthropocentric viewpoint. It seems that, while some environmentalist views will support these efforts, both ecocentric and naturocentric ones should reject them, as they entail the radical transformation of natural ecosystems. But those concerned with the well-being of animals should also oppose them, as these interventions result in ecosystems with much higher primary production. This creates the possibility that more animals will come into existence to suffer and die shortly after. So, this is indeed a case of clear convergence between these different approaches.

Other cases, however, are more problematic. In them, convergence between animal and environmental ethicists may depend on contingent circumstances, and our current limited knowledge may not allow us to reach a clear conclusion. One example of this is the following one.

*Protecting large herbivores.* Large-sized primary consumers can reduce significantly the amount of biomass available to other consumers in the areas where they are. Even if not all the biomass they eat would be otherwise eaten by other animals, a nonnegligible amount of it could be eaten by smaller animals who would have large numbers of offspring and who would be eaten by larger animals (who then, in turn, might also have large numbers of offspring and be eaten by larger animals as well). The presence of these large animals thus prevents a significant amount of suffering and premature death from taking place. This seems to happen, for instance, in the case of elephants (Cumming et al., 1997; Guldmond and Van Aarde, 2008; Guldmond et al., 2017). Protecting elephants thus appears to be a good way not only to aid them (Pearce, 2015), but also to prevent other animals who would otherwise come into existence from having terrible lives. If this is so, then conservationist efforts to prevent these animals from disappearing can also be supported by those concerned with wild animal suffering.

Still, this needs to be examined in detail case by case, as there can be other factors that explain why the presence of some big consumers may end up causing more suffering and premature death. To see this, consider the case of whales. Even if they are secondary instead of primary consumers, their case seems at first sight similar to that of elephants. They too eat significant amounts of biomass that might otherwise be eaten by other, much smaller animals. However, there are other reasons why their presence may not reduce, but actually increase the number of other sentient beings who may come into existence. This is because whales' feces allow the circulation of nutrients (such as iron, which is a limiting factor for phytoplankton growth) in areas where otherwise significantly fewer primary and secondary consumers would have existed (Lavery, 2010; Nicol, 2010; Roman, 2010). It is possible that also in the case of big herbivores such as elephants (and others such as rhinos or hippos) other relevant considerations could modify our initially optimistic assessment of their impact on other animals' well-being.

There are other cases where convergence may be uncertain, too. An example of this is opposition to global warming. Of course, climate change can directly affect a significant number of animals (particularly specialists), who may suffer for some time and be substituted by generalists. However, the indirect impact of global warming on the net aggregate well-being of animals will be determined by something else: by whether it will eventually increase or decrease the number of animals coming into existence to suffer and die shortly after. The crucial factor

for this is likely to be whether global warming will trigger an increment or a reduction of global net primary production. Unfortunately, it is still very hard to appraise which of these two outcomes will obtain (Finkel, 2014; Li et al., 2017; see also Tomasik, 2017 [2008]). There are many different factors to take into account here (including not only the relation between temperature and terrestrial productivity, but also, for instance, the distribution of land masses on Earth and the location of the different biomes, the variation of oxygen solubility at different temperatures, the relation between nutrient availability and water cycles, and the impact on productivity of having thicker or thinner ice layers and sea levels). For this reason, it is yet an open question whether this can be a case of convergence or divergence between environmentalism and the defence of animals in the wild. Similar assessments may be made in the case of other ecosystem disruptions on a smaller scale.

## 7. CONCLUSION

This paper has argued in favour of intervention in nature for the sake of sentient animals and examined to what extent this measure should be opposed or accepted by environmentalists of different sorts. As we have seen, this opposition should be less significant than it might appear at first sight. This is so, in particular, when intervention is carried out in areas that humans have already transformed significantly. Consequently, a promising course of action may be to promote research aimed at learning how to best intervene in those areas.

This paper has also examined whether there might be cases of convergence between environmentalists and those concerned with the harms suffered by animals in nature. Such cases appear to be quite few and uncertain, although future research might shed more light on this.

In any case, it seems that gaining more knowledge is insufficient to promote measures making a difference for animals in the wild. Spreading concern about the importance of wild animal suffering is even more necessary. Accordingly, to increase awareness about this should be a crucial task for animal defenders. While their efforts may be met at first with opposition by some people, including environmentalists, what we have seen here suggests that this resistance may decrease as their case is better known.

## NOTES

- <sup>1</sup> In this paper, I will be using the term “anthropocentrism” with the meaning it typically has in the animal ethics literature—that is, that the interests of human beings are more important than similar interests of other beings. This meaning is different from the different ones it has had in the environmental ethics literature (where the term may name, among other things, the view that only human beings have value, or the idea that the value of natural entities depends on human valuation of them, or the view that our reasons to be concerned by the environment rest on human interests).
- <sup>2</sup> Ecocentrism, like other positions assessed in this paper, is a normative view about what entities deserve moral consideration. These views need not be based on a conception of what is valuable. An ecocentric view may accept normative reasons to claim that we should respect ecosystems not derived from any consideration about what has value to claim (they may consist, for instance, in some deontological norm just prescribing to do so). For the sake of simplicity, this paper focuses on arguments that appeal to what is valuable or disvaluable. But similar arguments could be built considering other kind of reasons.
- <sup>3</sup> To be sure, there are positions that would not fit comfortably into the distinction made here between those views that focus on the conservation of ecosystems and those that focus on the conservation of what is natural (see, for instance, Rolston, 1994; Hettinger and Throop, 1999). But this still seems to be a cogent distinction (this is shown, for instance, by the contrasting views that ecocentric and naturocentric positions have towards restoration).
- <sup>4</sup> This contrast between biocentrism and the two environmentalist views we have seen above should not be surprising. In fact, it is not clear whether biocentrism really is an environmental ethic, even if this has been commonly accepted in the literature. After all, we can define environmentalism as the view that we should be concerned about how we behave towards our environment. But biocentrism is not about that, but about the way we should consider and behave towards other individuals. Its approach is therefore just like that of anthropocentrism or sentience-focused views. As we have seen, the only difference between these positions rests on their account of what entities are the individuals that we need to take into account (that is, on whether they are human beings, sentient beings, or living beings). These three views do not treat individuals as a part of our environment, but as beings who, like ourselves, belong to the realm of those who should be respected. There is no difference in this respect between anthropocentrism and the other two views. The only difference between them rests on the view of who the morally considerable individuals are.

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