

The Problem of Evil in Nature

Evolutionary Bases of the Prevalence of Disvalue¹

Oscar Horta

Professor of Moral Philosophy, University of Santiago de Compostela

doi: 10.7358/rela-2015-001-hort

Oscar.horta@usc.es

ABSTRACT

This paper examines the problem of evil in nature, that is, the issue of the disvalue present in nature, and the question of whether or not it prevails over happiness. The paper claims that disvalue actually outweighs happiness in nature. This is an unavoidable consequence of the existence of an evolutionary process in a context where resources are scarce. Because of this, suffering and early death are the norm in nature. The number of individuals who come into existence just to die in pain shortly after, vastly outweighs the number of those who survive. The paper also claims that the idea that the interests of nonhuman animals need not be considered in the same way as those of humans is speciesist and unacceptable, and that animals not only have an interest in not suffering, but also in not dying. In light of this, the paper concludes that the good things present in nature are vastly outweighed by the huge amount of disvalue that exists there, and that we should try to reduce such disvalue.

Keywords: anthropocentrism, disvalue, population dynamics, speciesism, egalitarianism, harm of death, interventionism, natural evil, problem of evil, suffering.

*What a book a devil's chaplain might write on the clumsy, wasteful, blundering, low, and horribly cruel works of nature!*²

¹ This work was done with the support of the Spanish Ministry of Science and Innovation (research project FFI2008-06414-C03-01/FISO). A previous version of this paper appeared in Spanish in 2011 in a special issue on the problem of evil in nature in the journal *Ágora. Papeles de filosofía* 30 (2): 57-75. The current version includes a number of modifications to the initial paper.

² Thus starts a letter by Charles Darwin to Joseph D. Hooker, dated on July 13, 1856, reflecting how Darwin was appalled at the disvalue caused by natural processes (Darwin [1908] 2005, 94).

1. WHAT DOES THE PROBLEM OF DISVALUE IN NATURE
CONSIST OF?

The problem of the disvalue present in nature, and of its prevalence over the value in nature, is one of the most significant aspects of the classic problem of evil. Despite this, the importance of this question remains for the most part unrecognized in the literature. This is because life in natural environments is commonly seen as good for animals. Of course, most of us are aware that nonhuman animals suffer different kinds of harms in nature, which cause them to suffer, undergo deprivations and mutilations, and die prematurely. Still, even though we know this occurs, we usually do not give much importance to it.

We tend to think that these are just a few occasional episodes that can occur in the lives of some animals, within a general framework in which pleasant life is the norm. We believe this is a perfectly acceptable cost in comparison to the good which a life in natural habitats provides animals.

In addition, it is believed by many that these harms are trivial even though they would be really tragic if human beings suffered them, because it is assumed that nonhuman animals are not morally considerable, or at least not in the way humans are. Furthermore, it is often considered that the suffering of animals in nature is just something that should occur because it is part of the processes that occur in nature, and the contemplation of nature is something valuable for human beings. Finally, it is sometimes argued that nature embodies some values that outweigh the disvalue that animals may suffer in it.

This paper will claim that these ideas about the value and disvalue present in nature do not correspond with what happens in reality, and that the moral arguments to dismiss this as unimportant fail. This is a very serious ethical issue which should receive careful attention. In support of this, sections 2, 3 and 4 will present the reasons why, contrary to what is often believed, suffering (and premature death) in nature vastly outweighs well-being. Sections 5 and 6 will argue that we should reject the views which claim that animal suffering is not something worthy of moral attention. These arguments also imply not just that our pleasure in the contemplation of nature is not a sound reason to deny the disvalue present in it, but also that the disvalue is more relevant than such pleasure. Section 7 will maintain that we must reject the idea that natural processes embody certain values so significant that they make the disvalue suffered by non-human animals trivial by comparison. Finally, section 8 will examine the conclusions that can be inferred from all this concerning our reasons for action.

2. THE DISVALUE SUFFERED BY ANIMALS IN NATURE

Although many see nature as a paradisiacal place, an immense amount of disvalue takes place in it. There is one way this occurs that is especially visible, which traditionally has raised the most doubts and concerns about this issue: the way animals attack each other. This consists basically in predation and parasitism. It is known how this affected one of the first theorists who started to reflect about the question of the disvalue in nature, Charles Darwin. He thought the idea that we live in a good world is hardly compatible with the fact that in nature there are nonhuman animals who suffer enormously and die due to attacks by other animals that occur not occasionally but continually. He therefore confessed in 1860 (in a letter to Asa Gray): “I cannot persuade myself that a beneficent and omnipotent God would have designedly created the *Ichneumonidae* with the express intention of their feeding within the living bodies of Caterpillars” (Darwin [1901] 2004, 105)³.

It would be misguided, however, to think that predation and parasitism are the only ways animals are harmed in nature. There are many other ways. Animals suffer from malnutrition and starve to death, endure terrible diseases, suffer from cold, heat and other weather conditions, and are hurt in accidents, among other harms.

As I have pointed out above, many could think that all these circumstances would be exceptions throughout the more or less happy lives animals lead. This idea, however, is contradicted by the fact that there are animals who die young as a result of them. Moreover, there are animals who die after living lives in which they cannot experience virtually any wellbeing, though they do experience a great deal of suffering. In these cases it cannot be claimed that the harms undergone by the animals are just anomalous episodes. Nevertheless, it could still be argued that those harms would be sporadic and secondary within a general scheme in which wellbeing prevails in nature.

As we will see later, we have reasons to doubt these are infrequent cases. At any rate, even if these cases were anomalous, the evaluation we would make of this problem would not necessarily be positive. On the contrary, that would depend on the kind of position we assume in value theory and ethics. We will see now why this is so.

³ On this see also Mill (1874) 1969 and Gould 1994.

3. DIFFERENT THEORIES ABOUT AGGREGATE VALUE AND DISVALUE

There are certain conceptions of value which entail that how good or bad an outcome is is determined by the total sum of wellbeing and suffering of the individuals that are present in it, regardless of how that wellbeing is distributed. This is what utilitarianism claims. According to this view, if the total amount of animal suffering existing in nature were less than the total amount of positive wellbeing present in it, the balance would be positive overall. Other theories reject this. There are two types of theories that could find such an outcome negative.

First, there are theories for which the way value and disvalue is distributed also matters. If some individuals live good lives, while others live lives that contain more suffering than wellbeing, that would not be good according to these theories. This would be the case even if the total amount of positive value were higher than the total disvalue present in that situation. And this is actually the way things are in nature. Many of the animals who come into existence have lives that contain little more than suffering. Due to this, according to these views, the enormous amount of suffering present in nature cannot be compensated by the fact that others are enjoying wellbeing. These are all the views according to which the unequal distribution of wellbeing and suffering is something negative, such as egalitarianism and prioritarianism (Temkin 1993; Holtug 2007; Faria 2014). And all those that consider that an outcome cannot be good if there are individuals whose lives do not reach a minimum level of wellbeing for their lives to be worth living, such as sufficientarianism (Crisp 2003).

There are others theories according to which positive value, if it exists, can never compensate for the existence of disvalue. This is the case with negative consequentialist theories. Other non-consequentialist theories, such as deontological ones, can also assume this value theory (Mayerfeld 1999). According to these views, the disvalue present in nature cannot be countervailed in any way.

This means that even if cases in which wild animals have to endure terrible lives were scarce, that would still be a very negative situation according to a number of views.

All this, however, does not mean that those accepting an aggregative viewpoint such as the one assumed by utilitarianism would reject intervening in nature to help animals as those defending the theories we have just seen would promote. Those accepting an aggregative viewpoint such as the one assumed by utilitarianism would also have reasons to support doing so. Even if value in nature exceeded disvalue, they would still have to conclude

that it is a bad thing that such disvalue occurs. They would thus be in favor of reducing that disvalue as much as possible as long as the total amount of value were not reduced.

Most importantly, there are reasons to think that in fact it is not the case that the value present in nature outweighs the disvalue found in it. This means that those who accept an aggregative viewpoint such as a utilitarian one will reach a similar conclusion to those who do not accept an aggregate viewpoint.

4. THE REASON WHY DISVALUE VASTLY OUTWEIGHS VALUE IN NATURE

The question we need to address here is whether suffering prevails over positive wellbeing, or it is the other way around. How can that question be assessed? In *Parerga and Paralipomena* Schopenhauer gave an answer which is simple but on the right track, when he wrote:

Whoever wants summarily to test the assertion that the pleasure in the world outweighs the pain, or at any rate that the two balance each other, should compare the feelings of an animal that is devouring another with those of that other. ([1851] 2000, II, § 149)

To be sure, Schopenhauer's criterion is not a very rigorous one, since in nature there are other sources of suffering and pleasure apart from eating and being eaten. Nonetheless, there is some truth in it. Wellbeing and suffering are tools for the self-regulation of the homeostasis of organisms and for other aims that maximize the transmission of their genetic information. They work by motivating them positively or negatively depending on whether or not they get what they need for that matter. Animals suffer when they lack the resources they need (for instance, when they cannot eat). They also suffer when they are hurt, as it happens when other animals use them as resources in harmful ways (being eaten by another animals is a clear instance of this). This means that the availability of resources and the way they are distributed determines the balance between the value and the disvalue in nature.

Unfortunately, as Schopenhauer appears to think, this balance ends up being negative. This is due to two circumstances. The first is the fact that those resources are indeed limited. The second is the existence of an evolutionary process that favors the maximization of the transmission of genetic information. These two circumstances together cause many beings to come into existence, for whom there will not be enough resources. Moreover,

in many cases the beings who survive use other animals as resources for themselves.

There are animals who starve to death or are eaten by others. Because of the two conditions presented above, this is commonly the case. The maximization of the transmission of genetic material implies, in most cases, a process that also maximizes disvalue. This occurs because the reproductive strategy prevailing in nature tends to maximize the number of sentient beings who starve or are eaten⁴. This process can be explained in population dynamics as follows.

For a population to continue existing through time it is necessary that a sufficient number of animals of the next generation survives. For their numbers to remain stable it is necessary that on average, a number of individuals approximately equal to that of the previous generation survives. The different reproductive strategies achieve this (of course, these strategies are not chosen as such by the animals themselves, but are the result of the two factors pointed out above). There are two main strategies.

- (i) The first consists in maximizing the survival chances of the animals who come into existence. This implies that parents provide their progeny with the care necessary for them not to die prematurely. This is possible only when that care is focused on just one offspring, or on a very small number of them. This strategy is commonly known in population biology as *K*-selection. *K*-selected animals are also known as *K*-strategists.
- (ii) The second consists in maximizing the number of animals who come into existence. This means that every time an animal reproduces she has an enormous number of offspring. This makes it very hard, if not impossible, for parents to give their offspring the care they could have provided if they had had just one or a few offspring. Animals who follow this strategy thus have a very low survival rate. As so few individuals are born, the available resources needed for them to survive are reduced. This reproductive strategy is commonly called *r*-selection, and the animals following it *r*-strategists.⁵

⁴ Even if the available resources in nature were scarce it would be possible for suffering and premature death to be at relatively low levels if sentient beings did not act in ways that maximize the transmission of their genetic material. However, this could not be, since those beings would not persist through natural history.

⁵ The names of these two reproductive strategies are due to an important equation used in population dynamics to account for the variations in population numbers: $dN/dt = rN(1-N/K)$. In this equation, given a population whose initial number of individuals is N , its variation during time t depends on two variables: r , which represents the reproductive rate of the population (the number of individuals that come into existence) and K , which represents the carrying capacity of the ecosystem in which this population is (ultimately, the odds each new individual survives). *r*-strategists maximize r , while *K*-strategists maximize K (MacArthur and Wilson 1967; Pianka 1970). Contemporary life history theorists

If all animals, or at least most of them, were *K*-strategists, the amount of disvalue that exists in nature would be relatively small. However, this is not what happens. The animals who follow this reproductive strategy must have very complex behavior, which is the result of a long and complicated evolutionary process. They are usually specialist animals who thrive in very particular environmental conditions. Due to this, they are very sensitive to important changes in their habitats.

These are very restrictive requirements, which favors the predominance of *r*-selection in nature. Therefore, the vast majority, in fact almost all the animals that exist in nature, are *r*-strategists. Only some vertebrates, such as certain mammals and birds, have just one offspring each time they reproduce. Others have reproductive strategies that combine both options, so they have several offspring who receive some parental care, though less than the care *K*-strategists usually give to their progeny. Still, the great majority of the animals existing in nature are much more characteristically *r*-strategists, and reproduce by laying enormous amounts of eggs (often thousands or tens of thousands, and in some cases millions of them) ⁶.

This means that the number of animals that come into existence only to die shortly after is extremely high. On average, if we consider a context in which populations remain stable at least in the mid term, for each animal that reproduces, only one of her or his offspring survives (otherwise animal populations would grow exponentially very fast, and would become massive with just one generation). This means that all the rest of the animals die. Many of them die shortly after coming into existence.

These animals starve to death, are eaten by other animals, or die for other reasons that usually entail a great deal of suffering. This means that an enormous number of animals come into existence only to suffer. Their lives contain virtually no enjoyment, since they die shortly after they start to exist. However, their lives do contain significant suffering, because of the painful ways in which they die. They thus live lives in which disvalue outweighs value. Living their lives causes them more harm than good. In fact, in many cases it causes them great harm and no good at all.

All this determines the balance between value and disvalue in nature. What we have just seen entails that the animals whose lives contain predominantly suffering are an overwhelming majority. In fact, they account

have criticized *r/K* selection theory for several reasons different from the simple claim that some animals reproduce by maximizing their offspring and others by maximizing their offspring's survival (Stearns 1992). This paper just assumes this basic claim without endorsing the whole *r/K* selection theory.

⁶ The vertebrate that lays more eggs, the sunfish, may deposit up to 300 million eggs each time (Froese and Luna 2004).

for almost all the animals that come into existence. This is because (i) virtually all the sentient r -strategists suffer this fate (all except around one per parent); and (ii) because the overwhelming majority of the animals existing on this planet are r -strategists. The wellbeing that thus exists in nature pales in comparison to the astronomical amount of disvalue, because of the suffering and premature death that it also contains (Sagoff 1993; Ng 1995; Tomasik 2015).

We might point out that such disvalue is not so significant by noting that not all the animals that come into existence and die without becoming adults suffer so terribly. This is because many of these animals are not sentient when they die, so they do not experience any suffering (or, it could be pointed out, any loss when they die). Many others, while sentient, may not have very vivid experiences. It seems very plausible that sentience develops gradually. Accordingly, maybe the suffering they endure is reduced (at least in comparison with the suffering other animals may feel). In addition, there are animals who have very quick deaths. Finally, there are many animals who may die before adulthood yet live long enough to enjoy some positive experiences. All this means that not all the animals that come into existence and do not make it through adulthood have lives that contain more suffering than positive wellbeing.

This limits significantly the negative effects which otherwise may occur as a consequence of r -selection. However, it does not eliminate them totally, but only to some extent. Even if some animals die without being sentient, or without suffering a great deal, many others have more developed nervous systems when they die, and die in ways that cause them great suffering. Moreover: even if there are beings with a very low level of consciousness who almost do not feel their experiences, their experiences still count for something. All suffering counts, including mild suffering. This means that if mild suffering is undergone by a huge number of individuals, as occurs in nature, its total sum gets enormously high. All this apart from the fact that, as we have seen, from those viewpoints for which distribution is relevant, and those for which disvalue is not compensated by value, the existence of individuals whose lives contain little more than suffering is enormously negative, even if that suffering is not as bad as the suffering that other individuals are capable of undergoing. Finally, even though many animals may have some enjoyments before they die, there are others who do not. And there are many who may have some enjoyments but not enough to compensate for the disvalue of their suffering and early death.

Due to all this r -selection can be said to be the main cause of suffering in the wild. This does not mean that there is no positive wellbeing at all in nature. Nor does it mean that K -selected animals do not suffer significantly

as well. It is, though, the factor that makes suffering outweigh positive well-being. In fact, this is something that could hardly have been different. As we have seen, *r*-selection is just the result we should expect of processes which tend to maximize the transmission of genetic material to new generations in combination with the fact that resources are limited.

This is something most of us do not think about. One important reason for this is that when we think of animals living in nature we tend to think of adult animals. Moreover, we also tend to think of vertebrates, especially, in most cases, mammals or birds, and often large animals. That is, we tend to think of those among which *K*-selection is more common. This drives away from our minds *r*-strategists, and with them the disvalue that is present in ecosystems. But this happens only because the animals we tend to think of are not representative of those who really exist in nature. As we have seen, most of the animals who come into existence are very young animals who will die very soon.

5. THE DISREGARD FOR NONHUMAN ANIMALS

There are people who think all this is irrelevant, because they believe that animal suffering and death is not really a disvalue, or because they think we should only care for the harms that human beings suffer. There is a widespread view according to which nonhuman animals are not worthy of full moral consideration, that only humans deserve.

This viewpoint is defended commonly⁷ by indicating that only humans possess certain complex cognitive capacities, or other related capacities (Paton 1984; Ferry 1992; Scruton 1996), that only they have certain special relations of solidarity between them (Whewell 1852, 223; Becker 1983), that they are more powerful than others, etc. (Narveson 1987; Goldman 2001). But for those arguments to succeed they must fulfill a necessary requirement. They must appeal to a criterion that is satisfied by all human beings and only by them. However, the aforementioned criteria (the possession of certain capacities or relations) do not satisfy that condition. Some human beings with intellectual functional diversity, as well as babies, have intellectual capacities that are less developed than those that a number of nonhuman animals possess. There are also many human beings with whom

⁷ In other cases this view is defended by appealing to the mere fact that humans are members of our own species or by appealing to criteria which cannot be verified, such as religious reasons (Diamond 1995; Reichmann 2000; Gaita 2003; Posner 2004). These claims fail to provide any sound reason to support disregard for nonhuman animals.

no one has any relation of solidarity or who are helpless among others who are more powerful than them. If we assume the moral relevance of these criteria we will accept that none of these humans be granted full moral consideration, and so may be considered disadvantageously or not taken into account at all.

If we think that, despite this, these human beings should be respected, and their interests should be fully taken into account, we cannot accept that in order to be morally considerable we need to have special relations of solidarity, sympathy, power, or other similar relations. This shows that these criteria fail to draw a difference between human beings and other animals.

In addition, we would also reject these criteria if we understand that when it comes to taking an entity into account in our moral decisions, what is relevant is that entity's capacity to be affected by those decisions. If we make our decisions based on relevant factors, all beings who can be benefited or harmed by our actions must be considered. This includes non-human animals, given that they can feel suffering and wellbeing. Accepting criteria that are based only on relevant factors implies that we cannot justify the view that considers the interests of nonhuman animals disadvantageously in comparison to those of humans (Pluhar 1995; Dombrowski 1997; Horta 2014). That view is a form of discrimination, which is called *speciesism*. To hold the view that the harms suffered by nonhuman animals in nature should not be of moral concern but accept that those same harms would be of moral concern if they were suffered by human beings is to assume a speciesist position.

In light of this, consider the idea that the emotional satisfaction or the pleasure we may obtain from contemplating nature outweighs the disvalue that nonhuman animals can suffer in it. That idea assumes that our interest in that kind of benefit would be more significant than the interests animals have in not being victims of the harms they suffer in nature. This, however, appears to be totally implausible, given how significant those harms are. In fact, if we had to undergo the harm animals suffer in nature to be able to enjoy its contemplation it is clear that we would conclude it would not be worth it. Even if we were not the ones suffering and the total benefit derived by those contemplating nature were greater than the total harm of those who suffered for it, to many this would still be unfair, since it would mean benefiting some by harming others. This shows that the disvalue suffered by animals in nature is not worth the benefits we enjoy out of its contemplation.

6. THE HARM OF DEATH

It might be thought that the fact that animals agonize in nature only harms them to the extent that it makes them suffer, but not because it causes them to die. It is sometimes argued that in order for death to be a harm to a being, that being must be conscious of being a separate entity that exists through time (Cigman 1981). There are, however, strong reasons to challenge this view.

According to an argument that dates back at least to Epicurus ([ca. 300 BC] 1964), death cannot harm us, because it cannot affect us before we die and, not being something one can experience, it does not affect us after we die either. The standard reply to this argument claims that death is not an intrinsic harm, but an extrinsic one: a harm by deprivation. Dying at a certain time t would harm us because it would deprive us of the positive things we would have had after that time t had not we died at t (Nagel 1970; McMahan 2002; Broome 2004; Bradley 2009).

If a being has the capacity to have positive experiences it would be possible for that being to have them in the future. This means that any being with this capacity can be deprived of positive experiences. Therefore, sentient animals are harmed by death. If this is right, we must conclude that animals are not harmed only when they suffer in nature: the fact that they die prematurely is a disvalue as well. This entails that the total negative balance in nature caused by the vast prevalence of suffering over wellbeing is also increased by the enormous number of premature deaths taking place in it.

7. IS THERE A VALUE IN NATURAL PROCESSES THAT OVERSHADOWS NATURAL DISVALUE?

We have seen in the previous sections that any view which values the wellbeing of sentient beings will have to conclude that in nature disvalue is the norm for them. However, there are theories of value according to which it is not individuals, but other kinds of entities that are the real locations of value. According to these theories, it is entities such as the sum of all living beings (that is, biocenoses), or the systems resulting from the interactions between these entities and between them and their physical environments (ecosystems) that are valuable. For these holistic positions individuals count only instrumentally as long as they further other aims. Accordingly, sacrificing their interests will be something positive if it grants the conservation of natural entities such as ecosystems. This means that the suffering and death of animals in nature will be of little or no concern to anyone holding such views.

Moreover, we must bear in mind that the suffering and death we find in nature is something intrinsic to how ecosystems work. It is not that in the natural world several things occur in a disconnected way so we have on the one hand the processes of which ecosystems consist (or which give rise to them) and on the other hand the circumstances that make it the case that the suffering and death of animals takes place massively. Rather, these are all the same: the very interactions that shape ecosystems in their present form are what cause, directly or indirectly, the suffering and death of animals. This is why different environmentalist theorists (Callicott 1989; Rolston 1992 and 1999; Sagoff 1993; Hettinger 1994) have argued against the viewpoints that defend the moral consideration of all animals, or at least against the moral consideration of nonhuman animals in the wild as individuals. They have done so because they are aware that there is a conflict between granting consideration to wholes and granting it to individual animals, and they choose the former instead of the latter.

It is important to note that these theorists do not maintain the same view in the case of human beings, even though today most people (including these theorists themselves) believe that human beings alter ecosystems very significantly, and much more than other animals do. Holding a truly holistic view would entail having to promote radical restrictions to human activity, and more than that, it would also entail the massive killing of humans to reduce their impact on natural systems. This can help us to see why views that value wholes more than individuals are very questionable, and also why those theorists who claim to accept them are actually not really doing so, but just combining a holistic approach with an anthropocentric speciesist one. In fact any theory of value seems implausible if it entails that the suffering of sentient beings is not disvaluable. So these holistic theories are hardly credible when they entail that the plight of nonhuman animals living in the wild is not something that should count as very negative. In addition to this, it can be pointed out that ecosystems and biocenoses as such do not feel suffering and wellbeing, as individual sentient beings do. They do not appear to have experiences. This has important consequences if we think having experiences is what matters in order to be negatively or positively affected by our actions in a way that is relevant for that which is intrinsically valuable or disvaluable. It means that we have to conclude that ecosystems or biocenoses do not belong to the group of those that suffer disvaluable things, while sentient animals do.

Other theorists have tried to combine the consideration of environmental wholes with a concern for individual sentient beings (Jamieson 1998; Everett 2001; Raterman 2008). This combination, however, is implausible if it claims that the disvalue suffered by nonhuman animals cannot outweigh

the value of natural nonsentient entities, as these theorists assume. For, even if the latter had a significant value, the aggregated disvalue of trillions of animals suffering to death has to be enough to outweigh it at some point.

All this entails that if we want to reject a speciesist viewpoint and to consider the interests of individual sentient beings, we have to reject holism and to accept the conclusions reached in previous sections.

8. CONCLUSION: THE QUESTION OF INTERVENTION

We have seen that the problem of evil in nature is much more relevant than it might seem at first sight. The amount of suffering present in the natural world is enormous. The arguments regarding the moral consideration of animals entail that this suffering must be considered morally relevant. This gives us reason to conclude that we should intervene in those cases where it is feasible in order to reduce the disvalue suffered by nonhuman animals. That is, in those cases in which we can reduce it as a whole, not in some isolated way that reduces disvalue for some in ways that trigger processes that result in more suffering elsewhere (Sapontzis 1984; Bonnardel 1996; Cowen 2003; Fink 2005; Nussbaum 2006; Horta 2010 and 2013; McMahan 2010a and 2010b; Donaldson and Kymlicka 2011; Sözmen 2013). Any plausible ethical theory must assume that the way we should act must aim somehow to achieve a better world, either indirectly or to a certain degree (as in deontological theories) or directly and completely (as in teleological theories). This being so, the amount of disvalue in the wild is hugely relevant and gives us strong reasons to change this situation no matter what approach we take to ethics.

As I have stressed before, most people assume nature is a good place for nonhuman animals. Due to this, the conclusion that we should intervene in nature for the sake of wild animals may seem counter-intuitive. In addition, we can think of other reasons to reject it, such as our lack of information about the ways our intervention may affect natural processes, the harm that altering these processes can cause for animals and the idea that nature is sacred and thus we have a duty not to intervene in it.

We have already seen throughout this paper that some of these reasons are not valid. It is false that animals are benefited by the way ecosystems work; in fact, it is the other way around: they are harmed by it. Neither are there sound reasons to think nature is sacred, at least if we accept that sentient beings are morally considerable, rather than ecosystems or biocenoses.

It might be argued against this that, even accepting that only sentient beings are morally considerable, without proper information interventions

may be counter-productive because they can indirectly increase, rather than reduce, the harms suffered by animals in the wild. This does not mean that we should abandon the idea of acting for the sake of animals in the wild. On the contrary, it means we need to research in more detail ways we might intervene successfully.

In addition, in order to succeed in an enterprise such as this there is something more important than being well informed about how to act: it is necessary to view it as something that should be done. However, as I have pointed out before, the intuitions most people have do not favor intervening significantly in nature to help animals. This means that there are some important things that we must do today so that in the future there will be a will to help animals in nature. They include the following: (i) promoting the arguments for the necessity to reject speciesism, (ii) raising awareness about the huge disvalue that is present in nature for animals, and (iii) spreading the idea that intervention in nature to help nonhuman animals is not only fully justified, but necessary if we want a better world.

REFERENCES

- Becker, Lawrence. 1983. "The Priority of Human Interests". In *Ethics and Animals*, edited by Harlan Miller and William Williams, 225-42. Clifton: Humana Press.
- Bonnardel, Yves. 1996. "Contre l'apartheid des espèces: à propos de la prédation et de l'opposition entre écologie et libération animale". *Les cahiers antispécistes* 14. Last modified December, 1996. http://www.cahiers-antispécistes.org/article.php3?id_article=103.
- Bradley, Ben. 2009. *Well-Being and Death*. New York: Oxford University Press.
- Broome, John. 2004. *Weighing Lives*. Oxford: Oxford University Press.
- Callicott, John B. 1989. *In Defense of the Land Ethic: Essays in Environmental Philosophy*. Albany: SUNY Press.
- Cigman, Ruth. 1981. "Death, Misfortune and Species Inequality". *Philosophy and Public Affairs* 10 (1): 47-54.
- Cowen, Tyler. 2003. "Policing Nature". *Environmental Ethics* 25 (2): 169-82.
- Crisp, Roger. 2003. "Equality, Priority, and Compassion". *Ethics* 113 (4): 745-63.
- Darwin, Charles. (1901) 2004. *The Life and Letters of Charles Darwin*, Vol. 2, edited by Francis Darwin. Reprint, Whitefish: Kessinger Publishing.
- Darwin, Charles. (1908) 2005. *More Letters of Charles Darwin: a Record of His Work in a Series of Hitherto Unpublished Letters*, Vol. 1, edited by Francis Darwin. Reprint, Whitefish: Kessinger Publishing.
- Diamond, Cora. 1995. *The Realistic Spirit: Wittgenstein, Philosophy and the Mind*. Cambridge: MIT Press.

- Dombrowski, Daniel A. 1997. *Babies and Beasts: the Argument from Marginal Cases*. Chicago: University of Illinois.
- Donaldson, Sue, and Will Kymlicka. 2011. *Zoopolis: a Political Theory of Animal Rights*. New York: Oxford University Press.
- Epicurus. (ca. 300 BC) 1964. *Letter to Menoeceus*. In *Letters, Principal Doctrines and Vatican Sayings*, translated and edited by Russell Geer, 53-9. Reprint, Indianapolis: Bobbs-Merrill.
- Everett, Jennifer. 2001. "Environmental Ethics, Animal Welfarism, and the Problem of Predation: a Bambi Lover's Respect for Nature". *Ethics and the Environment* 6 (1): 42-67.
- Faria, Catia. 2014. "Equality, Priority and Nonhuman Animals". *Dilemata* 14: 225-36. <http://www.dilemata.net/revista/index.php/dilemata/article/viewFile/272/296>.
- Ferry, Luc. 1992. *Le nouvel ordre écologique: l'arbre, l'animal et l'homme*. Paris: Grasset.
- Fink, Charles K. 2005. "The Predation Argument". *Between the Species* 13 (5): 1-15.
- Froese, Rainer, and Susan Luna. 2004. "No Relationship between Fecundity and Annual Reproductive Rate in Bony Fish". *Acta Ichthyologica Piscatoria* 34 (1): 11-20.
- Gaita, Raymond. 2003. *The Philosopher's Dog: Friendships with Animals*. London: Routledge.
- Goldman, Michael. 2001. "A Transcendental Defense of Speciesism". *Journal of Value Inquiry* 35 (1): 59-69.
- Gould, Stephen J. 1994. "Nonmoral Nature". In *Hen's Teeth and Horse's Toes: Further Reflections in Natural History*, edited by Stephen J. Gould, 32-44. New York: W.W. Norton.
- Hettinger, Ned. 1994. "Valuing Predation in Rolston's Environmental Ethics: Bambi Lovers versus Tree Huggers". *Environmental Ethics* 16 (1): 3-20.
- Holtug, Nils. 2007. "Equality for Animals". In *New Waves in Applied Ethics*, edited by Jesper Ryberg, Thomas S. Petersen, and Clark Wolf, 1-24. Basingstoke: Palgrave Macmillan.
- Horta, Oscar. 2010. "The Ethics of the Ecology of Fear against the Nonspeciesist Paradigm: a Shift in the Aims of Intervention in Nature". *Between the Species* 13 (10): 163-87.
- . 2013. "Zoopolis, Intervention, and the State or Nature". *Law, Ethics and Philosophy* 1: 113-25.
- . 2014. "The Scope of the Argument from Species Overlap". *Journal of Applied Philosophy* 31 (2): 142-54.
- Jamieson, Dale. 1998. "Animal Liberation Is an Environmental Ethic". *Environmental Values* 7 (1): 41-57.
- MacArthur, Robert H., and Edward O. Wilson. 1967. *The Theory of Island Biogeography*. Princeton: Princeton University Press.
- Mayerfeld, Jamie. 1999. *Suffering and Moral Responsibility*. Oxford: Oxford University Press.
- McMahan, Jeff. 2002. *The Ethics of Killing: Problems at the Margins of Life*. Oxford: Oxford University Press.

- . 2010a. “The Meat Eaters”. *The New York Times*. Last modified September 19, 2010. <http://opinionator.blogs.nytimes.com/2010/09/19/the-meat-eaters/>.
- . 2010b. “A Response”. *The New York Times*. Last modified September 26, 2010. <http://opinionator.blogs.nytimes.com/2010/09/28/predators-a-response/>.
- Mill, John Stuart. (1874) 1969. “Nature”. In *Collected Works*, edited by John M. Robson, Vol. 10, 373-402. Reprint, London: Routledge & Kegan Paul.
- Nagel, Thomas. 1970. “Death”. *Noûs* 4 (1): 73-80.
- Narveson, Jan. 1987. “On a Case for Animal Rights”. *The Monist* 70 (1): 31-49.
- Ng, Yew-Kwang. 1995. “Towards Welfare Biology: Evolutionary Economics of Animal Consciousness and Suffering”. *Biology and Philosophy* 10 (3): 255-85.
- Nussbaum, Martha C. 2006. *Frontiers of Justice: Disability, Nationality, Species Membership*. Cambridge: Harvard University Press.
- Paton, William. 1984. *Man and Mouse*. Oxford: Oxford University Press.
- Pianka, Eric R. 1970. “On ‘r-’ and ‘K-’ Selection”. *American Naturalist* 104 (940): 592-7.
- Pluhar, Evelyn B. 1995. *Beyond Prejudice: the Moral Significance of Human and Non-human Animals*. Durham: Duke University Press.
- Posner, Richard A. 2004. “Animal Rights: Legal, Philosophical and Pragmatical Perspectives”. In *Animal Rights: Current Debates and New Directions*, edited by Cass R. Sunstein and Martha C. Nussbaum, 51-77. Oxford: Oxford University Press.
- Raterman, Ty. 2008. “An Environmentalist’s Lament on Predation”. *Environmental Ethics* 30 (4): 417-34.
- Reichmann, James B. 2000. *Evolution, Animal “Rights” and the Environment*. Washington: The Catholic University of America Press.
- Rolston III, Holmes. 1992. “Disvalues in Nature”. *The Monist* 75 (2): 250-78.
- . 1999. “Respect for Life: Counting what Singer Finds of no Account”. In *Singer and His Critics*, edited by Dale Jamieson, 247-68. Oxford: Blackwell.
- Sagoff, Mark. 1993. “Animal Liberation and Environmental Ethics: Bad Marriage, Quick Divorce”. In *Environmental Philosophy: from Animal Rights to Radical Ecology*, edited by Michael E. Zimmerman, John B. Callicott, George Sessions, Karen J. Warren, and John Clark, 84-94. Englewood Cliffs: Prentice-Hall.
- Sapontzis, Steve F. 1984. “Predation”. *Ethics and Animals* 5 (2): 27-38.
- Schopenhauer, Arthur. (1851) 2000. *Parerga and Paralipomena: Short Philosophical Essays*, translated by Eric F.J. Payne. Oxford: Oxford University Press.
- Scruton, Roger. 1996. *Animal Rights and Wrongs*. London: Metro.
- Sözmen, Beril I. 2013. “Harm in the Wild: Facing Non-Human Suffering in Nature”. *Ethical Theory and Moral Practice* 16 (5): 1075-88.
- Stearns, Stephen C. 1992. *The Evolution of Life Histories*. Oxford: Oxford University Press.
- Temkin, Larry. 1993. *Inequality*. Oxford: Oxford University Press.
- Tomasik, Brian. Forthcoming (2015). “The Importance of Wild-Animal Suffering”. *Relations. Beyond Anthropocentrism* 3 (2).
- Whewell, William. 1852. *Lectures on the History of Moral Philosophy in England*. London: John Parker.