Animals and Longtermism

Oscar Horta[*] and Mat Rozas[**]

ABSTRACT

Longtermism should not be wrongly defined as the view that we should act so that the future is as good as possible for human beings and their descendants; rather, longtermists should be concerned with what the long-term future may be like for all sentient beings. This includes nonhuman animals, as different risks of future suffering may afflict them. Indifference toward their interests could lead to the worsening of their use as resources, quantitatively and qualitatively. It could also help expand wild animal suffering, a process that may have already begun.

INTRODUCTION

Longtermism has been defined as the view that positively influencing what happens in the long-term future should be a priority (Greaves and MacAskill, 2019/2021). Although this view is relatively new in the philosophical literature, it is based on fairly uncontroversial ideas. To endorse longtermism, one need only accept the following two premises:

1. We can influence not only the near-term but also the long-term future.
2. What will happen in the long term is very important.

Those who do not believe that we have a substantial capacity to influence the long-term future can still agree with (1) as long as they think we nevertheless have some such capacity. Those who think the long-term future is not what matters most can nevertheless agree with (2), as long as they believe it still matters in a sufficiently significant way.[1]

Longtermism is sometimes identified with a narrower view, according to which we should be especially concerned about the long-term future of humanity and its descendants (Balfour,

[*] University of Santiago de Compostela

[**] Syracuse University

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2021; Ethics Centre, 2023; Samuel, 2022; Syropoulos et al., forthcoming). In this paper, we argue that these ways of understanding longtermism are untenable. The trajectory of the long-term future will not affect only humans. There are several ways in which the long-term future may be very negative for sentient animals belonging to other species—in short, nonhuman animals—and longtermists should take this into account. This paper argues for this by claiming, first, that longtermism should not be conceptually linked with anthropocentric views. It then examines the different risks of future suffering faced by animals used as resources. Next, the paper addresses the avoidable harm that could be suffered by animals in the future owing to the spread of naturally occurring animal suffering. It then discusses an objection based on the idea that technological or moral progress can make such concerns unnecessary. It concludes by indicating the implications of this discussion.

WHY LONGTERMISM IS NOT COMMITTED TO ANTHROPOCENTRISM

Restricted definitions of longtermism that are focused solely on humans are very common. In fact, some people even identify longtermism with a more specific view—namely, that we should ensure that future humans or their descendants reach their full potential. Others endorse an even more restricted position, according to which we should ensure that humans continue to exist. Such definitions exclude all other ways in which we may try to positively influence the long-term future. People can have different views about how we should try to shape the longterm future. For instance, the persistence through time of human cultures, or at least of some of their elements, may be something some people regard as very important. For others, the conservation of Earth's biodiversity may be crucially relevant. Instead, some may solely want to produce as much happiness and as little suffering (understood as positively and negatively valenced mental states or as satisfied or thwarted preferences) as possible. Yet others may be focused primarily on reducing suffering. Some may not want to maximize all happiness and reduce all suffering but only that of certain beings. These are merely some examples, among many, of the divergent ways in which people may try to shape the long-term future. However, those endorsing views like the aforementioned have something in common: they can all consider it a priority to influence the long-term future, in one way or another, by virtue of what they consider to be valuable. It is because of this that they would all be equally suitable for consideration as longtermists.[2] There is no basis for thinking that only one of those views, or only a specific version of one of them, would be the only possible longtermist view that someone could endorse. Accordingly, nonanthropocentric views focused on how the

future may be for all sentient beings are equally longtermist, as what occurs in the distant future is one of their key concerns (Horta, 2022, pp. 154–157; Animal Ethics, 2020; Baumann, 2020; Browning & Veit, 2022; O'Brien, forthcoming; Reese Anthis & Paez, 2021; Stawasz & Sebo, 2022).

Some perspectives rightly avoid defining longtermism solely in terms of concern for humanity's future. However, those perspectives seem to assume that longtermist interventions should be considered solely or almost solely in terms of their positive and negative impacts on human beings or their descendants (Ord, 2020; Tarsney, 2023). One way to argue in favor of this is by claiming that animals' interests do not matter at all. This view, however, has been seriously challenged in the philosophical literature. It has been argued that sentience—that is, the capacity to have mental states of any kind that may be negative or positive—is what matters for moral consideration (Cavalieri, 2001; Francione, 2008). Discussions in animal ethics have often focused on the question of whether being sentient is a necessary criterion or, in fact, the only criterion for moral considerability. Many have given affirmative responses to both questions in the philosophical literature (e.g., Singer, 1975/2023; Bernstein, 2015). However, regardless of how the two questions are answered, sentience has long been accepted as a sufficient criterion for moral considerability (Pluhar, 1995; Regan, 1983/2013; Rollin, 1981/2006; Sapontzis, 1987). Given the overwhelming evidence that sentience is widespread among animals (Andrews et al., 2024), it has been argued that the view that only human interests matter is unacceptable: such a position would be an instance of anthropocentric speciesism—a form of discrimination (Ryder, 1970/2010). Indeed, it would be a radical form of anthropocentrism, as it would entail that the interests of nonhuman beings are either nonexistent or count for nothing. Note that the view that the equally strong interests of other sentient beings matter less than those of human beings, but that the former still matter to some extent, requires us to still take into consideration how nonhuman sentient beings may fare in the long-term.

In light of this, it seems that the only remaining way to argue for the view that longtermists should not take animals' interests into account is to assume that even if these interests count as much as humans', animals will not be affected in the long term in a way that can influence how good or bad the future will be for them. In the following sections, we argue that, unfortunately, this is not so, as there are different possible ways in which the long-term future could be highly negative for a vast number of nonhuman animals.

HARM INFLICTED ON ANIMALS OUT OF DISREGARD FOR THEIR INTERESTS

To examine potential risks of negative future scenarios for animals, we begin by considering the harm that humans cause to nonhuman animals not out of malevolence but out of disregard for the latter's interests. This is what occurs when animals are used as resources today. Doing so is simply convenient for humans, despite the fact that harm inflicted on nonhuman animals as a result is very significant. According to estimates, over eighty billion land vertebrates, two trillion aquatic vertebrates, and up to several tens of trillions of sentient invertebrates are killed annually for this purpose (Fishcount, 2010; Rowe, 2020; Šimčikas, 2020; Waldhorn & Autric, 2023). In slaughterhouses and fisheries, animals are not only killed but also suffer immensely. In factory farms, they suffer substantially for most of their lives (Singer, 1975/2023; Horta, 2022). Therefore, it can be concluded that the current state of affairs is very negative for them. However, there are two ways in which it could become even worse in the future. First, more animals may be harmed; second, the harm may become qualitatively worse. Below, we examine how this could happen.

Increasing the Number of Animals Harmed Because of Human Use

In the future, more animals may be harmed by humans than in the present both synchronically and especially diachronically.

Synchronic Expansión

Suppose that humans keep using animals in the same ways that they do now. This may mean that the number of exploited animals at any given time may increase substantially. This could happen, for instance, if the global human population grows without the per capita demand for animal products diminishing. Alternatively, the per capita consumption of animal products might rise (Alexandratos & Bruinsma, 2012; United Nations, Department of Economic & Social Affairs, Population Division, 2022). Both changes have occurred in recent decades despite the steady increase in the number of vegans and in their proportion to the total human population (Vegan Society, 2023).

The number of animals that are exploited may also increase if the use of smaller animals becomes more widespread. This is currently happening owing to the growth of the invertebrate farming and fishing industries, which might increase more dramatically in future decades.

Diachronic Expansión

The vast duration of the long-term future means that the cumulative harm inflicted on animals could ultimately be immense (Animal Ethics, 2020; Baumann, 2022). As time passes, more animals can be exploited, eventually exceeding by several orders of magnitude the number who will suffer and die in the near future. This could occur even if the number of animals harmed and killed at any given time is reduced and regardless of whether the injuries inflicted become less significant than they currently are.

Creating Worse Forms of Harm

In addition to changing quantitatively, animal exploitation can be expected to change qualitatively. Technology might open up the possibility of creating new methods of exploiting animals, which we may be unable to imagine today. This may cause more suffering per animal exploited and thus more suffering overall in several possible ways. We examine these next.

Worsening the Harm Inflicted on Animals Without Altering Their Genomes

Animals who are currently used as resources may continue to be employed in the same ways. Furthermore, others who are currently not utilized for food and clothing production may begin to be used in ways that we may not foresee today. Nonetheless, it is reasonable to expect that methods of this kind will be developed, as this has happened in the past. These methods could be widely used because they are profitable for humans. Again, we are already witnessing this with the development of invertebrate industrial farming, which was preceded by fish and land-based industrial farming, and with the use of artificial intelligence to make animal exploitation more profitable (Singer and Tse, 2023). The evolution of animal exploitation since the mid-twentieth century indicates that the use of animals as resources may worsen very quickly, and this pattern may continue in the future (Fishcount, 2010; Waldhorn & Autric, 2023).

Creating New Animals Using Top-Down Synthetic Biology

In addition to the possibilities outlined above, new animals could be created using synthetic biology. This could be done following a top-down approach, starting with existing living beings and redesigning them by altering their genomes (Menchaca, 2021; Roberts et al., 2013). Such an approach may give rise to organisms that barely differ from their antecessors, but it

may also lead to new ones if the modifications are significant. There may be different motivations creating new animals in this way, ranging from mere curiosity and scientific interest to the development of new animal products or services, most likely food items. The animals thus created may suffer just as much as those currently used for these purposes. However, they could also be harmed more significantly for different reasons. One possibility is that those animals will be used in ways that are especially detrimental to them, as is the case today with the animals used in experimentation. Furthermore, they may be genetically designed in ways that cause them to be afflicted by severe chronic pain, like some dogs and broiler chickens today, or in more exacerbated ways. Animals could also be genetically modified to mitigate their capacity to suffer pain, so that they can be used more easily in ways that cause them other forms of suffering, in addition to depriving them of their lives. Moreover, if these genetic modifications inadvertently failed, the animals thus modified could suffer very significantly without humans being aware of it.

Creating New Sentient Organisms Using Bottom-Up Synthetic Biology

New sentient organisms may also be created using a bottom-up approach, whereby inert components are employed to create new creatures (Kolisis & Kolisis, 2021; Schwille, 2011). If efforts in this field were successful, some of the resulting organisms might be sentient. These beings could suffer for the same reasons we have previously examined. Moreover, their suffering might be more difficult for us to assess because these creatures could differ significantly from currently existing animals, making it more likely for such suffering to go unnoticed and thus not be considered.

In the future, all these ways of harming animals (or new biological sentient beings) could happen simultaneously and interact in ways that might be especially negative for exploited animals. For example, the number of animals exploited synchronically could grow exponentially given the possibility of creating new sentient animals with synthetic biology (especially because the animals in question may be very small, like the invertebrates currently killed for consumption). If the worst were to occur, these undesirable scenarios could last for a very long time. It is uncertain whether and how these situations may unfold; however, past and current trends suggest that we cannot rule out the possibility of their occurrence. In particular, the use of artificial intelligence systems can be expected to have a crucial role in this being the case, through their application to the design of new animal exploitation systems and in synthetic biology research and developments.

MAKING ANIMALS SUFFER AVOIDABLE HARM OUT OF INDIFFERENCE TO THEIR INTERESTS

Consider the harm that is inflicted indirectly or allowed to occur even though it could be prevented, again out of a lack of concern for the victims. This is what happens in the case of wild animal suffering. Wild animals are negatively affected by a number of factors, including among others lack of food and water, harmful weather conditions, natural disasters, diseases, conflicts, and accidents. These factors cause them to suffer, often very significantly, and to die prematurely (Animal Ethics, 2020; Faria, 2023; Horta, 2022; Johannsen, 2020). For the most part, humans are indifferent to the fate of these animals, although there are important exceptions. All around the world, people help wild animals in many ways. These include rescuing trapped individuals; caring for injured, sick, or orphaned animals; saving those affected by harmful weather events or natural disasters; implementing vaccination programs; and other similar measures. These initiatives could have more positive effects in the future as we build our knowledge of how to successfully aid affected animals and get better at avoiding unintended consequences for others. The result could be a reduction in wild animal suffering (Horta and Teran, 2023). However, the opposite might happen. Wild animal suffering may increase substantially in two ways, especially in the long term.

Increasing Wild Animal Suffering Due to Changes in Earth's Biosphere

One way in which wild animal suffering could increase is already occurring; it has to do with humans' impact on the biosphere. This is not to say that anthropogenic influence is always negative. In fact, it can have positive effects, for example, by modifying ecosystems in ways that are net positive for animals. However, there is one important factor that might be considerably deleterious for wild animals, which is climate change (Palmer, 2021; Sebo, 2022). In the short term, climate change may worsen the lives of many animals by altering the conditions in which they live. This will happen owing to various factors, such as changes in temperature, water and food availability, and the oceans' salinity (Root et al., 2005). Such changes mean that many animals will die, often painfully. However, for at least two reasons, short-term environmental changes are unlikely to be the crucial factor in terms of wild animal suffering. First, in the same way that these changes will harm some wild animals, they will benefit others, for which the new situations will make survival easier. Second, and more importantly, the major harm that climate change may cause to animals will not happen in the

short term. Global warming will render the planet's colder regions warmer. Consequently, the affected regions will become more habitable, and as a result, animals that could not previously live in these regions may begin to populate them in great numbers. Because these regions include some of the largest land masses on Earth, global warming is likely to lead to a significant increase in the number of land animals. The opposite is likely to happen in the oceans, where colder waters allow for higher concentrations of living beings. However, the increase in the number of terrestrial animals may outweigh that of aquatic ones. This is often poorly understood because global warming will also cause a reduction in biological diversity, and when thinking of wild animals, people typically conflate diversity (especially the number of species) with the number of individuals. But from a perspective focused on sentient beings' interests, what matters is these individuals' situations, not the species to which they belong.

Unfortunately, this increase will mainly come about through the proliferation of wild animals with particularly bad lives, as they are the ones who are most likely to colonize new areas. On average, the animals with the most miserable lives are usually those that reproduce by having a large number of offspring. In stable populations, on average, only one animal per parent reaches adulthood in each generation. The others—the vast majority—die early on, often shortly after coming into existence, and generally in very painful ways (due to starvation, bad weather, conflicts with other animals, etc.). Because they die so young, they barely have the opportunity to enjoy their lives. This means that many wild animals have lives in which suffering predominates (Faria, 2023; Hecht, 2021; Soryl et al., 2021). However, although this reproductive strategy is associated with lower levels of positive wellbeing and large amounts of suffering, it contributes to making these animals more efficient at colonizing new areas compared to those who have only a few offspring and who typically have better net levels of well-being. For their part, those who typically have only a few offspring are much more likely to disappear owing to climate change.

Disseminating Wild Animal Suffering Beyond Earth's Biosphere

The second way in which wild animal suffering can increase is more speculative. However, it is not far-fetched; indeed, it has already happened, albeit in very limited ways. Furthermore, it is potentially more dangerous, as the number of animals affected could be astronomical. It consists of spreading wild animals and other organisms beyond Earth either voluntarily or accidentally.

Exporting Animals Outside Earth

Research on whether tardigrades can survive in outer space has been conducted since the 2000s (Rebecchi et al., 2009). In 2019, an Israeli mission attempting to land on the moon carried tardigrades (Gundersen, 2020; Shahar & Greenbaum, 2020). The mission failed when the spacecraft crashed, and the tardigrades either did not survive or in any case would not have been able to thrive in an environment without the resources that they needed to live. Scientists have also considered plans for reproducing Earth's ecosystems on other planets, such as Mars, through large-scale bioengineering interventions (Fogg, 2011; Friendman & Friedmann, 1995), also known as terraforming. These projects would result in the spread of wild animal suffering outside Earth.

Spreading Other Lifeforms in Outer Space

If lifeforms from Earth can survive in space, there is a risk that missions like the ones mentioned above could spread life to other planets and satellites. We should bear in mind that, while even invertebrates as resistant as tardigrades may be unable to survive in outer space, microscopic lifeforms, such as bacteria, can survive in extremely harsh conditions. Hence, it would be possible for them to survive and evolve in new environments. At some point, they might evolve into sentient beings. It is also important to note here that with every exploratory mission, whether human-piloted or not, microorganisms are spread to space, as it is impossible to completely sterilize probes and ships sent to space. Furthermore, for some time now, there have been discussions about the planned spreading of lifeforms to other planets (Debus, 2005; Rettberg et al., 2019). Although these may appear to be far-fetched science fiction scenarios, some scientists have discussed initiatives such as planet terraforming and directed panspermia (Crick & Orgel, 1973)—that is, the delivery of biological material to other planets. These initiatives could multiply wild animal suffering, as the same factors that brought about reproductive strategies associated with the potential prevalence of negative over positive wellbeing on Earth (finite resources and Darwinian selection) would also apply elsewhere (O'Brien, 2021).[3]

These scenarios vary with respect to their certainty, but the risk of the occurrence of each of them is nontrivial, and the scale of the harm that could occur is very significant, thereby making their prevention far more important than it may seem. However, despite this, such scenarios are mostly neglected.

CAN RISKS FOR ANIMALS BE PRACTICALLY IRRELEVANT?

It might be argued that what we have discussed thus far may not make a significant difference for longtermists who hold anthropocentric views, because what is best for humans may also be positive for other sentient beings. In particular, we may think that the descendants of present humans may not be motivated to harm animals, as technological progress will mean that they may no longer need to do this. It could also be that owing to moral progress, they no longer wish to cause these harms. Instead, they may decide to improve the situations of other sentient beings and prevent future harms to them. However, we have no reason to think that this is a highly likely scenario.

To begin with, it is true that the promotion of what is best for human beings may in some respects coincide with the promotion of what is best for other sentient beings; for instance, both seem to imply we should take action against climate change. But the interests of humans and animals can diverge very significantly in other important ways too. For example, technological progress can be used in ways that are overall significantly negative for animals but very beneficial for humans. In effect, we have seen that using animals as resources can be beneficial for us even if this is not always necessarily the case. However, we have also seen that these uses are very detrimental for the animals involved. Moreover, even if humans or their descendants do not seek to harm other sentient beings to promote their own interests, they may nonetheless be indifferent to their plight. This can still harm animals significantly as a side effect of certain decisions (for instance, by spreading wild animal suffering through space exploration). Furthermore, even if these decisions do not harm animals like this, they can lead to resources being invested only in humans themselves, even though such resources could be utilized more efficiently to prevent harm to other animals.

In addition, it is quite uncertain whether moral progress leading to nonhuman animals' interests being fully taken into account will happen. But if it is to occur, it seems that it crucially depends on promoting concern for such interests. Consequently, appealing to the possibility of such moral progress as a reason not to be concerned about what will happen to animals in the future, and thus not to spread concern about them, seems self-defeating, as it would predictably prevent the occurrence of the very conditions for such moral progress.

CONCLUSION

The reasons considered above imply that longtermism should not be defined or identified in practice with any kind of view according to which we may disregard the interests of some future sentient beings. This has implications for those involved in animal advocacy, as it means that they should take the long-term future of animals much more seriously. It is also relevant to those concerned with the long-term future in general, as longtermists aiming at any kind of plausible goal will fail to adequately pursue it if they do not take into account the interests of nonhuman animals.

NOTES

1. A common defense of longtermism rests on these two other premises, which bolster the case for premise (2) (MacAskill, 2022; Roser, 2022; Tarsney, 2023):

(2') We should care equally about all individuals who will exist in the future.
(3) Vastly more individuals will exist in the long-term future compared to the near-term future and the present.

We think these premises are both correct, although accepting them is not a requisite for endorsing a longtermist viewpoint. Strictly speaking, (2') would endorse a longtermist approach focused on promoting the interests of individuals, while some people may endorse instead longtermist approaches focused on different values. Meanwhile, premise (3) may be necessary for accepting not just longtermism broadly understood, but, more specifically, strong longtermism, which is the view that positively shaping the long-term future should be our highest priority (MacAskill and Greaves, 2019/2021). The resulting version of longtermism, a strong one focused on the interests of individuals, is in fact the view we endorse, but we acknowledge that there are a number of other possible variants of longtermism.

2. In fact, the aforementioned definitions could be considered too restrictive as well, given that nonconsequentialists may also want to shape the longterm future in ways that need not be determined by the value of states of affairs but, rather, by other normative considerations. However, for the sake of simplicity, we will not examine this issue in this paper.

3. Other risks for nonhuman beings include the development of non-biological forms of sentience. If digital forms of sentience are eventually developed, we may face scenarios that, while different from the ones examined above, would also involve very significant amounts of suffering for nonhuman entities. This seems less feasible than creating new animals from already-existing ones by using gene drives or other similar technologies, but it may be more achievable than using synthetic biology to produce new organisms from scratch. The resulting artificial entities would not be animals, but the key arguments for the moral consideration of sentient beings would also apply to them (Althaus & Gloor, 2016; Harris & Reese Anthis, 2021; Owe & Baum, 2021). Although this paper has focused on nonhuman animals, factors that are similar to the ones presented here should drive longtermists to also take into account the interests of digital forms of sentience.

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