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ZOO ANIMAL WELFARE

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ABSTRACT. The continuing existence of zoos and their good purposes such as conservation, science, education, and recreation, can be ethically justified only if zoos guarantee the welfare of their animals. The usual criteria for measuring animal welfare in zoos are physical health, long life, and reproduction. This paper looks at these criteria and finds them insufficient. Additional criteria are submitted to expand the range of welfare considerations: natural and abnormal behavior; freedom and choice; and dignity. All these criteria should play a role in analyzing zoo animal welfare and interests but dignity has the overriding part because it impacts on both animal and human interests.

KEY WORDS: animal, dignity, ethics, reintroduction, welfare, zoos

1. INTRODUCTION

Ethical justification for the existence of zoos is questionable. Justifications have been given for their existence, such as conservation, education, science, and recreation, but all these purposes have been criticized (e.g., Jamieson, 1985). However, the question raised in this paper is that of animal welfare in terms of individual animal interests.[1]

Zoos often claim that having healthy, long-lived animals that reproduce is sufficient proof of good care. I believe that these three criteria have to be examined more closely and also that there are other important criteria of zoo animal welfare: natural and abnormal behavior, freedom and choice, and dignity. All these criteria should play a role in analyzing zoo animal welfare and interests.[2] I will examine whether a zoo that has the best possible conservation, education, and scientific programs can be justified in the light of my new criteria.

[1] I refuse to use the term "animal rights." I think this term makes sense only in legal discussions, while this paper is not about legal rights.

[2] These criteria are artificially divided. It is never possible to say that this animal is suffering only from lack of freedom, for instance.

2. PHYSICAL HEALTH

There is no doubt that good physical health is a necessary condition for the welfare of any animal, and in general, animals in zoos appear to physically suffer less than animals in nature through veterinary care and medicines, including pain killers. But this is misleading. The nature of pain is a complex issue and it can be difficult for zookeepers to reliably recognize pain in animals, especially if there is no obvious cause. Also, zoo animals suffer physical health problems specific to their environment. Injuries requiring treatment are often caused by limited or unsuitable enclosures. Animals unaccustomed to a new enclosure or innovation often hurt themselves. Also, Bostock (1993) argues that the population density in zoos causes fast transmission of infections and parasites, some of which are human in origin; for example primates often get colds, influenza, tuberculosis, or measles.

3. LONG LIFE AND EUTHANASIA

On average, animals live much longer in zoos that in nature. Zoo animals are probably the longest living animals in captivity,[3] as agricultural and laboratory animals mostly have a limited lifetime. But is a long and safe life in zoos always better than a short and ''risky'' life in nature, and is longevity always proof of good care and welfare? As the experienced zoo director Heini Hediger (1950) said, ''The attainment of ripe old age in captivity is no guarantee of biologically right treatment.'' A long life cannot be good if the zoo fails to provide fitting conditions. A long life full of suffering is no advantage for an animal.

Should a zoo cull if animal welfare cannot be maintained? Authors like Lacy (1996) believe that culling is right. No zoo has unlimited space or possibilities and ensuring good welfare must be a priority. By keeping animals captive, we take responsibility for their life, including a painless death. Lacy also raises the question of why the public doesn't generally accept culling of zoo animals whilst it is tolerant of slaughtering animals in agriculture. His answer is that people sympathize with zoo animals as they do with pets, and many people don't put down their old, very ill, and obviously suffering animals.

We often give preference to our own feelings over the needs of animals. Because of this, many zoos refuse to talk about culling. They believe that public opinion would be against them. This is a false strategy: people are not blind to the fact that spring's babies are missing at the end of autumn. Part

[3] This does not include pets.

of education in zoos is basic biology, which should include understanding that death is part of life, and nobody should think that vultures, crocodiles, tigers, or chimpanzees are vegetarian.

4. REPRODUCTION

Successful reproduction is the pride of every zoo and certain new-born animals attract the media and increase public attendance. It is generally thought that a zoo where animals successfully breed is a good one, and that it is necessary to worry about the welfare of animals living in zoos with a low reproduction rate. But is high reproduction actually an indicator of good animal welfare? Many successful zoo births are results of human intervention. *In vitro* fertilization, assistance during birth, or taking over the care of young ones are common practices in zoos. Such "artificial" breeding can hardly be proof of animal welfare.

Bostock (1993) claims that it is a myth that only well looked-after animals reproduce. Farm pigs confined to a space of 1 square meter each also successfully reproduce, so if higher reproduction meant better welfare, then zoos would have to admit that their animals have worse conditions than agricultural animals. This argument might seem unfair, as most agricultural animals are bred for easy reproduction while most zoo animals are not, but past experiences have proved that even zoo animals breed successfully in obviously bad conditions; bears in dark pits, lions in small cages, and birds in cages where they could not fly.[4] Another argument Bostock uses is that increased reproduction of zoo animals and increased sexual activity is a sign of boredom, not welfare, and may be an indication of slow domestication. However, we still know little about the natural life of many species, and it is impossible to assert zoo animals to be more sexually active than animals in nature. In the wild, animals cannot be watched constantly such that they are not aware of human presence and change their behavior accordingly.

On the other hand, there are species such as mountain gorillas, Sumatran rhinoceros, and giant pandas that reproduce poorly in captivity. Although zoos are trying to provide these special animals with good living conditions, they still reproduce very rarely. By their own argument, zoos should admit that they are failing to provide good welfare for these species. But the fact that some animals reproduce in truly bad conditions while others don't

[4] In human terms, if a high rate of reproduction was related to welfare then an observer would conclude that standards of welfare were much higher in the countries of the Third World than in afluent Western society. This is clearly not the case, as other factors affect reproduction of humans.

reproduce well under special care means that reproduction says nothing about the standards of welfare and cannot be used on its own as an indicator of welfare.

5. NATURAL AND ABNORMAL BEHAVIOR

It is difficult to recognize which behavior in captivity is close to natural behavior. Many behaviors seen in zoos were previously perceived as unnatural until it was observed in nature, e.g., some species exhibit cannibalism, urinating on each other, or eating feces (coprophagy) in the wild, as well as in captivity.

Progressive zoos try to enable animals to live as natural a life as possible and to provide them with naturalistic environments. They cannot, though, provide genuinely natural environments. There are many conditions zoos cannot easily simulate; e.g., climate, migration, or hunting.[5] Zoos also introduce unnatural stressors to the animals, such as exposure to humans and close proximity to other possibly stress-inducing species. Exposure to such constant stress often leads to maladaptive behavior, such as self-mutilation, the vomiting and re-eating of food, and increased aggression.

Zoo apologists argue that such behaviors have been observed in stressful situations in nature as well, but the concern in zoos is that the abnormal behavior becomes a stereotype. Usual zoo stereotypes are constant licking of bars or walls and head-swaying. Animals needing more movement often march for hours in geometrical paths. A former Prague zoo director and former president of the International Union of Directors of Zoological Gardens (IUDZG) Veselovský (2000) claims that stereotypes are no proof of failed welfare as such behavior is similar to human behavior in overcrowded cities. Zoo animals behave just like athletes running in stadiums. Bostock (1993) similarly argues that captive polar bears are like people training in swimming pools. This is a flawed argument: people go to gyms and swimming pools voluntarily to spend only a part of the day there. Animals have no choice but to be in their enclosures all their life.

So should species from environments that cannot be practically provided be kept in zoos? The belief that zoos should give up keeping animals that need a lot of exercise or require difficult to emulate conditions is expressed by Hancock (1996) in his paper *Lions and Tigers and Bears, oh no*. This problem of natural life suggests that it would be better only to breed domestic animals in zoos. There are three reasons for this. First, it is natural for such animals to live in captivity, with limited space and in the presence of

[5] Such attempts have been made, but have been criticised for being immoral.

humans. Second, zoo goers are often city people for whom seeing a domestic animal is as rare as seeing a wild one. Third, there are many domestic or semi-domestic animals that are exotic for city-dwellers; e.g., llamas, Indian elephants, or reindeer.

6. FREEDOM AND CHOICE

Defenders of zoos sometimes claim that freedom is not in the interest of animals. For example Maple et al. (1996) claim that freedom of movement in nature is an illusion, as animals are strictly limited by their territory, which has to be fought for against other animals and humans. They also claim that animals don't need the same territory in captivity as they are provided with food, water, shelter, and safety from predators. The argument fails on several grounds. Wild animals in nature don't move around their territories only for food and survival. Their bodies are made for traveling, and preventing them from movement causes a lot of distress. Also, it is not true that animals stay all their lives in their territories; they often leave them, e.g., in mating season. According to the argument of these authors, we could also claim that humans do not really have freedom as they are limited by society, physical abilities, etc. Reliable food supplies and protection are also no argument for zoos being better for wild animals than free nature. It would be difficult to find many people who even voluntarily take up an offer to live within a luxury apartment of a five-star hotel for the rest of their lives.

It is often said that only animals born in nature can show a desire for freedom (Veselovský, 2000), and, as most of today's zoo animals were born in captivity, they don't know what freedom is and cannot miss it. Hediger (1950) illustrated this theory with animals who escaped from their enclosures but later returned back voluntarily. It can be argued, though, that animals escape precisely because they are not satisfied with their living conditions; they want to be free from constraint, but once outside they are confused and even more stressed. Voluntary return of zoo animals may only be a proof of survival incapability, mental and social underdevelopment, and strong dependence on man. An analogy would be institutionalized humans; life in unfamiliar freedom brings a great deal of anxiety.

Freedom is not only about ability of movement but also about the decrease in the quality of living conditions or the impossibility of making one's own decisions regarding food, climate, or companions. It is impossible to release most zoo animals back into nature, but a useful method for improving their living conditions is by asking them what they prefer. Animals don't speak our language but they can communicate with us. Stamp Dawkins (1980) participated in research on animal choice in agriculture. Researchers

offered hens a choice of two environments (such as different types of flooring, inside or outside) and observed their preference. The hens at first tended to prefer the environment they were used to but later showed a different preference. These experiments also tend to prove the argument above; zoo animals returning to their enclosures choose what they are used to. If they escaped more often, a true indicator of their preferences might be found.

In zoos, choice tests could be useful to let captive animals express their needs and interests so as to find better environments for them. For example, they could be offered different types of flooring, enclosures with different temperatures, light, or humidity, etc. Research must be carried out to find out whether new enclosure innovations like glass instead of metal bars, paintings on walls, artificial flowers, and waterfalls make any difference for animals. This has resource implications for zoos.

7. DIGNITY

According to Mullan and Marvin (1999), contemporary zoos look very similar to mental asylums in the 18th and 19th centuries. At that time, mental patients were often chained and frequently exhibited to the public for an entrance fee. A good example was Bedlam in London, which was a popular weekend entertainment for fine society. Mullan and Marvin state that thanks to the entrance fees, mental patients were provided with decent meals, and apparently the patients didn't mind the visitors, some even liked to demonstrate their madness. Most asylums were closed to the public during the 19th century, and we perceive using the mentally ill for entertainment as bad, because we respect their dignity.[6]

But how is it with animals in zoos? Do they have dignity? We ascribe dignity to such animals as lions, deer, or eagles, but is this just our tendency to anthropomorphism? Do animals such as pigs or frogs really have dignity, and, if they do, don't we offend their dignity by keeping them in enclosures and staring at them? Until the 18th century, dignity was assigned only to people high in the social hierarchy, such as aristocrats and churchmen. Kant (1998) assigned dignity to all who are able to think rationally, have free will, and act autonomously. Marcel (1971) criticized this concept of dignity based on rationality. He suggested that dignity requires respect for others' differences and accepting them as equal. Today's society doesn't base human dignity on rationality. Dignity is often assigned to all humans, including the mentally disabled, those living in a vegetative state, and even embryos. This shows that dignity can be assigned to those humans who are not even aware

[6] It is interesting that mental asylums closed to public at approximately the same time as menageries and the first modern zoos started being hugely popular.

of it. If we can ascribe dignity to all people independently of their intelligence or consciousness, why not ascribe it to animals as well?

For Wise (2002), the criterion for dignity is intrinsic autonomy of the being. Such animals as chimpanzees, gorillas, dolphins, parrots, and dogs are aware of themselves, they can communicate on high level, use tools, make decisions, empathize, understand the concept of past and future, and even grieve for their dead. But animal dignity doesn't have to be based only on autonomy or intelligence. It can be based on their ability to suffer, having their own interests, or just having life. Each species has its unique characteristics and each individual animal is special. Therefore, we can ascribe dignity to all animals.

A proper definition of dignity is rare. Does it arise from the inside of a being (intrinsic) or is it a matter of respect from others (extrinsic)? I would claim that dignity originates from the meeting of these two elements. It is something between virtue and honor. While virtue may be a personal good, honor is a matter of the opinion of society and it is mostly accidental. A virtuous person doesn't always have to be honored by his fellow-citizens and equally a highly honored person doesn't have to be virtuous.[7] Dignity requires both these elements; the self-interest of the being as well as the respect of this interest by others.

It is very difficult to keep one's own dignity in an environment that doesn't allow dignified behavior. For example, in a prison environment including torture and humiliation, it is nearly impossible to keep one's dignity, whether prisoner or guard. On the other hand, civilized countries try to respect the dignity of all prisoners, including serious criminals such as mass murderers or rapists. In the same sense, good zoos that provide sufficient living conditions for animals enable the animals and the keepers to maintain their dignity. But a bad zoo makes it impossible for the animals to keep their dignity if it prevents them from their basic natural behavior, like cleaning themselves, or socializing with their own kind. Visitors cannot easily perceive animals living in bad conditions as dignified beings. The thing at stake in zoos is not just the dignity of animals but also our own dignity. If we as zoo keepers, zoo visitors, or society in general tolerate keeping animals in small cages, bunkers, and aquariums, we decrease our own dignity.

8. REINTRODUCTION FROM ZOOS

There is another area in which the welfare of animals living in zoos needs brief discussion. The main conservation priority of zoos should be reintroducing

[7] In *The Defence of Socrates* Plato describes his teacher as a most virtuous man who is nevertheless sentenced to death by honored (non-virtuous) citizens of Athens.

endangered species back to their natural habitat. There are several doubts about the seriousness of most zoos to proceed with this, as most breeding programs concentrate on keeping populations of wild species in captivity. There are also ethological and environmental problems with reintroduction.

Reintroduction raises important ethical questions about animal welfare. Reintroduced animals are often born in captivity and as such are not prepared for life in nature. They do not know how to move in their natural habitat, seek their own food, or protect themselves from predators and changing weather. Returning these animals to nature brings them a lot of stress, suffering, and often a quick death.

It can be argued, though, that preservation of species and habitats is a higher value than welfare of individual animals. It is then fair to sacrifice several animals for a higher good. Also, freedom is in the interest of wild animals, so the risk of reintroduction is worth it, and animals have the chance to show their own preferences, as they can often return to the place they were released and get captured again.

One possibility for successful reintroduction of animals is training them before release, but there are doubts about the effectiveness of training. Firstly, training is linked to even more suffering, not only of the trained animals, but also animals used for training. The key behavior that carnivorous animals have to learn is hunting. Defenders of such training argue that releasing live prey into predators' enclosures is only copying nature where prey also suffers. This argument is not fair, as in nature prey have a chance to run away, while there is no such chance in an enclosure. Also, we have different responsibilities to animals in nature and to animals in captivity. As stated above, we owe animals in our care that have to die at least a quick and painless death.

Secondly, it has been questioned whether it is really possible to train captive animals in natural behavior. In other words, is it within our capacity to teach animals "wildness?" Several programs of reintroduction are having problems with it; for example, scientists at the university in Minas Gerais in Brazil are training captive-born rheas (*Rhea americana*) to be afraid of humans and leopards. Thus the keepers run in robes around the birds and push stuffed leopards on wheelbarrows. So far scientists admit that they have had only one result; there is no doubt that rheas have learned to be afraid of wheelbarrows. (Corra, Ema, Corra, 2005) Another example is referred to by a team of scientists preparing black-footed ferrets for reintroduction. Although these successfully learned to hunt in captivity, most of them died of hunger after being released to nature (Miller et al., 1998). It seems like it is much easier to kill prey (which is instinctive behavior for most predators) than to be able to find it and hunt it down.

9. CONCLUSION

As with a great deal with ethical discussion, more questions than answers have been raised by this paper, but it is clear that there is much more to the welfare of animals in zoos than merely whether they are healthy, long-lived, and breeding. Natural life and psychological health, freedom, and the possibility to make some choices must be taken into account. In particular, dignity needs to be considered because it is intimately involved with the other elements of welfare and may be overriding. The fact that dignity affects both the animals and the humans in the zoo suggests that it should be given a dominant position in the debate about the justification of zoos. There are also serious ethical welfare issues related to releasing captive-born animals back to nature.

In general it would be useful to change current zoos into either breeding conservation centers mostly closed to the public that would focus on reintroduction, or into domestic animal sanctuaries open to the public. Many animals suffering in agriculture or in homes could be moved to these centers where the public could learn more about part of our cultural history – agriculture.

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