

# The moral implications of a Jurassic zoo

An overview of the arguments of the debate on de-extinction and creation of extinct species for zoo purposes

Master Thesis

21-6-2018

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MA Applied Ethics

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## Abstract

Thanks to ongoing progresses in technology it may soon be possible to breed extinct species. The idea of a Jurassic zoo like the ones in the movies becomes more realistic. The purpose of this study is to investigate the moral implications of such a Jurassic zoo. In this thesis these moral implications are explored by first outline a theoretical frame, using the views of Peter Singer and Christine Korsgaard, which results in principles on the treatment of animals and the moral status of animals and artificial animals. with this Theoretical framework, the idea of creating a Jurassic zoo is analyzed on the basis of the justification of present-day zoos. The arguments that justify present-day zoos have implications for the justification of a Jurassic zoo, therefore they will be examined. Finally, the arguments will be presenting an advice on whether or not to create a Jurassic zoo.

Content

- Abstract ..... 2
- The case..... 4
- 1. Introduction..... 5
- 2. My moral intuition..... 7
  - 2.1. Arguments for creating extinct species ..... 8
  - 2.2. The moral intuition ..... 10
- 3. The moral status of animals in present-day practice..... 15
  - 3.1 The moral status of animals ..... 15
  - 3.2 The moral status of artificial animals ..... 18
  - 3.3 Implications of this notion of moral status for the realization of a Jurassic Park ..... 21
- 4. Ethics of kept animals..... 23
  - 4.1 The aspect of education ..... 23
  - 4.2 The aspect of scientific research. .... 25
  - 4.3 The aspect of preserving species..... 27
  - 4.4 The aspect of amusement ..... 28
  - 4.5. Justification of zoos ..... 29
  - 4.6 In relation with Extinct species..... 30
    - 4.6.1 The educational aspect of a Jurassic park ..... 30
    - 4.6.2 The Scientific research aspect of a Jurassic park..... 31
    - 4.6.3 The Aspect of preservation species in a Jurassic park..... 32
    - 4.6.4. The amusement value of a Jurassic Park..... 33
    - 4.6.5. The economic value ..... 35
  - 4.7. Weighing the arguments ..... 35
- 5. Conclusion ..... 37
- 6. Recommendations for future research ..... 39
- 6. Bibliography..... 40

## The case

The central subject of this thesis is the recreation of extinct animals. Because of the broadness of the subject I chose to focus on one case of recreation of extinct animals. This one case focusses on one category of extinct species, in one particular use of the recreated extinct animals. Because extinct animals vary from the great and monstrous tyrannosaurus rex to the recently extinct passenger pigeon<sup>1</sup>, I chose to focus of one category of extinct animals in order to keep the subject limited to the length of the thesis. For all kinds of implications vary for the different kind of extinct species. When doing research on the extinct Passenger pigeon the discourse is profoundly different than when discussing the extinct dinosaurs. In order to maintain a central topic in this thesis I will be using a case study. This case study will be based on the 1993 Steven Spielberg film 'Jurassic Park'. The setting of the movie takes place on a fictional island in the United States. Due to the discovery of a mosquito captured in amber, scientist are able to reproduce the dinosaurs that roamed the earth in the Jurassic era. The whole island is designed as a theme park and people can visit the island after paying a certain entrance price. The reproduced animals are in this case created to function like animals would function in a regular present-day zoo<sup>2</sup>. To summarize the important aspects of the case in comparison to the subject of de-extinction in general: the animals that are to be created are dinosaurs, they are not able to be set free in the wild. Second, because the animals cannot be set free in the wild, they are to be kept in a zoo like situation. Third, the animals are not like present-day wild animals, and they cannot be compared. After all this being clear, the research can begin.

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<sup>1</sup> "Top 10 extinct animals" STABLE URL: < <https://onekindplanet.org/top-10/top-10-worlds-extinct-animals/>> (consulted on June 12<sup>th</sup> 2018)

<sup>2</sup> Movie: Jurassic Park, directed by Steven Spielberg. Produced by Kathleen Kennedy and Gerald R. Molen (1993)

# 1. Introduction

For a long time, the idea of bringing back extinct species, like the woolly mammoth or the dodo, remained science fiction. But scientific progress made the idea of walking around in a Jurassic Park not that unrealistic anymore. With the realization of the ability to bring back extinct species comes an extended ethical perspective. Not only for the recreation of dinosaurs like in the famous movies, but also for other animals that are gone extinct or that are going extinct. In itself the idea of seeing a living dinosaur with your own eyes can be very appealing, but can we bring back extinct species without moral objections? When first thinking about the topic I tended to believe that bringing back extinct species was something to strive for, just because of the idea of the well-known movies and the entertainment value it would have. I dare to say that I am not the only one whose heartrate rises at the idea of a real like dinosaur theme park. The big question that arises is what the moral objections against a real life Jurassic Park are. This question has diverse implications. First, determining the moral status of animals and in particular such cloned extinct animals. Do these animals have different moral status from the animals that already exist? What implications does this have for cloned animals or genome engineered animals in general? Second, does this moral status allow for creating animals for human's sake? When bringing back certain extinct species, the only option is to use them either for scientific research or for entertainment in zoo like situations. Which leads to the question of the moral status of zoo animals, do they only exist for our own pleasure? All these hypotheses and questions lead to a much more difficult answer to the question whether or not we should create extinct animals.

In order to research and answer the question of the moral implications a Jurassic Zoo has, I have determined an approach that starts from my intuition on the subject. The way how I tend to react on the debate on this subject will form this moral intuition. In the first chapter of this thesis I will elaborate on how I tend to think about the subject, I will define my own moral intuition on the subject. Although the creation of a Jurassic Park would be entertaining, my intuition tells me that there are too many objections against the recreation of extinct animals. The main reason is that if it gets to creating these animals in the case of a Jurassic Park, they will be created only for human pleasure. The main theory that helped form my intuition about animal's rights in general is preference utilitarianism by Peter

Singer<sup>3</sup>. This theory will be also elaborated in the first chapter, to substantiate my intuition. The theory will be the leading focus of my intuition in the continuing chapters.

After the examination of what my moral intuition looks like, and the substantiation by the theory of Peter Singer, I will focus on what I think is one of the most important questions in the subject of animal rights and the moral treatment of animals. This is the question of the moral status of animals, do they have moral status and how should apply to practice. The debate on the question on moral status for animals is important for the research of this thesis, because it will give a clear view of how to treat animals in general. In order to give a justified advice on how to treat recreated animals, it must first be clear what the moral status of animals in general is.

An extensive explanation of moral status for animals will be given in the second chapter, with a focus on the difference between the moral status for humans and the moral status for animals. The definition of what moral status for humans versus animal's entails will help answer the question on how to treat animals in general. When the distinction between the moral status of animals and humans is clear, a new focus can be made. The focus on the difference between natural and artificial animals. How do natural and artificial animals differ from each other and does this have implications for the treatment of these animals, either natural or artificial. After the definition of moral status for both natural and artificial animals, the research can focus on new aspects of the case that are at stake. One of the most important aspects of the Jurassic Park case is that the animals are to be created only to pursue their life in a zoo like situation. The fact that it is highly improbable that such an environment can be created, is not momentous in this thesis.

The second chapter will be describing the debate on morality of captive animals in general. In order to get a clear view on what a Jurassic Park may imply for the animals, the justification of present-day zoos is examined. The reason for zooming in on present day zoos is that when these extinct animals are created, they are created only to exist in zoo like situations. In order to give any advice on how treat recreated animals in zoo like situations, an examination on present-day zoos is necessary. When present-day zoos are morally justifiable, does that mean we should plead for creating a new zoo like situation filled with recreated extinct animals? The justification of present-day zoos exists of four main

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<sup>3</sup> Peter Singer, *Animal Liberation*, 2<sup>nd</sup> edition (New York: The Bodley Head, 1990)

arguments, these four types of justification of zoos are explained in chapter two. These four arguments of justification are shaped like arguments for creating a zoo like situations, or in other words like benefits for zoos in general. These four arguments are the educational value, the scientific value, the entertainment value and the value of preserving species. In this chapter I will research whether or not these four arguments for justification of a zoo are sufficient enough. Afterwards, I will examine whether these arguments for justification apply to the case. Do the arguments of justification of a zoo also justify a zoo filled with recreated extinct animals like dinosaurs?

The aim of this thesis is not only to provide an overview of the arguments for and against creating extinct animals, it also addresses the discourse on present-day zoos and aquariums in general. When thinking about how to treat possible recreated extinct animals when the only option is to put them in a zoo like situation, one necessarily thinks about how the treatment of animals in present-day zoos should be. In the end I hope to conclude that the recreation of extinct animals, only to put them in zoo like situations, is not morally acceptable.

## 2. My moral intuition

In this chapter I will define the thoughts and intuitions I have on the subject. From this intuition I will further examine if the recreation of extinct animals is morally permissible. In order to determine the moral intuition I have, I will first give a brief overview of the arguments for the creation of extinct animals. This overview will be brief, because in the next chapters these arguments will be further examined. After defining these arguments, I will give a summary of the intuitions I have when considering these arguments. When using my intuition to define answers on the case, I will find a theoretical frame that fits my intuition and will help researching the different aspects of the case.

When choosing a theoretical framework, I will choose theories and philosophers based on how they fit in my moral intuition. Not only will these philosophers be fitting my moral intuition, they will also have done great amounts of research concerning the topic of animals rights and the moral status of animals versus humans. In this chapter I will show what my

moral intuition is, and which theories apply to this intuition. The philosophers that are most close to my own intuition are Peter Singer and Christine Korsgaard. The theoretical framework for this thesis will be based on a combination of the two, complementing each other where necessary. As said before, the reason for choosing these two is not only the fact that they fit my intuition. They have played a big role in debates on animal ethics and are most fitting to the case I have described. They focus on the treatment of animals in comparison with the treatment of humans, and on the moral status of animals in comparison to humans. Using these two philosophers will help me find answers on the main question on the treatment of recreated extinct animals.

### 2.1. Arguments for creating extinct species

In this paragraph I will give a brief overview of what I think are main arguments for creating a Jurassic Park. These arguments will be expanded on later in the thesis. The reason this paragraph gives a brief overview is to place my moral intuitions in the next paragraph in perspective. The case suggests that with the de-extinction of the animals, one of the most prominent arguments is the aspect of entertainment. A Dinosaur theme park is the goal of de-extinction in this case, so the aspect of entertainment is obviously the first goal. Entertainment and amusement could be arguments for recreating extinct animals. Amusement for humans is valued by humans, so it can function as a moral argument for implementing the idea. When enough people experience enough pleasure, the argument gets weightier. Altogether, the entertainment aspect of creating a Jurassic park can be respected as an argument for the implementation of such a theme park. Another possible argument for recreating extinct species for a theme park is the scientific value it may have. When having real life 'extinct' species, the research on those species can be more elaborated, scientist can now use field research to examine these extinct species. The fact that these species can be created may lead to many more optional recreations, which according to scientist can be valuable. A third argument for recreating extinct species may possibly be the stimulation of growth of biodiversity. The growth of biodiversity is often



defined as valuable and important<sup>4</sup>. The fact that the species recreated in this case are extinct for an excessively long time may imply that these animals are not to be set free in the wild. Still, animals in captivity do contribute to biodiversity. For me the argument of biodiversity does not apply to the thesis. First, in the case on which this thesis is based on the recreated extinct animals will not be set free into the wild. Therefore, they will not in any way effect the biodiversity of wildlife. When separated from all other wildlife, these created animals will have their own private living area, without any contact with other animals. Furthermore, even if these created animals are set free in the wild, the opposite is likely to happen. The intention is to stimulate growth of biodiversity. When these created animals, likely to be any kind of dinosaur, are set free they will demolish biodiversity as it is right now. The animals chosen to be recreated in the case are all animals that are more or less at the top of the food chain as we know today. A third question that arises when discussing the biodiversity argument is on the need for expansive biodiversity. Biodiversity seems to be something to strive for, but is the function of all these different kinds of animal species this important, what do we gain from an expansive biodiverse living environment? Further possible arguments for creating a Jurassic Park could be the reestablishing of lost value. According to Ronald Sandler, species possess many different types of value, ecological, instrumental, and intrinsic value<sup>5</sup>. The latter will be discussed in chapter two. The ecological value can be compared to the argument of biodiversity. The instrumental value may be an interesting one to look into, are we justified to use the animals for other purposes than entertainment and scientific research? This brainstorm about the possible arguments for the implementation of a Jurassic park can help defining my moral intuition. Next, I will first focus on the moral status of animals versus humans and the moral status of animals versus artificial animals. Peter Singer will be central in this chapter, but to focus more on the moral status and the concept of personhood, philosopher Christine Korsgaard theory on moral status supplements Singer's theory. Although Korsgaard comes from a different point of view, a Kantian, her theory connects with Singer's theory without a problem. After that the moral status of natural versus artificial animals is elaborated, with help of Bernard Baertschi.

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<sup>4</sup> Ronald Sandler, "The ethics of reviving long extinct species", *Conservation Biology*, Vol. 28 No. 2 (2013) 354-360

<sup>5</sup> Ronald Sandler, "The ethics of reviving long extinct species", *Conservation Biology*, Vol. 28 No. 2 (2013) 356

## 2.2. The moral intuition

Now that I have determined my thoughts on what the arguments for recreating extinct species for a zoo like situation could be, I can articulate what my moral intuition on doing so is. When I was younger, I always dreamed of walking around in a real life Jurassic Park like theme park. Dinosaurs always fascinated me, and they still do. Therefore, the idea of bringing back these extinct species sounds like something scientist should strive for. I think I am not the only one when I say that a Jurassic park would be a little girl's dream come true. But, when growing older and learning more about morality and, in special, the moral treatment of animals, I must say that creating a Jurassic Park would not be, in my opinion, a morally right thing to. After seeing the reasons for realizing a zoo based on recreated extinct species, I have the feeling that the reasons only contribute to human's happiness. The fact that the aspect of entertainment is one of the most prominent reasons to realize a Jurassic Park, indicates that only human preferences are being held into account. None of the reasons for implementing a Jurassic park stated above care for only the wealth and happiness of the animals that are to be created. The feeling that this is not morally right tells me to look into the debate on the question who counts in moral situations. Another thought on the case is that the animals are not only produced to live in a zoo like situation for human pleasure, they are also limited in their functions. I tend to believe that animals should be able to act according to their instincts and their usual natural behaving. When in a zoo like situation, the animals do not have the ability to, for instance, hunt or mate. In the original Jurassic park movie, all the animals in the theme park were female, in order to keep them from mating and reproducing. When hearing this it felt wrong. Putting all female animals together in one closed area is unnatural, the animals lack the ability to reproduce and mate, like they would do if they would be living freely. The artificial reproduction in itself does not feel that morally off, because the way they were produced in the first place is artificial as well. A third prominent thought on my mind when overthinking this subject is the fact that these animals do not fit in an ecosystem like the one we have nowadays. The animals are created to be in an enclosed area not only for entertainment issues, but also because the animals could never be set free in the wild. The environment like we have today would not allow for introducing species like the animals in the case. Immediately they would be at the top of the food chain and destroy flora and fauna like we know it today. Altogether my

intuition summarizes as an objection towards the idea of recreating extinct species in the way it is done in the case. From my intuition, animals are not to be used for human pleasure only, animals are not mere things that can be put into fenced area's just for the sake of watching them like art. From this perspective, animals should have the ability to exhibit natural or species-specific behavior. This implies that the recreation of animals just for the sake of putting them in a zoo like situation is, intuitively, morally wrong. This position does not imply that animals should have the exact same treatment as humans do, nonetheless it entails they deserve a better treatment than they do now. I cannot deny that my intuition offers room for the idea that in some situations humans are 'higher ranked' than animals. This may become clear in emergency cases, such when standing in front of a burning house. Then I will always try to rescue the humans inside first, even if there are animals inside too. From my intuition, this feels like a natural and logical thing to do. This determination of my moral intuition has led to formulate four principles that I think should be held in mind when debating the treatment of animals. First, animals should be able to act according to their natural behavior. Second, animals are not mere thing, and should not be used in that way. Third, animals are not to be used for human pleasure only, which leads from the principle that animals are not mere things. Lastly, animals should not have the exact same moral status as humans. The reason for these principles will be researched in this chapter. The intuition I have is based only upon my knowledge and expertise, which lacks scientific evidence. In order to analyze my moral intuition and reflect on it from a more theoretical perspective, the next chapter will be dedicated to the creation of a theoretical perspective, using Peter Singer and Christine Korsgaard.

### 2.3 Theoretical framework

Peter Singer is an Australian ethical and political philosopher best known for his work in bioethics and his role as one of the founders of the modern animal rights movement. Singer is known to be a utilitarian philosopher which describes himself as a preference utilitarianist, which will be explained in this chapter. In his book *Animal Liberation* Singer describes his version of utilitarianism, which he calls preference utilitarianism. To summarize Peter Singer's preference utilitarianism into one sentence; he states that an act is morally

right if it maximizes the fulfillment of preferences of all those affected<sup>6</sup>. With maximization Singer aims for a typical utilitarian calculus. When an act effects one's preferences negatively, it can still be a morally right act. If the positive effects on preferences outweighs the negative effects on preferences, the act is morally right. The preferences one can have is the wish to fulfill interest of any kind. A preference may be the wish to maintain a healthy life. A healthy life is in this case the interest, the wish to maintain this healthy life is the preference for it. In Singer's preference utilitarianism, every preference is considered when acting in a certain moral way. When an act ensures my preferences to be neglected, but the preferences other people are fulfilled, the totality of all preferences will be decisive. Not the number of preferences count but the amount of happiness the preference causes to the collective happiness. This means some preferences outweigh other preferences based on the what these preferences entail. The preference for whole wheat bread over white bread does not outweigh the preference for food in general, even if many people have the first preference. Even if these preferences do not have much moral weight, all preferences do have to be taken into consideration when making a moral decision. Singer stated that all preferences have to be taken into consideration, what does this mean for the preferences of animals? Singer defines a concept called speciesism in the start of his book. He defines this concept as follows: *the speciesist allows the interest of his own species to override the greater interest of members of other species*<sup>7</sup>. The thought behind speciesism is the same as racism, where the interest of the own race is valued higher than the interests of other races. In a utilitarian view, the interests of all races are to be valued equally. Singer implies that the interests of all species are to be considered equally. The membership of a certain species should be morally irrelevant. Singer rejects that only humans should be a part of the moral discourse, based on human characteristics like autonomy and rationality. Singer states that autonomy, rationality and the ability to use language to inform others of their preferences are not the requirements necessary to have moral standing. When these requirements are used to define who has moral standing, not only will all animals be locked out but also a great part of all humans will be. Humans who do not have the ability to use language to express their preferences, will be locked out. The humans locked out for this case are for example mentally handicapped humans or infants and babies. Do babies have less moral

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<sup>6</sup> Peter Singer, *Animal Liberation*, 2<sup>nd</sup> edition (New York: The Bodley Head, 1990) 13

<sup>7</sup> Peter Singer, *Animal Liberation*, 2<sup>nd</sup> edition (New York: The Bodley Head, 1990) 108

standing just because their ability to speak up about their preferences is lacking? Same goes for humans with reduced rationality, like mentally handicapped humans or humans suffering from dementia. All beings with sentience have preferences. When a being has the sentience to feel pain or pleasure, this being has the preference to feel pleasure over pain. The preferences of animals and humans may differ, they should be taken into consideration equally. Although animals cannot express their preference in a way that humans can, we can assume the preference animals have to not feel pain<sup>8</sup>. Accepted the fact that animals are sentient beings, they are able to suffer from pain and to enjoy pleasure, it may be clear that animals favor pleasure over pain. Since animals have the ability to feel pain and suffering, they seem to have an interest in avoiding it. Pain is defined as a negative concept, and just like humans, animals are likely to want to avoid it. Therefore, the interests of animals exist mainly of avoiding pain and suffering. To summarize Singer, he states that although the preferences may differ, the preferences of all beings should be taken into equal consideration when making moral choices. I can have the preference to achieve my masters' degree in the future, to have children of my own or to achieve certain career goals. Animals' preferences are, as far as we know and thus we assume, more primitive. The preferences animals have varied from the preference to not have food in order not to starve to death or the preference to be saved from a fire in order not to burn to death. In this way, when taking all preferences into consideration, human preferences have priority over the preferences of animals. When saving a human, more preferences are maintained. The preferences of the rescued humans seem to weigh more than the preferences of the dog, not because they are human, but because they are more extended. How does this apply to my moral intuition?

I stated before that I tend to believe that animals do have some moral standing, but that it should differ from the moral standing humans have. An example as followed; imagine a fire in an apartment complex, several humans are still inside as well as a dog. The firemen only have so much capacity to rescue either humans or dogs. I believe that the firemen always should aim for rescuing humans first but have to do everything to help the animals inside. My intuition states that humans have more moral standing than animals do. Singer states that all preferences should be taken into equal consideration. Suppose a case that both humans and animals are captured in a fire, then everyone of them, human and non-

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<sup>8</sup> Patrick Bateson, "Assessment of pain in animals" in *Animal behavior* Vol. 42 (University of Cambridge, 1991), 827-839.

human, have the preference to avoid pain and to be rescued from this situation. This answers my thoughts in the previous chapter, the reason why I would always save humans over animals is not because their preferences do not matter at all, but because their preferences are more primitive and simple. The human's preferences affect future plans, hope and dreams alongside the preference to pursue life and not starve. For this reason, the preferences that animals have do not outweigh those of humans.

My moral intuition can be summed up in a few principles; animals should be able to act according to their natural behavior, animals are not mere things, animals are not to be used for human pleasure only, animals should not have the exact same moral status as humans. The first two parts of what entails my moral intuition can be covered with Singer's Preference utilitarianism. Animals should be able to act according to their natural behavior, this can be translated to 'animals should be able to act according to their preferences'. In this way Singer matches my moral intuition. Animals are not mere things can be defined by the statement of singer that all beings should be treated equally and that animal's preferences should be taken into consideration the same way as those of humans. This implies that animals are not mere things, they should be taken into moral consideration. Then my intuition on the moral status of animals arises. Singer does lack theoretical frame on this aspect. Therefore, I will introduce Christine Korsgaard and her vision on the moral status of animals versus humans. Korsgaard states that the moral status of humans and animals is not completely the same, the difference lies in the aspect of legal or rational personhood. The next chapter will give an elaborated outline of Korsgaard's view on moral status of animals. From this view I will further research the aspects of present-day zoos and their implications.

### 3. The moral status of animals in present-day practice

When creating artificial life, do we create moral beings? When life is created in a laboratory, does this life have the same moral standing as existent life has? Does the artificiality effect the moral standing of that entity? In this chapter I will give arguments for the statement that created life has the exact same moral status as existent living beings. The fact that humans create a living animal by cloning by synthetic biology does not affect the fact that this life has moral standing. With the growing ability to synthetically create life, the moral question seems to remain unanswered.

#### 3.1 The moral status of animals

When debating the moral status of animals, a wild variety of theories and concepts can be consulted. These theories vary from the statement that animals are mere thing to the statement that animals deserve the same moral consideration as humans do. In chapter one I recognized myself in the theory Peter Singer provides in his book *Animal Liberation*. One philosopher from an unexpected genre of ethics provides a more suiting explanation of the distinction between the moral standing of humans and animals, while using the same starting point as Singer does, the sentience of beings as requirement for moral status. Christine Korsgaard, although from a more Kantian perspective, gives a clear definition of the distinction.

Christine Korsgaard elaborates on the aspect of personhood and the effect on animal rights in her article 'Personhood, Animals, and the Law'. According to Korsgaard, all entities in the world are divided into two categories; 'persons' and 'things'. The reason for this distinction can vary from legal to moral purposes. A person can be defined as a being that deserves respect, that has to be valued and that is the subject of rights and duties. A person may never be owned as a property while a thing can be owned as a property. A thing only has derivative value, which means it is not valuable in itself, it is valuable because a person values it in some way<sup>9</sup>. One of the problems concerning this simple categorization of the world is that it lacks an alternative category. When it becomes unclear whether something is

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<sup>9</sup> Christine Korsgaard, "Personhood, Animals, and the Law" in *Think* Vol. 12 No. 34 25-32 (2013)

to be defined as a person or as a thing, what must I do? This simplification of categories can be a problem for non-human animals. While animals are sentient beings with preferences for pleasure and the lack of pain. Are animals to be defined as things or as persons? When looking at my own pet dog, I agree that keeping animals as a property is classified. When claiming that all animals are persons, we must agree that keeping animals as property is no longer acceptable.

What is the definition of personhood? In philosophical tradition, rationality is one of the most common grounds for personhood<sup>10</sup>. Before stating the opposite, why should rationality be the major requirement for attaining personhood? Rationality is here defined as the normative capacity humans have, the ability to reflect upon their own actions and beliefs. It seems likely that only humans possess this kind of rationality. Is having this kind of rationality necessary for obtaining personhood, is it necessary for having certain rights? According to the definition of personhood animals can be defined as things. With this statement we could end the debate and say that animals do not have any rights, let alone have moral status. We can keep animals as property and we should treat them as if they were property. But the common view on animals and their rights do not rhyme with this statement. Do animals have moral status and rights, outside the fact that they are defined as 'things'? The distinction between persons and things states that only person has rights and obligations. From this premise, the next one can be stated; only persons have rights and obligations toward each other, and not to 'things'. When we speak of human rights, we speak of the interests that ought to be protected, the interests that all humans share. With this statement we go back to Peter Singer's preference utilitarianism, because humans or persons are not the only ones to have preferences or interests. This causes for humans to have the duty to take these preferences into consideration. Animals, although defined as 'things', have interests or preferences. Just like I explained in chapter one, animals have preferences because of the way things can be good or bad for them. Being in pain is bad for an animal and enjoying pleasure is good for them. The concepts good and bad apply to things as well, something can be good or bad for an object. It is good for my wooden floor when is treat it with wax every couple of months, while it is bad for that same floor to wash it with soap every week. According to Christine Korsgaard, organisms may be regarded to as

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<sup>10</sup> Christine Korsgaard, "Personhood, Animals, and the Law" in *Think* Vol. 12 No. 34 25-32 (2013)



functional objects, designed by evolutionary process to survive and to reproduce<sup>11</sup>. It is good for my floor to treat it with wax because it is good for me when my floor lasts and looks optimal. This differs from the way things are good from animals or other organisms. It is good for my banana plant to have a sufficient amount of water and sunlight, because it is good for that plant, not because it is good for me. The preferences of plants are non-derivative. Of course I enjoy the view of a healthy houseplant, but in this case water and sunlight are good for the plant itself.

Animals differ from plants in the sense that their preferences can differ. An animal can use his intelligence to fulfill their preferences. Animals can have experience other than how plants have experiences. An animal uses his intelligence and instincts to eat, to mate and to take care of their offspring. In a way an animal can use his brain to function good or bad. The preferences of animals are both non-derivative and capable of being experienced<sup>12</sup>. Like stated before, animals do have interests and preferences, and the fact that these preferences can be experienced gives them ideas about their own welfare. Animal rights advocates argue that having welfare is to have rights. The difference between plants and animals has become clear. What is the difference between animals and humans?

The difference between humans and animals still lies in the fact that humans are able to act rationally, that humans have autonomy. Humans have the autonomy to choose what they want to do in life. They can choose their own life. Humans are able to reflect upon choices and pick the (for them) right one. Humans have rights because they can choose not to obey those rights. The right to freedom of speech exists because humans have the choice to say what they want. Animals do not choose their own life in a way like this, so they do not have the rights grounded in autonomy. So now we are still stuck in the way the world is categorized into two concepts, persons with rights and things. The distinction seems to be wrong, because when autonomy is what defines a person, some humans are not defined as persons. Humans like infants, mentally ill people or elderly people suffering from dementia. A new distinction or categorization is made by Korsgaard in 2007, the distinction between rational persons and legal persons. Both animals and humans are rational persons, they have desires and are to be regarded as ends in themselves. Legal persons are humans, human firms or governments that have obligations and duties and that are able to be sued. When

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<sup>11</sup> Christine Korsgaard, "Personhood, Animals, and the Law" in *Think* Vol. 12 No. 34 25-32 (2013) 5.

<sup>12</sup> Christine Korsgaard, "Personhood, Animals, and the Law" in *Think* Vol. 12 No. 34 25-32 (2013) 6.

using this distinction, animals do have rights. Different from the rights that legal persons have, but more or less the same as the rights that humans have.

The combination of Korsgaard's view on the moral status of animals with Singer's preference utilitarianism, gives a theoretical frame that will help answer the main question, 'is it morally acceptable to create animals for zoo like purposes?'. Although it is not an obvious choice to combine a Kantian view with a Utilitarian view, I think in this case both theories do have a lot in common. Both theories tend to think of animals as more than mere things, but both theories acknowledge the fact that the moral status of humans differs from that of animals. The preferences or interest of human are more complicated and will therefore weigh more when scaled with the preferences of animals, but the preferences are to be considered in the same way.

When discussing the case of a Jurassic Park, this particular combination of views is how I want to address the problem. The animals should be considered in a way that is not exactly the same as humans, but the animals do need to be considered in a way so that they have moral standing. This combination of concepts and theories may give a brighter view on the moral status of animals in the next chapter. Altogether, the idea of moral status for animals starts with the concept of sentience, which humans and non-humans have. Animals have sentience to feel pain or pleasure, from this the assumption is made that animals prefer pleasure over pain. Therefore, animals have an interest in feeling pleasure over pain. From this I can conclude that, according to this theoretical framework, animals have preferences to feel pleasure and not feel pain. After determining the moral status of animals, can we answer the question of the difference in moral standing between natural and artificial animals?<sup>13</sup>

### 3.2 The moral status of artificial animals

The notion 'artificial' often has negative connotations. The things that are natural are often thought to be more valuable than things that are artificial, for some reason. When speaking of artificial we mean something that is created by humans rather than occurring

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<sup>13</sup> Christine Korsgaard, "Facing the animal you see in the mirror" A lecture by Christine M. Korsgaard. Harvard University, April 24, 2007

naturally, especially as a copy of something natural. We often use the word artificial light versus natural light, artificial flowers instead of real ones. The word artificial or synthetic will be associated with negative images of created life in the form of monstrous species or animals. However, not all scientist are maniacal scientist that are willing to create Frankenstein like animals using genetic engineering. The assumption that a synthetic or artificial being or object often receives negative reactions can be the reason why people tend to think differently about artificial and natural animals. Imagine the situation where you are out for dinner, and on the menu you find two kinds of steak, both served with the same side dishes and at the same price. The first steak is purely natural, real meat. The second steak says to be produced in a laboratory based on non-animal proteins. Would you choose the natural steak or the synthetic steak? Study shows that the first reaction towards synthetic meat is one of disgust and unnaturalness<sup>14</sup>. Again, the word unnaturalness has negative connotations to it. This negative connotation may cause the fact that people tend to think that created animals are not 'good' and therefore may have less moral standing or even lack moral status as a whole. Bernard Baertschi developed three arguments against the statement that artificiality modifies the moral status of life<sup>15</sup>. In this chapter I will expand on these three arguments. For this paragraph I will be focusing on the three aspects stated by Bernard Baertschi. Most of the moral concerns are aimed at humans and the environment that humans live in but according to Baertschi, these concerns are supposed to concern the attitude we adopt towards these created artificial beings.

Next are the three arguments posed by Baertschi against the idea that artificiality can modify the moral status a being has. These three arguments, one conceptual, the second ontological and one based on an analogy<sup>16</sup>, are to be explained in this chapter.

The first argument is a conceptual one, it analyzes the concepts in the statement that artificial and natural beings have the same moral standing. The conceptual argument relies on the concept of moral status as a function of intrinsic properties. In other words, moral status relies on intrinsic properties of a being, on what this being is and what it does. It does not rely on external or extrinsic values. The fact that a being is natural or artificial is not an intrinsic value or property, it is an extrinsic one. When moral status depends on intrinsic

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<sup>14</sup> Wim Verbeke et. Al. " 'Would you eat cultured meat?': Consumers' reactions and attitude formation in Belgium, Portugal and the United Kingdom" *Elsevier. Meat science* 102 (2015) pp. 49-58

<sup>15</sup> Bernard Baertschi "The moral status of artificial life" *Environmental Values*, vol. 21, no. 1 Synthetic 3

<sup>16</sup> Bernard Baertschi "The moral status of artificial life" *Environmental Values*, vol. 21, no. 1 Synthetic 3

properties, the artificiality or naturalness of a being has nothing to do with the moral status they claim to have. This first argument is called the conceptual because it focusses on the concepts moral status and natural versus artificial. The strength of this argument lies in the simplicity.

The ontological argument is a bit harder to describe, we have to go back to the start of modern physics. Baertschi defines two conceptions important for his second argument:

- 1. There exists an ontological identity between what is natural and what is artificial.*
- 2. There exists only one kind of change in nature.*<sup>17</sup>

The first premise makes clear that there is no difference between what is natural and what is artificial. Glass made in a volcano is the same as glass made by a glassmaker. The intrinsic properties of the artificial glass and the natural glass are the same, so the ontological status must be the same. In both cases it is just glass. The problem here is that even though artificial and natural glass are the same, glass does not have moral status. I cannot think of any good reason why, when replacing glass with a being with moral status, one should have more or status than the other. The second premise can be explained by stating that the physical world solely exists of moving bodies. Change in reality exist only out of one thing and that in the movement of things and beings. There is only one kind of change in nature, and that is local motion. This motion does not have any effect on the ontological or moral status of things and beings. These two scientific premises together state that there is no difference between the natural and the artificial. Not in an ontological way, and thus not in a moral way.

The third argument is based on an analogy, which goes as follows:

- 1. A human being procreated artificially (by cloning or IVF) or naturally has the same moral status.*
- 2. Therefore the moral status of a human being depends on what he is, i.e., on his intrinsic properties, and not on the way he has been procreated.*
- 3. By substitution: a living being created artificially or naturally has the same moral status.*

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<sup>17</sup> Bernard Baertschi "The moral status of artificial life" *Environmental Values*, vol. 21, no. 1 Synthetic 3

4. Therefore the moral status of a being depends on what it is, i.e., on its intrinsic properties, and not on the way it has been created.<sup>18</sup>

This argument may seem somewhat simple. But it does give a clear idea on what the first two arguments stated earlier. This argument makes use of an analogy to clarify that artificiality does not modify moral status in any way. This analogy exists of four premises. The first premise states that an artificially created human, by IVF for instance, has the same moral status as a naturally created human. This premise is undeniable, IVF is a method of conception that is used frequently and the humans created by this method are not rare anymore. It is not permissible to act differently towards those who are conceived through IVF than to those conceived naturally. Therefore, humans that are conceived artificially have the same moral status as those conceived naturally.

The second premise states that the moral standing of a human is dependent on a human's intrinsic properties, and not on the way he is created, which follows logically from the first premise. It is not the way one is created that modifies its moral status, it is the intrinsic property that modifies the moral status. The intrinsic properties that modify moral status is among other things the intrinsic moral value a being has. It may be obvious that with intrinsic properties Baertschi does not mean the material intrinsic properties beings have, like weight and density.

The third and fourth premise shifts the first and second premises from humans to all living beings. When the moral status of humans does not rely on extrinsic properties but on intrinsic properties, the same should go for all non-human beings.

### 3.3 Implications of this notion of moral status for the realization of a Jurassic Park

After defining the notion of moral status for animals and artificial animals, the implications for creating a zoo with recreated animals can be clarified. The main idea is that animals do have moral standing. As said before, animals are sentient being and able to feel pain and pleasure. An animal will have the preference to experience pleasure over pain. In

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<sup>18</sup> Bernard Baertschi "The moral status of artificial life" *Environmental Values*, vol. 21, no. 1, 14.

other words, an animal has interest in feeling optimal, to not feel pain. These interests are primitive in comparison to those of humans, humans may have the ability to think about more in-depth interests like graduating. Although these interests differ from those of humans, they should be taken into consideration equally. For me, this notion of moral standing for animals states that the preferences should always be taken into consideration when dealing with animals or using them for touristic or other ends. The fact that the recreated animals have preferences that are to be taken into consideration means that they cannot just be created without thinking of the use and treatment of these animals. These extinct animals may have preferences, like the preference to pursue life, to act according to their natural behavior and to have a sufficient amount of food and water along with sufficient shelter. Animals have moral standing because they have welfare, which they can review, they attain rights. When comparing this view on moral status for animals with the moral intuition I described, I agree with this notion of moral status. Animals do have moral status in the way that we have duties towards them, and that they have rights. Their preferences are to be taken into consideration in the same way as humans. They do lack the ability to think about their actions in the way that humans can, therefore the animals are not legal persons. To me, according to my intuition, this sounds logical. This notion may have moral implications for the debate about the creation of extinct animals. When the extinct animals are to be recreated for entertainment purposes only, it is obvious to examine the zoo like situations we have in the present day first. What are the justifications for zoos and how do these justifications apply to the recreation of extinct animals? In the next chapter a broader elaboration on the justification of zoos is given

After setting a theoretical framework on the moral status of animals and the way preference utilitarianism poses to treat animals, present-day zoo will be the next topic of research. As much as I would like to walk around in a Jurassic Park like zoo, the moral objections are present. The moral problem is clear; my intuition tells me that even though a real life Jurassic Park would be a dream come true and very entertaining it is questionable if the implementation of a zoo with recreated extinct animals is morally permissible.

## 4. Ethics of kept animals

imagining a Jurassic Park as in the movies, it is apparent that the recreated animals are most likely to be located in a zoo. The animals are living in fenced areas and are being fed, they lack the freedom to do as their natural instincts tell them to do. In order to debate the moral value of putting extinct species in a zoo like situation, a moral evaluation of zoo like situations is required. In this chapter, the justification of zoo like situations is taken into consideration. What are the justifications we have for zoos in present day, and how effective are these justifications? Are humans justified to create zoo like situations and what would be the reasons for them. Mostly, when zoos and aquariums are being justified, there are four persistent reasons for doing so; education, scientific research, species preservation and amusement. These four reasons for keeping animals in captivity are each explained and weighed in this chapter. After doing so, this information is linked to the main subject; the realization of a zoo like situation using created extinct species. In the end of this chapter the moral intuition stated in chapter one will be substantiated or refuted.

### 4.1 The aspect of education

Zoos and aquariums claim to provide an educational character, rather than only having an entertaining character. While dealing with a lot of criticism from animal rights groups, zoos and aquariums often justify their existence with a mission to educate. When education indeed is one of the main goals of zoos, the discussion about the moral value of a zoo will be swiftly completed. The educational value of a zoo may be one of the main goals, but is education genuinely the most important value? First off it is a difficult task to prove the educational value of zoos, does a visit to the zoo add to, for instance, the education about animals and wildlife? Studies show that zoos do have educational value (like the large-scale study by Eric Jensen on educational value in zoos<sup>19</sup>). Still, these studies undermined the fact that information signs and screens provide more information than watching the actual animals. I carefully assume that a similar study may be able to show that watching videos of animals can lead to the same amount of education. Zoos should make an effort to provide

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<sup>19</sup>Michael Gross 'Can zoos offer more than entertainment?' in *Current Biology Magazine*. No. 25. May 18, 2015 391-394

evidence to show that they can offer added educational value above and beyond what biology teachers can do with modern media and technology at schools.

The educational value does not only affect schoolchildren. Adults are to create more awareness of biodiversity and species conservation. When the value of education is applicable to adults too, the value of education gains importance. Awareness of the necessity of wildlife preservation and the value of biodiversity is an important factor that helps reduce practices that decrease biodiversity and wildlife preservation. When adult education is done right, bigger goals can be achieved. For instance, goals that imply reducing the consumption of goods that reduce biodiversity, like ivory. When taking a look at the Aichi Biodiversity Convention, created in 2013, the number one target is that 'by 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.'<sup>20</sup>. Zoos could help provide this awareness in adults by focusing on education in biodiversity. This again begs the question for a control experiment using videos rather than live animals. A problematic aspect of education in zoos and aquariums may be that the information that is provided may not always be truth-bound. Zoos and aquariums sometimes alter the information they are providing to justify the way they treat the animals in captivity. Sea World is one of the institutions that is being accused of providing the wrong information on the orca's in captivity<sup>21</sup>. They provide wrong information about the animals to keep their image positive, while it should be the opposite. They state that the bending the orca's fin is natural, while only orca's in captivity show this kind of deformation. They state that the expected age of orca's in the wild is younger, to cover the fact that orca's in captivity do not reach the age they would in their natural habitat. The fact the information is modified in present-day aquariums worries me, if Sea World is accused of doing so, how does this work in other zoos and aquariums. If this is the truth, the educational aspect loses its credibility and even works out negatively. It should not be possible that the wrong information is educated.

All together it is undeniable that some education occurs in some zoos, that put effort into educational systems. How is this relevant for the case used in this thesis? Is the aspect of education also this important when it comes to zoos filled with recreated extinct animals?

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<sup>20</sup> Aichi Biodiversity Targets, version 2 – Februari 2013, United nations Decade on biodiversity. Stable URL: <<https://www.cbd.int/doc/strategic-plan/targets/compilation-quick-guide-en.pdf>>

<sup>21</sup> Blackfish, directed by Gabriela Cowperthwaite, Produced by Manuel V. Oteyza and Gabriela Cowperthwaite (2013)



This question will be answered later on in the second half of this chapter. The very fact that it is undeniable that education occurs in zoos raises other issues. What is it that we want people to learn from visiting zoos? Everything that can be learned from visiting a zoo, can be learned from watching a video, attending a lecture and so forth. When the educational value is one of the key arguments for the perseverance of zoos, the education must be obviously coming from visiting zoos, and not only from attending guided tours and listening to lecturers. I will elaborate later that when it is true that attending lectures and watching video's is sufficient enough to get educated about the animals, that the value of education may imply that creating extinct animals is not necessary at all. The problem here is that, until there is no further research of the effect of documentaries and lectures, we cannot know the difference between the actual visitation of a zoo versus the visitation of a lecture. Therefore, I conclude that the educational value of a zoo is existent and important to reach certain goals of awareness.

#### 4.2 The aspect of scientific research.

Another main argument substantiated for zoos is the scientific research gained from it. Scientific research is an important method to attain an understanding of the natural world and to raise awareness. In order to criticize the scientific research in zoos, an overview of this research must be given. Scientific research can also be understood as among other things wildlife conservation, research in animal behavior, nutrition, reproduction, genetics and medicine. Many species owe their existence to cooperative efforts of modern zoos<sup>22</sup>. Furthermore, the investment of zoos and aquariums in conservation science is underappreciated. In 1992 alone, the American Zoo and Aquarium Association supported nearly 1.100 scientific and conservation projects in over sixty countries<sup>23</sup>. Without a doubt the value of scientific research in aquariums and zoos is a heavy one. Still the question arises whether the animals used for this research are valued and especially the way they are treated while doing the research morally questionable. Proponents of animal rights have traditionally opposed the use of animals in research, especially when animals are caused to

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<sup>22</sup> Tudge, C. "Last animals at the zoo: how mass extinction can be stopped" London: Hutchinson Radius. (2001)

<sup>23</sup> Wiese, R., K. Willis, J. Bowdoin, and M. Hutchins. AZZPA Annual report on conservation and science, 1992-1993. Bethesda, Md.: AAZPA

suffer pain or when their lives are sacrificed in order to benefit humans. As we have seen in the previous chapter, the debate on moral status of animals states that the preferences of humans and animals should be taken into consideration equally. The fact that the preferences of animals are less elaborate makes up for the fact that in some situations the health and wealth of humans is chosen over the health and wealth of animals. This does not imply that animals should be used for scientific research at all times at any cost. Are humans allowed to use animals as mere receptacles or as renewable resources? Would the scientific progress we can make while studying animals and using animals in research outweigh the harm caused in the animals used for testing.

Another aspect here is that when using animals in research in favor of the species as a whole, does that mean the individual animal has less moral value than the species as a whole? When one animal is suffering for research in order to have better understanding of the species as a whole, does this mean he has less moral value than the species as a whole? On the other side, the development of innovative technologies and the attainment of new knowledge are critical for the future of endangered species conservation. It is estimated that as many as one million species of animals and plants could be lost in the next few decades, primarily through habitat destruction<sup>24</sup>. When these facts are at stake, one could say that the moral status of one individual animal is less weighty than the moral status of the species as a whole. The fact that this situation would have impact on humans as well will give arguments for persevering scientific research on and with animals. When looking at the reason why all these species are to go extinct, it is always habitat destruction. The focus should not lie in researching the animals in itself, but the focus should be at habitat preservation. For this scientific research we do not need zoos and aquariums. In conclusion, the aspect of scientific research in zoos and aquariums shows to be an important value of zoos and aquariums. The way this research takes place may have some wrong implications of the moral status of individual animals versus animal species, but as I have said before, these implications can easily be called far-fetched.

The question whether this aspect also applies for the case studied in this thesis will be answered later in this chapter.

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<sup>24</sup> Michael Hutchins, Betsy Dresser, and Chris Wemmer. "Ethical Considerations in Zoo and Aquarium research" in the animal Ethics reader. Edited by Susan Armstrong, Richard George Botzler. Routledge, 2008 pp. 459-470

#### 4.3 The aspect of preserving species.

As we have seen above, scientific research and preserving species are close related subjects. Zoos and aquariums plead to play a big part in the preservation of species and the recovery of endangered species. Many zoos participate in the association of zoos and aquariums species survival plan (AZA's SSP program<sup>25</sup>). This program aims to manage the breeding of endangered species in order to help maintain healthy and self-sustaining populations. The goal of this program is to reintroduce the animals that are raised in captivity back into their native habitats. Although the program aims to have many success stories, the preservation of endangered species has shown to not always work out fine. The program has shown not to have success with the giant panda's, snow leopards among other species<sup>26</sup>. I may conclude that zoos do contribute to the preservation of species in a way, but the question whether this way of preserving species is suitable.

There are limitations to the preservation of species in zoos and captive breeding. First, obtaining consistent reproduction and survivalship under captive conditions has proven difficult with many species<sup>27</sup>. Failures to breed well in captivity can be traced to a various of reasons, including the lack of psychological or environmental requirements, inadequate dieting<sup>28</sup> etcetera. When animals are born and breed in captivity, the possibility they would function well in their natural habitat is poor. Also, large numbers of individuals must be held in captivity in order to attain the production needed to sustain reintroduction into natural habitat. It shows that the possibility to reintroduce entire species back into nature is too big of a goal. The requirements necessary for this kind of action is unlimited, which cannot be provided by zoos and aquariums alone. The animals that find themselves in programs like this often experience problems when being reintroduced in their natural habitat. These problems can vary from the way they are being reintroduced, the fact that

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<sup>25</sup> Earth Talk, in *Scientific American* Produced by the environmental Magazine. STABLE URL: <https://www.scientificamerican.com/article/how-do-zoos-help-endangered-animals/> (Consulted on 5<sup>th</sup> of June, 2018)

<sup>26</sup> Earth Talk, in *Scientific American* Produced by the environmental Magazine. STABLE URL: <https://www.scientificamerican.com/article/how-do-zoos-help-endangered-animals/> (Consulted on 5<sup>th</sup> of June, 2018)

<sup>27</sup> Noel F. Snyder et al "Limitations of Captive Breeding in endangered species recovery" *Conservation biology*, Vol. 10, No. 2 338-348

<sup>28</sup> Setchell, K. D. R. S. J. Gosselin et al, "Dietary estrogens – a probable cause of infertility and liver disease in captive cheetahs" *Gastroenterology* Vol. 93, 225-233

the animals are domesticated and the fact that the animals carry diseases that do not naturally occur. The goal of programs designed to reintroduced endangered species in the wild are very utopian, and the practice does not always work out as planned. Moreover, the financial and physical resources are not sufficient for achieves the goals that are set. The financial resources are needed for preservation by captive breeding of endangered species are not likely to be available in zoos. because financial support from the government is limited and focusses often on species with substantial public appeal, the goals of the program are not being achieved<sup>29</sup>. After seeing that the intention to preserve species by using captive breeding is present, different problems occur when the programs come to practice. I conclude that although zoos and aquariums claim to have a big part in the preservation of species, the practice shows that the real added value proved to be rather limited.

#### 4.4 The aspect of amusement

When keeping the case in mind, the most obvious reason for creating zoo like situations is amusement or entertainment. When visiting the zoo, the interior is almost always created in a theme park like manner. Although entertainment is one of the most obvious reasons for visiting a zoo, for the zoos it is not anymore. The function of zoos seems to have shifted from purely educational towards a more scientific function, one that focuses on conservation of species and the education of their visitors. Still, for the consumer, a day at the zoo is for entertainment. Often, zoos are non-profit organizations that use the admission fees for their preservation programs and research. It has been said that modern zoos are becoming more 'Disneyized'<sup>30</sup>. In other words, zoos and aquariums are more and more turned into theme parks. Present-day zoos are likely to become more like theme parks, including rides. An image of a zoo is created where children and animals come for the same reasons as for visiting Disneyland. I tend to disagree on some levels with this image. In my

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<sup>29</sup>Noel F. Snyder et al "Limitations of Captive Breeding in endangered species recovery" *Conservation biology*, Vol. 10, No. 2 338-348

<sup>29</sup> Setchell, K. D. R. S. J. Gosselin et al, "Dietary estrogens – a probable cause of infertility and liver disease in captive cheetahs" *Gastroenterology* Vol. 93, 225-233

<sup>30</sup> Alan Beardsworth and Alan Bryman "The wild animal in late modernity, the case of the Disneyization of zoos" *tourist studies*, Vol 1 83-104 (2001)

experience, zoos and aquariums are more and more focused on education for children and adults. The residences the animals are in in present-day zoos in The Netherlands are not merely cages, they turned into great open spaces. The fact that zoos improve their residences for the animals does not imply that the aspect of entertainment is decreased. Still the sale of hamburgers and stuffed animals shows that the zoo is a place to go to for pleasure and amusement, not just for educational goals.

The fact that zoos and aquariums are this amusing, may be a side effect of what the real goal is. After learning how the educational, research and preservation goals are practiced in zoos and aquariums, it almost feels like the zoos do not focus on profit gained from the entertainment aspect. It is hard to give a solid conclusion on this aspect of zoos. Entertainment seems to be the main justification for zoos and aquariums, even after changes made in present-day zoos. On the other hand, entertainment could also be a side effect of the other justifications of zoos. I imagine that entertainment could be the one and only reason for creating a zoo or aquarium, and if this is so, it has major implications for the case studied in this thesis. These implications will be elaborated on further in this chapter.

#### 4.5. Justification of zoos

After seeing the possible ways of justification of zoos and aquariums, I can now research what these justifications imply for the creation of a zoo like situation. The aspect of education seemed to be a just reason for the existence of zoos. Children and adults are educated when visiting a zoo their knowledge of the importance and earnest of animal welfare grows. With this growing knowledge people may tend to act differently, they could for instance stop buying ivory. When this effect is reached, a greater value is realized. Scientific research is another reason for justification of zoos, which may, just like education serve a greater value than the scientific research alone. When research on zoo animals helps to get better outlook on what that animal needs, researchers may assist in a growing conscience around animal welfare and nature as a whole. The aspect of preserving species can have similar goals and can also serve a greater value. But there is one problem. When thinking about preserving animal species, the animal in the zoo does not immediately come to mind. When a species is completely extinct, except for a few in captivity. Does this mean the animal is not extinct? When there is no chance of that species returning in nature, is it

not extinct? The individual animal still alive at the zoo seems to be nothing more than a walking carrier of genes? Finally, amusement is one of the reasons for the justification of a zoo. It is a tourist attraction which has financial value as well as cultural value. When keeping the concept of moral status discussed in the first chapter in mind, the entertainment aspect of zoos may not be reason enough to keep animals in captivity. The preferences of humans in this case are defined as the preference to enjoy the entertainment of a zoo, keeping in mind that entertainment would be the only justification a zoo has. The preferences of animals in zoos can be defined as, for instance, the preference to act according to their instincts, the preference to mate and reproduce like when in their natural habitat. When scaling these preferences, the preferences of the animals override those of humans. Leading to the conclusion that creating a zoo exclusively for entertainment purposes is not morally right. The preferences of the humans do not outweigh the preferences of the animals in this case.

I believe zoo like situations give humans the idea that animals are here for our pleasure and that they are to be used for our purpose (even if that purpose is scientific research).

#### 4.6 In relation with Extinct species

After examining the justifications for present-day zoos, these justifications might have implications for the creation of a Jurassic Park like zoo. In order to benefit from the research of the reasons for present-day zoos, these reasons are applied to the case of this thesis.

Are the justifications applicable to the case of a Jurassic zoo or are they non-relatable? To find out if these justifications have implications for creating extinct animals for zoo like purposes each of the justifications or values are applied to the case. An overview of what this application means for creating a Jurassic park is given. After examining these applications, an overview can be given whether or not the reasons have effect on the question whether or not to create a Jurassic Park.

### 3.6.2 The Scientific research aspect of a Jurassic park

I concluded that present-day zoos did have value in scientific research. The subject of this research is mostly the preservation of species, but also just the research on the animals themselves. When the extinct animals are created, a whole new species is being created. When the technology of cloning and recreation of extinct species is completed, this will have implications for further scientific research. With the same technology, scientist may access a variety of options for humans. When the de-extinction of animals is realized, the animals can be used for research in multiple ways. We could, for example, use the extinct animals for medical research. The possibility exists that extinct species have certain characteristics that we could use for medical research and thus development and progression in medical research. Moreover, with the realization of de-extinction the possibility exists to have a better idea on what caused the extinction in the first place. All these possibilities seem to have some moral value. But does this value weigh more than the value of animals in itself. This subject will be further explored in chapter three.

Again, when combining these ideas on scientific research on the extinct animals, the concept of moral status comes in. is it morally permissible to create animals for research purposes only? When comparing this question with the question of entertainment stated in the previous paragraph, it can be answered somewhat the same. The only difference here is that the preference humans have are not that superficial anymore. These preferences do now exist of, for instance, the preference to have medication for certain diseases like cancer or the preference to be able to reach the age of eighty without having a chance on Alzheimer's' disease. The preferences of the animals would still be the same, they would be primitive like the preference to have food and shelter. In the previous paragraph the question was answered with the fact that in that case the preferences of the animals did weigh more than the preferences of humans. Do these preferences weigh more in this case? The fact that humans use animals for medical experiment up until today gives an answer. Apparently, the preferences of animals do not weigh enough to keep them from being used for medical experimentation and research. The reason why we still use animals for scientific research is because it may help improve the health of all humans and the environment we

are in<sup>31</sup>. The preferences of a few laboratory rats weigh less than the preferences of all humans suffering from some kind of disease, addiction or any other unhealthy situation. It becomes clear that the moral status of animals does not help them keeping themselves from scientific research. This implies for the case that the recreated extinct animals may be used for scientific research, and that they may be created for scientific research.

#### 4.6.3 The Aspect of preservation species in a Jurassic park

It may seem obvious, but the aspect of preserving species does not apply to a Jurassic park like situation. It is not the case that the animals are preserved, for they weren't there in the first place. When applying the arguments and information to species that have been extinct by the cause of humans, we could say that de-extinction is a form of preservation, in the latest stadium of the concept. When discussing the animals that are gone extinct in the last few years, preservation does have great value. This is something that could be further examined in a sequel of this thesis. That does not mean that there is no moral question on the preservation of animal species. When discussing the value of the preservation of species, it first has to be clear why preservation of species matter as a whole. Why is biodiversity important and why do we have to preserve species in the first place? Bas Haring questioned this in his book "Het aquarium van Walter Huijsmans"<sup>32</sup>. He asked himself why it would be bad if the rainforests of the world would be ruined. One of his answers is that when ruining the rainforests, many species would go extinct. He continues by asking whether the extinction of animals would be a bad thing, why would we worry about the survival of the panda bear for instance? When questioning the value of biodiversity, the first thing that comes to mind is the intrinsic value of species, or, the intrinsic value of the presence of many different species.

There are a few reasons why biodiversity is a good thing, and why the loss of biodiversity is a bad thing. To name a few: humans have a moral and ethical responsibility to preserve life on earth, biodiversity has aesthetic value, biodiversity has monetary and

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<sup>31</sup> Animal research info STABLE URL: <http://www.animalresearch.info/en/designing-research/why-animals-are-used/> ((Consulted on June 5<sup>th</sup> 2018)

<sup>32</sup> Bas Haring, "Het aquarium van Walter Huijsmans, of waarom zouden we ons zorgen maken over de toekomst van de aarde" 2009, Stichting maand van de filosofie en Bas Haring.



utilitarian value, biodiversity is a useful measure of the quality of the environment and biodiversity has ecological value<sup>33</sup>. These reasons are assumed to be true. The one reason that could receive some criticism is the first one. Are humans morally responsible for the preservation of life on earth? You could say humans are responsible for the preservation of their own life on earth, and in that way are responsible for preserving all life on earth. Some believe that without the biodiversity that we have today the living conditions on earth become unbearable. Different hypotheses on this subject exist. On one side, there could be no relationship between biodiversity and the functioning of ecosystems at all while on the other side every species could play a big role in the functioning of ecosystems. For science has not figured out yet what the effect of decreasing biodiversity is on the functioning of ecosystems, we cannot produce moral claims about the responsibility of humans towards preserving biodiversity.

When a species goes extinct, people are tended to judge that as morally wrong. The thing is that the extinction of a species is not in itself morally wrong. Extinction is a part of evolution and nature. It becomes wrong when humans are the cause of the extinction of a species.

#### 4.6.4. The amusement value of a Jurassic Park

The fact that a Zoo filled with recreated extinct animals is entertaining and amusing is undeniable. After watching the Jurassic Park movies, the desire to see those wild extinct animals in real life is great. The amusement value of a park like Jurassic Park would be greater than the amusement parks like we know today have. The thrill not only to see extinct animals being recreated gives great amusement, the fact that these animals are very rare, very colossal and very dangerous optimizes the entertainment value. This is one of the main arguments for creating a zoo like situation with extinct animals. When viewing the case from the utilitarian point of view, like I did in chapter one, the entertainment value may be more important than just entertainment. Humans may have the preference to view the recreated

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<sup>33</sup> Paul S. Giller and Grace O'Donovan, "Biodiversity and ecosystem Function: DO species Matter?" in *Biology and Environment*, Vol. 102B, 3

extinct animals. This preference can override other preferences. Although human and animal's preferences are to be taken into consideration in the same way, this preference may be somewhat overriding over other preferences. Still, the idea that just entertainment can lead to an overriding preference feels off. When thinking about preferences, I usually think of the preference to be able to have food, to be able to have housing and so on. The preference to be entertained may be one of these important preferences, but more in an abstract way. A human may have the preference to be entertained or to be happy in life, but the fact that in this case this preference is very specific makes it less convincing. The preference would go: 'I have the preference to go and see extinct animals in a zoo like situation', instead of 'I have the preference to be entertained' or 'I have the preference to live a happy life'. Can a preference this specific be overriding over other, more primary preferences? The question arises whether the value of entertainment in zoos can outweigh the opposite values, like animal suffering, moral status and animal rights. The answer to this question seems in the first place simple. The entertainment value of zoos does not justify the existence of zoos, including animal suffering and not taking into account the moral status of the animals.

Are we allowed to use animals for our own pleasure? Arthur Schopenhauer determined that in the western philosophy animals were forbidden<sup>34</sup>. Humans were allowed to use animals in the way they wanted, because they did not take part in the moral world. Since Singer published his book 'Animal Liberation' the view on animal ethics changed<sup>35</sup>. The question whether we may use animals for human pleasure, even if this means the animals in question are hurting, leads to a much broader question about moral status of animal in general. This subject is to be discussed in chapter 3.

Another perspective on the aspect of amusement is that people must be interested in what they are doing or seeing in order to learn anything from it. Entertainment keeps people interested. In this way the aspect of amusement can be seen as a helping hand for education.

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<sup>34</sup> Arthur Schopenhauer, "On the basis of morality", Published by Hackett Publishing, 1998

<sup>35</sup> Peter Singer, *Animal Liberation*, 2<sup>nd</sup> edition (New York: The Bodley Head, 1990)

#### 4.6.5. The economic value

One aspect of zoos that is not a main argument for creating or maintaining zoos is the economic aspect. A regular present-day zoo may not produce this much profit, and the profit usually goes straight back to the preservation of the zoo. A zoo like situation with extinct animals on the other side may gain much more financial profit. Does the economic value of a Jurassic park have weight in the discussion on animal rights? We have seen that some animal species have gone extinct in order to make financial profit. One of the extinct animal species caused by the urge to make financial profit is the black rhino. The extinction of the black rhino started in the 1950's<sup>36</sup>, when traditional Chinese medicine was highly promoted in Asia. One of the many non-western cures was the healing power of powdered rhino horn. The powdered horn of the black rhino was said to cure almost every disease and illness, which caused an astonishing hunt for the rhino. Between 1960 and 1995 98 percent of black rhinos were killed by poachers<sup>37</sup>. This example may show that humans view financial profit as a more important value than the survival of a species. This observation shows that humans are not that committed to animals and their rights at all. What would happen when a zoo filled with extinct species gain enormous financial profits, would the focus on animal rights fade, just like it did with the extinction of the black rhino?<sup>38</sup> The fact that a Jurassic zoo would be immensely profitable does have some weight in the discussion for financial profit seems to be one of human's dearest preferences. Does the preference to gain financial profit outweigh the animal's preference to pursue living their life?

#### 4.7. Weighing the arguments

When the arguments for and against creating a Jurassic zoo are lined up, an estimation of the weight of the arguments can be made. On one side are the moral status of animals and the fact that the preferences of animals should be taken into consideration

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<sup>36</sup> STABLE URL: <https://blogs.scientificamerican.com/extinction-countdown/how-the-western-black-rhino-went-extinct/> Consulted on June 18<sup>th</sup> 2018)

<sup>37</sup> STABLE URL: <https://blogs.scientificamerican.com/extinction-countdown/how-the-western-black-rhino-went-extinct/> Consulted on June 18<sup>th</sup> 2018)

<sup>38</sup> Kate Elizabeth Jones "From dinosaurs to dodos: who could and should we de-extinct?" *Frontiers of biogeography*. Vol. 6 pt. 1. (2014) Stable URL: <<http://escolarship.org/uc/item/9gv7n6d3>

equally to those of humans. On the other side of the scale are the justifications of a Jurassic zoo like stated before in this chapter. Each of these justifications have some moral value. The aspect of education has moral value because education of children and adults can change the attitude towards nature and the treatment of animals. The aspect of scientific research has moral value because scientific progress is defined as valuable, which to me is not that clear, especially when it states to be more valuable than the welfare of animals. Next, the aspect of preservation of species has no moral value concerning this case at all. It does rise interesting questions on the value of biodiversity in general. The aspect of entertainment has, according to my intuition, no moral value at all in this case. The preferences of humans to gain pleasure from visiting a Jurassic zoo are valued less than the preferences of animals to act according to their natural behavior and not be kept in fenced areas. The values of education and scientific research remain to be the two valuable arguments for implementing a Jurassic zoo. When putting these in the theoretical framework this would mean that when education and scientific research are the reasons for creating a Jurassic zoo, the adequate preferences are that humans have the preference for education and scientific research. This implies that the preferences for education and scientific research outweigh the preferences of the animals, to avoid pain and to experience pleasure, to act according to their natural behavior, and to be treated as not mere things. According to my intuition, the preferences of animals do in this case weigh more than the preferences of rejecting the implementation of a Jurassic zoo.

## 5. Conclusion

In this thesis I have tried to give an answer to the question “is it morally permissible to create a zoo filled with recreated extinct animals?”, this question is related to the case I of a Jurassic zoo. The case stated that it would be possible to create extinct animals, for the purpose of putting them in a zoo. In order to answer this question, I first determined what approach I would use to get the right view on the topic. The approach I have chosen was that I started from my own point of view, by defining my moral intuition on the subject. In the first chapter I chose to start by determining what the moral intuition I have on the subject. This resulted in stating four premises that my moral intuition tells me are right. These four principles are stated as follows; animals should be able to act according to their natural behavior, animals are not mere things, animals are not to be used for human pleasure only, animals should not have the exact same moral status as humans. These four principles summarize the moral intuition I have and are based upon my knowledge and expertise but lack scientific evidence. In order to analyze this intuition from a more theoretical perspective, a theoretical framework is needed. Peter Singer and Christine Korsgaard will provide this theoretical framework. Peter Singer’s claimed with his preference utilitarianism that the preferences of all beings should be taken into consideration equally. In other words, the preferences of animals are to be considered in the same way as the preferences of humans. This would mean that the first and second principles of my moral intuition are covered. Animals have the preference to act according to their natural behavior. Animals are not mere things, there preferences count just like those of humans do. Singer also claims that the preferences of animals and humans are different, these differences lie in the aspect of depth. Animal preferences are more primitive than those of humans. This is the reason that humans and animals are not always to be treated equally, which covers the fourth principle of my moral intuition. Christine Korsgaard gives her view on the moral status of animals versus humans, she also points out the difference in moral status of humans and animals. The difference lies in the fact that humans have legal personhood while animals have rational personhood. Korsgaard stated that animals do have moral standing, for they have personhood. This covers the third principle of my intuition, animals with moral standing are not to be used only for human pleasure. After determining the view on moral status for animals, the moral status of artificial animals is defined. Bernard

Baertschi claimed that the moral status of existing living animals is the exact same than of created animals. Baertschi provides three reasons for the similarity of the moral statuses. A conceptual one, an ontological one and one based on an analogy. With this theoretical framework, the further research is to find out what is wrong about the zoos the extinct animals would be put into. In order to determine the justification of a zoo filled with extinct animals, the justification of a present-day zoo is defined. I have found out that the justification of a zoo exists of four main arguments for zoos; education, scientific research, amusement and species preservation. Each of these aspects of zoos is examined. All four arguments do have some strength in a moral debate on zoos. It is undeniable that present-day zoos have taken part in the education of children and adults. These were educated on the animals in general, but mainly on the treatment of animals and what to do to preserve species. This educational value of present-day zoos is existing, just like the educational value of a Jurassic zoo would be. Education is a main argument for implementing a zoo. Second, the aspect of scientific research is too present, but not as clearly as the educational aspect. When the scientific research value is combined with the idea of a Jurassic zoo, the value changes. A Jurassic zoo would be valuable for scientific research. But the value of scientific research does not outweigh the contra arguments for creating a Jurassic zoo. The aspect of preservation showed to be not that valuable in present-day zoos. it will be even less valuable for a Jurassic zoo, as there is no species preservation without existing species. This aspect does raise the question whether species preservation is something we should strive for or not. Does biodiversity have intrinsic value of its own? This question is still unanswered and may be interesting for further research. Then, the argument of entertainment is raised. A present-day zoo obviously had entertainment value, and a Jurassic park would have even more entertainment value, but this neglects the principles of my moral intuition completely. When entertainment is the reason for creating a Jurassic zoo, this does not outweigh the moral standing of animals or their preferences. Altogether, creating a Jurassic zoo may be valuable for different reasons, but the fact that these artificial animals would have moral standing comparable with existent living animals and the preferences they have that would be neglected gives an answer. My moral intuition was that we should not create a Jurassic zoo, after this research I believe that it is sufficiently determined that creating a Jurassic zoo is not a good idea.

## 6. Recommendations for future research

While writing this thesis, I found many other interesting questions which would have been interesting to add to this research. These remarks and questions may be interesting for further research for myself and for other researchers, which is the reason for implementing them into my thesis in this paragraph. Also, while writing my thesis, some ideas and answers may have been used in a better or other way. Here I reflect on how this thesis may have been written or researched better. The first main idea that came to my mind while writing this thesis was the question whether creating extinct animals would be morally more acceptable when the animals are used for the production of meat. This production of meat in this case has the intention to 'cure world hunger'. Here, the preferences that are opposed to the preferences of the recreated extinct animals would have more moral weight because it is a case of saving lives. It would be interesting to write a sequel including this case. Another idea that may be interesting for future work is the research of the moral implications of recreating deceased humans. When technology allowed for recreating extinct animals, the recreation of deceased humans would be allowed for too. Questions that arise while researching this can be focused on the difference between humans and animals. Both of these aspects would have been beneficiary to this thesis, which leads to the point on which I think my thesis could have been done better. I think the interesting ideas stated above may have been complementary to this thesis, even if they were addressed briefly. Altogether, I think this thesis has interesting implications for future research.

## 6. Bibliography

Animal research info STABLE URL: <http://www.animalresearch.info/en/designing-research/why-animals-are-used/> ((Consulted on June 5<sup>th</sup> 2018)

Baertschi, Bernard "The moral status of artificial life" *Environmental Values*, vol. 21, no. 1 Synthetic Published by White Horse Press (February 2012) pp. 13

Bateson, Patrick, "Assessment of pain in animals" in *Animal behavior*, Vol. 42. 827-839. University of Cambridge, Cambridge 1991.

Cowperthwaite, Gabriela, *Blackfish* Produced by Manuel V. Oteyza and Gabriela Cowperthwaite (2013)

Beardsworth, Alan, Bryman, Alan "The wild animal in late modernity, the case of the Disneyization of zoos" *tourist studies*, page publications Vol. 1 pp. 83-104 (2001 London)

Earth Talk, in *Scientific American* Produced by the environmental Magazine. STABLE URL: <https://www.scientificamerican.com/article/how-do-zoos-help-endangered-animals/> (Consulted on 5<sup>th</sup> of June, 2018)

Giller, Paul S. and Grace O'Donovan, "Biodiversity and ecosystem Function: DO species Matter?" in *Biology and Environment: Proceedings of the Royal Irish Academy*, Vol. 102B, 3, Biodiversity: A natural national resource (Dec., 2002) pp. 129-139 Published by Royal Irish Academy

Gross, Michael "Can zoos offer more than entertainment?" in *Current Biology Magazine*. No. 25. May 18, 2015 391-394 Published by Elsevier.

Haring, Bas "Het aquarium van Walter Huijsmans, of waarom zouden we ons zorgen maken over de toekomst van de aarde" 2009, Stichting maand van de filosofie en Bas Haring.

Haring, Bas "Plastic Panda's, over het opheffen van de natuur" published by Nijgh & Van



Ditmar, (Amsterdam, 2011)

Hutchins, Michael, Dresser, Betsy and Wemmer, Chris "Ethical Considerations in Zoo and Aquarium research" in *The animal Ethics reader*. Edited by Susan Armstrong, Richard George Botzler. Published by Routledge, (2008)

Jones, Kate Elizabeth "From dinosaurs to dodos: who could and should we de-extinct?" *Frontiers of biogeography*. Vol. 6 pt. 1. (2014) Stable URL:  
<<http://escolarship.org/uc/item/9gv7n6d3>

Korsgaard, Christine "Personhood, Animals, and the Law" in *Think* Vol. 12 No. 34 25-32 (2013)

Sandler, Ronald 'The ethics of reviving long extinct species' in *Conservation Biology*, department of philosophy Vol. 28, no. 2 (2013) society of conservation biology

Schopenhauer, Arthur "*On the basis of morality*", Published by Hackett Publishing, 1998 Originally published by Berghahn Books.

Singer, Peter *Animal Liberation*, second edition Ney York: The Bodley Head publishing, 1990

Snyder, Noel f. et al "Limitations of Captive Breeding in endangered species recovery" *Conservation biology*, Vol. 10, No. 2 (April 1996) pp. 338-348 Published by Wiley for Society of conservation Biology,.

Tudge, C. "Last animals at the zoo: how mass extinction can be stopped" London: Hutchinson Radius. (2001)

Verbeke, Wim et. Al. " 'Would you eat cultured meat?': Consumers' reactions and attitude formation in Belgium, Portugal and the United Kingdom" *Elsevier. Meat science* 102 (2015) pp. 49-58

Wiese, R., K. Willis, J. Bowdoin, and M. Hutchins. AZZPA Annual report on conservation and science, 1992-1993. Bethesda, Md.: AAZPA