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I have heard nearly as much nonsense about zoos as I have about God and religion. (Martel 15)

The Captivity Debate

Animals form a central part of the story in *Life of Pi*: Pi's early years are spent in his family's zoo, and the cast of animal characters play an important role in his experiences on the lifeboat. There are many different topics arising from the representation of animals in this story that could be discussed, but one issue —and perhaps of most importance for animal ethics—is the quality of life for animals in captivity and in the wild; i.e., whether animals in captivity can ever have good lives, or whether they are being deprived. This mirrors an ongoing controversy surrounding the ethics of keeping exotic animals in captivity, within institutions such as zoos, aquariums, and sanctuaries.

There is increasing scrutiny of the practices in zoos, and a strong rising movement to close such institutions. The 2012 film *Blackfish*, for example, purported to show the reality behind the keeping and breeding of captive orcas at SeaWorld, and the ensuing public outcry led to the cessation of breeding of the species at many facilities. The main motivating factor for the anti-zoo lobby is concern about the welfare of animals kept in captivity. Those who criticize zoos argue that the welfare of animals is always decreased when they are housed there. This concern is the result of two related features: the lack of freedom and the lack of naturalness. They argue that instead of being held captive, animals should be "free" to flourish in the wild and to pursue their natural lives: "It is surely true that in being taken from the wild and confined in zoos, animals are deprived

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of a great many goods. For the most part they are prevented from gathering their own food, developing their own social orders, and generally behaving in ways that are natural to them" (Jamieson 97). Supporters of zoos, on the other hand, emphasize the benefits of zoos, both to the animals and to human societies. Like Pi Patel, they argue that the wild is far less free or pleasant than many may imagine. It seems that detractors may "fall into the trap of thinking that a natural life is better simply because it seems more romantic to us from the outside" (Dawkins 52).

In this chapter, we will examine this debate in more detail. Particularly, we will side with the arguments put forward by Pi Patel and use evidence from animal welfare science and the biological sciences to support the claim that the lives of many captive animals will, indeed, be better than those of their wild counterparts. It is important here to distinguish between "good" and "bad" zoos. There are, of course, still plenty of poorly run institutions, holding captive animals for the wrong reasons, or without the resources to properly care for them. We are against these sorts of zoos, as everyone should be, and would seek to see them improved or closed. To quote Pi, "A plague upon bad zoos with bad enclosures! They bring all zoos into disrepute" (Martel 40). However, there are also a growing number of good zoos: those which place a strong emphasis on the welfare of the animals in their care, and aim to have a positive impact on both animals and humans. It is these sorts of zoos that we shall defend here, arguing that it is possible for captive animals to have very good lives when properly cared for.

Captivity in Life of Pi

You have known the confined freedom of a zoo most of your life; now you will know the free confinement of a jungle. (Martel 286)

"Freedom" and Captivity

The primary line of argument put forward by zoo detractors is that zoos necessarily limit the freedom of animals (Jamieson). Animals held in zoos are limited to a confined space, often much smaller



than the home range they would have in the wild. They, thus, cannot choose where they travel. They are typically not free to make decisions about when or what they eat, which other members of their own (or other) species to spend time or mate with, or which activities to participate in. By contrast, wild animals have these freedoms, and, thus, are supposed to be far better off. We can think of Pi's three-toed sloth, living a "peaceful, vegetarian life in perfect harmony with its environment" (Martel 2). Pi criticizes "[w]ellmeaning but misinformed people" for thinking that wild animals "are 'happy' because they are 'free.' These people usually have a large, handsome predator in mind, a lion or a cheetah (the life of a gnu or of an aardvark is rarely exalted). They imagine this wild animal roaming about the savannah on digestive walks after eating a prey that accepted its lot piously, or going for callisthenic runs to stay slim after overindulging" (15-16). Thinking that these animals have been denied their freedom, they think that the animal will inevitably become "a shadow of itself, its spirit broken" (16).

One major problem with this argument is that it presumes that animals in the wild are far more free than they truly are. Animals in the wild, however, are restricted to harshly delineated territories, the boundaries of which are enforced by their neighbors, and often with aggression. They can only eat that food they are able to find within their territory, limited by season, availability, competition with other animals, and their own ability to hunt or otherwise process what is available to them. They can only mate if and when they find a suitable partner that will also choose to mate with them, and many animals (males in particular) will never have such an opportunity, being rejected by females and out-competed by other males. Animals in the wild often have limited choices in their actions and must get by with what opportunities are made available to them. Wild animals live highly constrained lives "of compulsion and necessity within an unforgiving social hierarchy in an environment where the supply of fear is high" and as Pi emphasizes "territory must constantly be defended and parasites forever endured" (16), thus challenging us to think whether it makes sense to speak of freedom here: "[a]nimals

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Another misconception is that animals actually value that freedom and do poorly without it. In reality, many animals dislike too much freedom. They prefer the predictability and routine of their known territories and habits. As Pi points out: "animals are, conservative, one might even say reactionary. The smallest changes can upset them. They want things to be just so, day after day, month after month," going as far as to "stick to the same paths for the same pressing reasons, season after season" (16).

Additionally, the lives that animal activists often presume zoo animals are yearning for, are those that they have never experienced. Most zoo animals have been bred in captivity—the collection of wild animals being exceedingly rare—and have never lived in the wild at all. They are unable to miss what they have never experienced. Freedom itself is an abstract concept, and one that animals do not possess. Freedom to an animal simply means the ability to follow its needs and desires and where these are met, the notion of "freedom" itself, for its own sake, does not mean anything to them. Even where animals have the ability to escape, they often do not, as they prefer familiarity and safety to freedom: "Animals that escape go from the known into the unknown—and if there is one thing an animal hates above all else, it is the unknown. Escaping animals usually hide in the very first place they find that gives them a sense of security" (41). Though Richard Parker did not hesitate to escape, both when on the algae "island" and then again when reaching the shores of Mexico, here he was not escaping from a well-provisioned zoo enclosure, but from a small and lonely lifeboat.

The final problem is that this argument overlooks the amount of freedom animals in modern zoos actually receive. A zoo enclosure that has been well-designed, Pi argues, "is just another territory, peculiar only in its size and in its proximity to human territory" (17). The territories of wild animals are not large due to an inherent desire to defend and forage within large territories (though some animals do enjoy these activities), but because they are required to cover their needs. Pi compares zoo enclosures to human houses that

similarly "bring together in a small space what in the wild is spread out," with an animal taking "possession of its zoo space in the same way it would lay claim to a new space in the wild" (17–18).

The welfare of zoo animals has always been of concern to their keepers. In early zoos, this primarily took the form of caring for health, but over the years there has been an increasing awareness of the importance of behavior and psychological health to animal welfare. Many zoos now employ animal welfare specialists, tasked with assessing the welfare of animals within the collection, and leading advances in the science and practice of zoo animal welfare. One such advancement has been a focus on choice and control for zoo animals. Research has shown that many animals do enjoy having some measure of control over their environment (Brando and Buchanan-Smith). For example, monkeys given access to a lever that changes the light in their enclosure will use it, regardless of what the starting light level was, demonstrating that they are simply enjoying the ability to control their environment (Moon and Lodahl). Zookeepers now look for ways to provide choices to animals to give them control—whether they sit in the sun or the shade, lie on a hard or a soft surface, receive a shower, interact with cage mates, eat from a variety of foods, or play with an ever-changing array of novel objects and puzzles. This emphasis on choice and control means that captive animals have more freedom than ever within the "confines" of their enclosures, and in many ways may even be more free than their wild counterparts.

Natural Behavior

He killed beyond his need. He killed meerkats that he did not eat. In animals, the urge to kill is separate from the urge to eat. To go for so long without prey and suddenly to have so many—his pent-up hunting instinct was lashing out with a vengeance. (Martel 269)

Another primary line of argument against keeping animals captive in zoos is an appeal to natural behavior. The idea here is that wild animals are in a natural state, able to express their natural behavior, whereas zoos are an artificial environment and thus the animals are

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necessarily prevented from doing so. Wild animals are considered to have the capacity to "flourish" in a natural way that captive animals do not (Nussbaum). Often, the word "telos" is used, to describe the natural essence of an animal, and those conditions and behaviours that it has naturally evolved to experience or perform (Rollin).

There are a number of problems with this type of argument. The first is that it is not clear that there is any real "telos" that one can appeal to when talking about an animal. Within the literature, there are multiple different definitions used, ranging from those behaviors that the species will normally perform, to those that are evolved adaptive behaviors. Ruling out some sort of spiritual or metaphysical "nature" that an animal may possess, instead we are left with a set of behaviors and environmental conditions typical for the species. There are then a range of additional problems involved in deciding exactly which behaviors get to count as natural for these purposes, and how to discover or measure them (Veasey et al., "On Comparing"; "Using the Giraffe").

There is also a question as to whether animals kept in zoos are truly even the same as their wild counterparts. Captive exotic animals are not domesticated as pets or agricultural animals are, bred for hundreds or thousands of years to adapt to the conditions of living with humans. Yet, neither are they wild, free from human influence. Instead, they sit somewhere in the middle. They are domesticated in a more developmental sense—through the conditions of their birth and rearing—rather than in an evolutionary sense, involving genetic change. Still, this is enough to make them meaningfully different from their wild conspecifics. Zoo animals have learned to thrive in the captive environments in which they find themselves, and are, thus, another step removed from the struggles of the wild. The difficulties faced by training animals their wild behaviors for reintroductions into their natural environments stand as proof of that. Captive-bred animals require significant training to have the skills and abilities necessary for survival within their wild habitats. These differences between wild and captive exotic animals stand as another reason animals are not harmed through being held in

captivity—it changes their very nature such that they are adapted to this environment.

The more serious problem with appealing to natural behavior is that even if there were such a "telos," it is unclear why this should matter (Browning, "Debate"). That is, why animals are better off when expressing their telos than those that do not. One way of reading this claim is simply that animals feel better when they are in a natural state. They have evolved to experience particular conditions and perform certain behaviors, and so they like these things. They may feel deprived, or frustrated, when they are prevented from following through on this. Indeed, this is commonly observed—for example, pigs in the wild spend a lot of time "rooting" (digging up the soil with their snout) and when captive pigs are kept on hard floors and are unable to perform this behavior, they will begin to display signs of frustration (Broom et al.). However, what is important here is not that the behavior is "natural," but instead that it is something that the pigs want and like to do. The naturalness is beside the point, so long as all the needs are met, they are as Pi argues "subjectively neither better nor worse for an animal than its condition in the wild" (Martel 18). Naturalness may be a useful way of identifying the behaviors that an animal might like to perform (and is often a shorthand used by zookeepers looking to design effective environmental enrichment for their animals) but is not itself what matters. It is only the promotion of positive feelings of satisfaction, and the prevention of negative feelings of frustration, that we really care about (Browning, "Debate" 11). Of course, prevention of boredom is an important part of keeping captive animals happy—without their normal pursuits of finding food, mates and shelter, other methods must be found to occupy their time. This is discovered first-hand by Pi when on the lifeboat with endless hours to fill: "My greatest wish-other than salvation—was to have a book. A long book with a never-ending story" (Martel 207). However, it is the occupation itself that matters, not its naturalness, and we have already discussed some of the many ways zookeepers strive to keep their animals active and engaged.

The second way of reading the claim is that the telos is somehow additionally valuable in and of itself, regardless of how the animal

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feels about it. This is a strange claim, because it leads us to think that natural conditions that may actually be harmful to animals—such as fighting with one another, escaping from predators, or being infested with parasites—are necessary for their well-being (Mellor). These examples make it obvious that many wild states are clearly bad for animals, causing problems for their health and welfare: Many wild animals are physically injured, malnourished, stricken with disease and exposed to unfavorable environmental conditions. It is hard to see that any of these things could be intrinsically valuable simply for being natural.

As the naturalness of their lifestyle and behaviors is not what matters to animals, but rather the opportunities to experience those things that bring them positive feelings of comfort, satisfaction, curiosity, joy, and so on, then it is entirely possible for a well-designed enclosure and husbandry program including environmental and behavioral enrichment to provide all of this for captive animals. "It is not so much a question of constructing an imitation of conditions in the wild as of getting to the *essence* of these conditions" (Martel 40). This means that animals kept in zoos do not suffer simply from the lack of naturalness in their lives, and indeed can be quite happy and flourish in captivity when all their needs are met.

Human-Animal Relationships

What you don't realize is that we are a strange and forbidding species to wild animals. We fill them with fear. They avoid us as much as possible. It took centuries to still the fear in some pliable animals—domestication it's called—but most cannot get over their fear, and I doubt they ever will. (Martel 296)

Another concern often raised about the keeping of animals in captivity is the problematic relationships that it engenders between humans and animals—both the keepers and the public. The relationship between the viewing public and animals is often conceived as one of superiority in which people come to zoos to view animals as entertainment and to reinforce their views of themselves as the "top" of the natural order (Jamieson). Sometimes this is the case—

the viewing public can be disrespectful, noisy, and even aggressive towards animals. All keepers are familiar with having to repeatedly ask unruly visitors not to bang on the glass or throw things at animals to try and make them move. Pi describes similar despicable visitors to their zoo, those who feed dangerous objects to the animals, or even attack them directly. More generally, however, the relationship between the public and animals is one of awe, respect, and love. Many visitors will repeatedly visit their local zoo to view their favorite animals, knowing their names and habits, and will reach out to express their grief when the animal dies. Far from a feeling of superiority, they are instead seeking a connection.

Of perhaps more interest is the relationship between animals and their keepers. The concern is that this is an unequal relationship, based on dominance and control, and can never hold respect or love. However, this is a gross mischaracterization of what happens in zoos. Instead, zoo staff work hard to develop good relationships with their animals—as Pi says, "Getting animals used to the presence of humans is at the heart of the art and science of zookeeping" (Martel 39). Most keepers hold a deep love for their animals, those beings they spend their days alongside, getting to know each of their individual personalities and habits. The power and strength of this affection can be seen in Pi's reaction to the loss of his animal companions, particularly Richard Parker, and his feeling of sadness that there was no real closure or goodbye. A zookeeper's time is entirely committed to making life better for the animals they care for, in any way they can. In many ways, it is the keepers who are subservient to the animals, as is captured when Pi describes the zoo animals as akin to unruly hotel guests:

One has to wait until they saunter to their balconies, so to speak, before one can clean their rooms, and then one has to wait until they tire of the view and return to their rooms before one can clean their balconies; and there is much cleaning to do, for the guests are as unhygienic as alcoholics. Each guest is very particular about his or her diet, constantly complains about the slowness of the service, and never, ever tips . . . Are these the sorts of guests you would want to welcome to your inn? (13–14)

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Most current interactions are based on building relationships of trust and use of positive reinforcement training to encourage animals to participate in important husbandry procedures, such as being safely locked into dens for cleaning, presenting body parts for health inspections, and even voluntarily allowing injections or blood draws. They develop friendships in which the animals seem to accept them as 'one of their own'—what Pi describes as 'zoomorphism' (84). This friendly acceptance can be demonstrated by animals in a variety of ways, such as grooming (like Pi's orangutans), or vocalizations (like Richard Parker's "prusten"). Keepers know their animals well and are able to pick up on these signals to know when they are accepted by their animals.

Where there are relationships of dominance or control, these are not necessarily harmful to the animals. Pi describes the most basic "training" of this type, which is simply getting animals to allow keepers to come close to them, to diminish their "flight" distance and reduce fear in keeper presence. Additionally, all social animals have intricate hierarchies, in which some animals will be dominant over others, gaining priority access to preferred resources and being safe from attack. When a keeper can position themselves in this role, they are better able to safely work with their animals. This is the technique used by Pi to safely coexist with Richard Parker, by establishing himself as in control and the top of the tarpaulin as his territory, using loud noise, unpleasant stimuli (the nausea induced by the rocking of the boat) and even marking with his own urine. This was combined with the provision of food and water to demonstrate his abilities to provide as an "alpha." Reading an animal's body language and reacting appropriately can help avoid conflict, as Pi learns: "[e]ventually I learned to read the signals he was sending me ... his ears, his eyes, his whiskers, his teeth, his tail and his throat, he spoke a simple, forcefully punctuated language that told me what his next move might be" (207).

Indeed, Pi's relationship with Richard Parker was much closer to a typical zookeeper-animal relationship than one with a wild animal, not only because of the nature of the care Pi provided for his tiger (feeding, watering, and cleaning) but because of Richard



Parker's previous history as a captive animal and his willingness to accept the continuation of these conditions. "It occurred to me that with every passing day the lifeboat was resembling a zoo enclosure more and more: Richard Parker had his sheltered area for sleeping and resting, his food stash, his lookout and now his water hole" (188-89). The above training techniques are becoming rarer as keepers tend to have only "protected contact" with dangerous animals and instead rely on positive training methods to influence behavior. Zookeepers are taught a healthy respect for the potential damage that can be done by even the most seemingly harmless animals in their care; the same lesson that Pi's father graphically teaches his young sons for their own protection, by feeding a live goat to the tiger and going through the zoo to describe the potential harms each and every animal can inflict. For this reason, zookeepers are often more fearful and respectful of animals than the viewing public, despite their care for them.

The Benefits of Zoos

But I don't insist. I don't mean to defend zoos. Close them all down if you want (and let us hope that what wildlife remains can survive in what is left of the natural world). I know zoos are no longer in people's good graces . . . Certain illusions about freedom plague them. (Martel 19)

In the previous section, we have shown that zoos (and similar forms of captivity) are not harmful for exotic animals, and, indeed, can often be beneficial. Here, we will examine some of the benefits that can arise from the keeping of animals in zoos, both to the animals themselves, as well as to human society.

Benefits to Animals

In the first instance, zoos provide a number of benefits to animals. They benefit both the animals held within the institutions, as well as their wild counterparts. As we have discussed above, animals held within zoos may actually have better lives than those out in the wild. Pi argues that many animals would choose to live in a zoo

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if they could rationally make such an evaluation, "since the major difference between a zoo and the wild is the absence of parasites and enemies and the abundance of food in the first, and their respective abundance and scarcity in the second" (18). Pi suggests putting yourself in the "shoes" of the animals: "[w]ould you rather be put up at the Ritz with free room service and unlimited access to a doctor or be homeless without a soul to care for you?" (18). Additionally, some zoo animals come from even worse lives, and are rescued into zoos—those animals that were previously kept as pets and discarded by their owners when they become too difficult to manage (like the orangutan Orange Juice), or those taken by poachers. Zoo animals are provided with regular, nutritious and varied food, and always have access to fresh water. They are kept free from diseases and parasites and have veterinary care available to deal with any health problems that arise, particularly as they age. They have access to warm sheltered places to sleep in cold weather, and cool, shady places to rest in hot weather. They have opportunities to interact with other members of their species, often including the chance to breed. They are safe from predators, hunters, and habitat destruction. And they are given increasingly sophisticated forms of cognitive and behavioral enrichment, to provide mental stimulation and encourage performance of a range of behaviors. Zookeepers work with their understanding of animals to give them the best lives they are able: "our tools . . . are the knowledge we have of an animal, the food and shelter we provide, the protection we afford. When it works, the result is an emotionally stable, stress-free wild animal that not only stays put, but is healthy, lives a very long time, eats without fuss, behaves and socializes in natural ways and—the best sign reproduces" (39-40). With regular welfare audits conducted and improvements implemented, most zoo animals experience lives of positive welfare.

Zoos help wild animals in several ways-through direct and indirect conservation outcomes (Browning, "No Room"; Gray). Directly, zoos can hold and breed endangered species for reintroduction back into their natural habitat to boost numbers. This process has been successful for several species, including

Przewalski's horses, golden lion tamarins, and black-footed ferrets, to name a few. These breeding programs can be expensive and difficult, as animals require a lot of training and monitoring to ensure a successful release. However, where there is a safe habitat to return to, this can be an extremely effective way of boosting wild population numbers. Where there is no safe habitat, zoos can function as "arks," to safely hold wild species indefinitely, until there is somewhere for them to return to. This requires careful genetic management of the population to ensure they remain healthy and viable, and most zoos are part of regional management programs to try and maximize genetic diversity in their animal populations.

Indirectly, zoos assist in conservation efforts through raising awareness and funds, and inspiring action. When people visit zoos, they learn about and connect with the animals there, which increases their enthusiasm to do something to help conserve wild animals and their habitats. Zoos then also provide education on what steps people can take to help conservation efforts, from donating money to relevant conservation programs to changing their purchasing habits to sustainable products. Modern zoos now conduct research to ensure their educational initiatives are effective in motivating care and action in their visitors (e.g., Powell and Bullock). Many zoos even take this action outside their own walls, using widereaching education and activism campaigns to encourage changes benefitting the natural world, such as labeling of palm oil to help protect the rainforest habitats of Indonesia or calls to reduce plastic usage to protect ocean life. Thus, both captive animals and their wild counterparts can benefit from zoos.

Benefits to Humans

Zoos also provide several benefits to humans—recreational, educational, and perhaps most importantly, connections to animals. These are all closely related. Zoos began as "menageries," places of pure recreation, where animals (typically the private collections of kings and emperors) were placed on display for the curiosity of the viewing public (Mazur). However, even here, there was a driving sense of curiosity and awe—the sense of seeing animals, learning

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what they were like. Pi describes his time growing up within the zoo as idyllic—a bustling, vibrant, wild space, full of color and surprise. Overtime, the educational role of zoos gained emphasis, with small labels at each exhibit giving way to larger graphics and signs, aimed to engage interest and provide information not only on the species, but on the challenges facing them and their place within the natural world. The Mr. Kumars in Life of Pi both visit the zoo in a sort of educational capacity. The teacher Mr. Kumar wonders at the scientific marvels of nature, reading every label and description in the zoo, and approving of their finely-tuned evolved design. He took the zoo as "an exceptionally fine illustration of science" leaving the zoo "feeling scientifically refreshed (Martel 25-26). In a parallel way, the mystic Mr. Kumar takes his visit to the zoo as providing education in the ways of creation: "How carnivores were supplied with herbivores and herbivores with grass, how some creatures crowded the day and others the night, how some that needed sharp beaks had sharp beaks and others that needed limber limbs had limber limbs". It left him reinforced in his faith quoting the Qur'an: "In all this there are messages indeed for a people who use their reason" (82). While both disagree about the ultimate explanation of adaptation in nature, both are nevertheless learning.

Primarily, though, people visit zoos for the sense of connection with the animals they see (Browning, "No Room"). Zoos represent one of the few places where people can actually see exotic animals up close and in person. This wonder can be seen in the young Pi's awe towards the animals he shares his zoo home with when he describes the ordinary, yet unforgettable encounters with their diverse and astonishing behavior: "I discovered in a leisurely way what it's like to have an elephant search your clothes in the friendly hope of finding a hidden nut, or an orangutan pick through your hair for tick snacks, its wheeze of disappointment at what an empty pantry your head is" (Martel 14). Such encounters can radically transform one's view on animals. Indeed, there is a strong human drive for connection with nature, and, in particular, with animals (Gray). This explains the rising popularity of "up-close" animal encounters, in which members of the public are able to meet zoo animals,

sometimes to even feed or touch them, and build a connection with the animals as individuals. They come away with a feeling of awe and love, which in turn helps inspire the sorts of conservation action discussed above. This sense of wonder found in animals can be seen in the preference of Pi, and his Japanese interviewers, to accept his first version of events, that which contained the animals.

We have shown here that zoos can provide a number of benefits to both humans and animals. As the animals kept in (good) zoos have good lives, this gives us reason to support such institutions and their practices. Perhaps a time will come when animals in the wild can live without threat of human encroachment; then we may no longer need zoos for their conservation benefits, and they may cease to exist. However, we argue that this need not be the case, as we have shown here, zoos are not causing harm—indeed are often benefitting the animals they keep—and, therefore, could keep existing indefinitely.

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