

Seoul Grand Park, 1984-2015

A Historical Analysis of the Changing Conservation and Animal Welfare Priorities in

South Korea

by

Anne Safiya Clay

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Graduate Supervisory Committee:

Ben Minter, Chair
James Collins
Ronald Broglio

ARIZONA STATE UNIVERSITY

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ABSTRACT

This project analyzes the efforts of Seoul Grand Park Zoo (the largest and most important zoo on the Korean peninsula) to develop and achieve the highest standards in conservation, education, animal welfare, and research over the last three decades. Founded primarily as an entertainment venue in 1984, the zoo has struggled to become a scientific center that adequately provides for the animals under its care and promotes the advancement and dissemination of knowledge. Drawing on interviews from zoo officials, academics, conservationists, and animal-rights activists, I explore the animal welfare management and conservation priorities of a prominent Asian institution. Although the zoo has made significant improvements in animal welfare, it remains constrained by limited resources and government indifference. These constraints have also restricted the zoo's ambition to become a major center for conservation; it currently concentrates on a handful of projects with broad popular appeal. Based on my interviews, greater collaboration, better communication with other researchers, and more systematic sharing of data would be especially beneficial for expanding the zoo's conservation agenda. As research and conservation become a more prominent part of the zoo's portfolio, potential conflicts may arise with zoo's current emphasis on the welfare of the individual animals under its care.

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Introduction

In a rapidly urbanizing world, zoological institutions have taken increasingly active conservation roles in the effort to maintain biodiversity. Not only have zoos become directly involved in various wildlife rehabilitation and reintroduction programs, but several of them have also in many ways undertaken the responsibility of educating the public on conservation, sustainability, and biodiversity (Hancocks 2001). Over the last thirty years, new economic powers, especially in Asia, have begun to affect the environment on an international scale. In particular, the Republic of Korea succeeded in becoming the eleventh largest economy in the world within a relatively short period of sixty years after the end of the Korean War (Choi 1999). Along with economic development, South Korea has also undergone rapid urbanization and industrialization, which have led to increasing environmental concerns about the preservation of natural resources in light of the small country's rapid development (Tak et al. 2007). The establishment of a sound zoological institution could be a powerful tool both in field conservation and in educating the public about preserving biodiversity in South Korea's current situation.

Although originally created in Changgyeong Palace on November 1, 1909, for the amusement of the Japanese occupiers and as a subjugation of Korean heritage, Korea's first zoo has, in the last thirty years, sought to become a modern zoological park that both offers entertainment and provides a venue for conservation education and advanced research in the propagation of endangered species. In 1984, approximately thirty years after the end of the Korean War and three years before the democratization of the

southern part of the peninsula, the zoo was moved to its current location in the mountains of Makgyedong, Gwacheon, and has since become of part of Seoul Grand Park, a large leisure facility that, in addition to the zoo, contains an amusement park, a botanical garden, and a natural history museum (Choi 2013a). According to its website, the Seoul Grand Park Zoo, also known as the Seoul Zoo, is now the world’s tenth largest zoological institution (Seoul Grand Park 2013a). It is also the eighth zoo to have been created in Asia (Choi 2013a).



Figure 1: Map of Seoul Grand Park Zoo (Seoul Grand Park 2013).

This study departs from the predominantly Western focus of the current scholarly literature on zoos to explore what the case of Seoul Grand Park, in the national context of South Korea, has to teach us about the wider Asian response to the proposed conservation goals of modern zoological institutions. Specifically, it asks whether South Korean zoos

such as the Seoul Grand Park Zoo are following the conservation, welfare, and educational standards set down by the World Association of Zoos and Aquariums (WAZA), or are these zoos driven by different standards. If the interpretation and implementation of conservation in the Seoul Grand Park case is unique, what explains this distinctiveness (i.e., is it the Korean cultural context, the history of the institution, or some other set of factors)? Conformity to the global WAZA standards represents an important way in which this institution has modernized.

Historically, most of the literature regarding the evolution of zoos, especially zoo conservation, has been focused on European and North American institutions. There is very little available literature on the establishment of Asian zoological parks, and this case study of a prominent South Korean zoo aims to help bridge this gap in the literature. In addition, Western thought dominates discussions of the role of the 21st century zoo in conservation and education, and there is little indication of how the East is responding to such discussions despite the establishment of a World Association of Zoos and Aquariums. This thesis uses the South Korean context to broaden the literature with a well-documented study of an important Asian example.

William Conway, a leading voice in the zoo conservation community, has called for “a new zoo vision, a new perception, not only for zoos but about them” (2007, 19). In addition to providing entertainment, a necessary element of any publicly supported zoological park, zoos are also responsible for actively working to change environmental behavior through education, and involvement in innovative ways of conserving habitats and species. The current literature about zoos calls for this new type of modern

zoological institution that would embrace the above-mentioned goals (Zimmerman et al. 2007). The World Association of Zoos and Aquariums (WAZA) lists several specific priorities the ideal modern zoological institution should uphold. Among others, these include a commitment to conservation in the wild, the development of education programs on local and global environmental concerns, innovative development of exhibits and improvement of animal welfare.

WAZA defines conservation as “the securing of long-term populations of species in natural ecosystems or habitats wherever possible” (WAZA 2005a, 9). Seoul Grand Park is involved in several conservation programs under the Wildlife Species Conservation Center (Seoul Grand Park 2013a). The zoo has demonstrated innovative ways of conserving species, including collaborating with Seoul National University in the cloning of endangered grey wolves for conservation purposes (Oh 2008). The division of research at Seoul Grand Park supports studies focused on species conservation of indigenous Korean animals through breeding and reproduction (e.g., Rho et al. 2009). The Seoul Zoo is currently also the only zoological institution in South Korea to have its own laboratory and to conduct its own research. However, it is not clear whether Seoul Grand Park has successfully “secured long-term populations of species” (WAZA 2005a, 9) in the wild through their participation in these innovative projects. Yet, the recent changes in the institution’s website indicate a willingness to highlight research and conservation endeavors as a priority in the zoo’s vision, instead of advertizing the zoo as merely a place of leisure and entertainment to the masses (Seoul Grand Park 2015a).

In addition to conservation, WAZA's standards for the ideal modern zoo include educating the public about local or global environmental concerns. One of the many powerful ways a zoo can educate individuals regarding environmental concerns is to inform visitors about the importance of sustainability, or the maintenance of the diversity and productivity of ecosystems. WAZA insists that zoos must "develop outstanding education programs that teach proactive environmental concerns locally and globally" (WAZA 2005a, 10). The Seoul Zoo has invested enormous effort in improving its education programs to include courses, which cover both local and global environmental issues. However, the zoo still faces challenges when attempting to reach new audiences.

WAZA also specifies a set of animal welfare standards, or code of ethics, for modern zoological institutions to follow. Since its foundation in 1984, the Seoul Grand Park Zoo has developed a strong focus on improving animal welfare. However, the zoo's lack of resources and South Korea's lack of legislation concerning zoological institutions has limited the rate of these improvements. Over the years, the Seoul Zoo's most successful collaborations have been with local animal welfare organizations that encourage the institution to conduct more ecological research on animals in order to improve their quality of life. This has resulted in an interchangeable understanding of conservation and welfare at the Seoul Zoo. However, as the Seoul Zoo enters into the 21st century, the role that the institution could play in the research and conservation of South Korea's biodiversity may cause problems if or when these endeavors conflict with the welfare of individual animals. This study examines how the development of the Seoul Grand Park Zoo from its foundation as a leisure resort in 1984, to its present-day

condition as a twenty first century modern zoo in 2015 reflects a changing dynamic in the interrelationship between animal welfare and conservation at the institution.

To answer this question, this thesis is based on an analysis of several different types of sources: journalistic accounts of the Seoul Zoo, the Seoul Zoo's annual journal, Korean and international laws governing animal welfare and conservation research, unpublished papers from workshops at the zoo, the writings of Korean and American zoo experts, and personal interviews with South Korean academics, Seoul Zoo officials, and conservationists. The interviews lie at the heart of this research. Conversations with zoo officials such as Seoul Zoo Director Jeongrae No, curator Hyojin Yang, education coordinator Inyeong Yeom, head lab coordinator Gyeongyeon Eo, and some of the zoo's zookeepers, revealed how the zoo has struggled to improve in areas of animal welfare and research. These also demonstrated that individuals working at the zoo in many ways often conflated acts of animal welfare with acts of conservation, by relying on the animals' happiness as one of the most essential elements of a successful zoo.

In addition, conversations with academic experts such as Ewha Woman's University's Ecoscience division chair professor Jaecheon Choi and Seoul National University Professor Hang Yi revealed another perspective on how the zoo handled its priorities regarding animal welfare and conservation. Speaking with animal rights activists such as Jinkyong Jeon uncovered the failings of South Korean animal welfare legislation along with the successful collaborations between associations such as the Korea Animal Rights Advocates (KARA) and the Seoul Zoo. Lastly, talking with conservationists such as Director Seongyong Han of the Korean Otter Research Center

provided insight into the true state of the Seoul Zoo's research facilities, its lack of resources, and the absence of concrete communication between itself and outside institutions.

Drawing from these sources, this thesis explores the dynamic between animal welfare and conservation at the Seoul Zoo. The first chapter lays out the beginnings of the Seoul Grand Park Zoo and how the zoo's development reflects South Korea's economic ambitions as well as its freedom from colonial oppression. The second chapter is a discussion of how zoo animal welfare facilities have improved at the Seoul Zoo within the overall context of animal welfare law development in South Korea. Finally, the third chapter examines the Seoul Zoo's conservation projects and collaborations with outside academic and zoological institutions. The history of this institution in the past thirty years reveals structural problems in the collaborative network and legal framework of the South Korean Zoo community, and also reveals an institution striving to create a vision compatible with the standards established by the World Association of Zoos and Aquariums.

Over the last thirty years the Seoul Zoo has become more cognizant in improving animal welfare, which has been its greatest priority. At the same time, the leaders of the zoo have been increasingly discussing the zoo's purpose in conservation and research, but have been restricted by a limited resources and legislation. As a result, the Seoul Zoo has evolved into an institution that presents some of their welfare projects as conservation, blurring the distinction between the two concepts. On the one hand, the Seoul Zoo demonstrates how acts of animal welfare can inspire people to care about environmental

issues. However, as the zoo refines its mission with relation to research and conservation, the current interchangeable dynamic between conservation and animal welfare could become problematic when research priorities negatively affect the welfare of individual animals.

A Korean World-Class Zoo

Changgyeong Garden

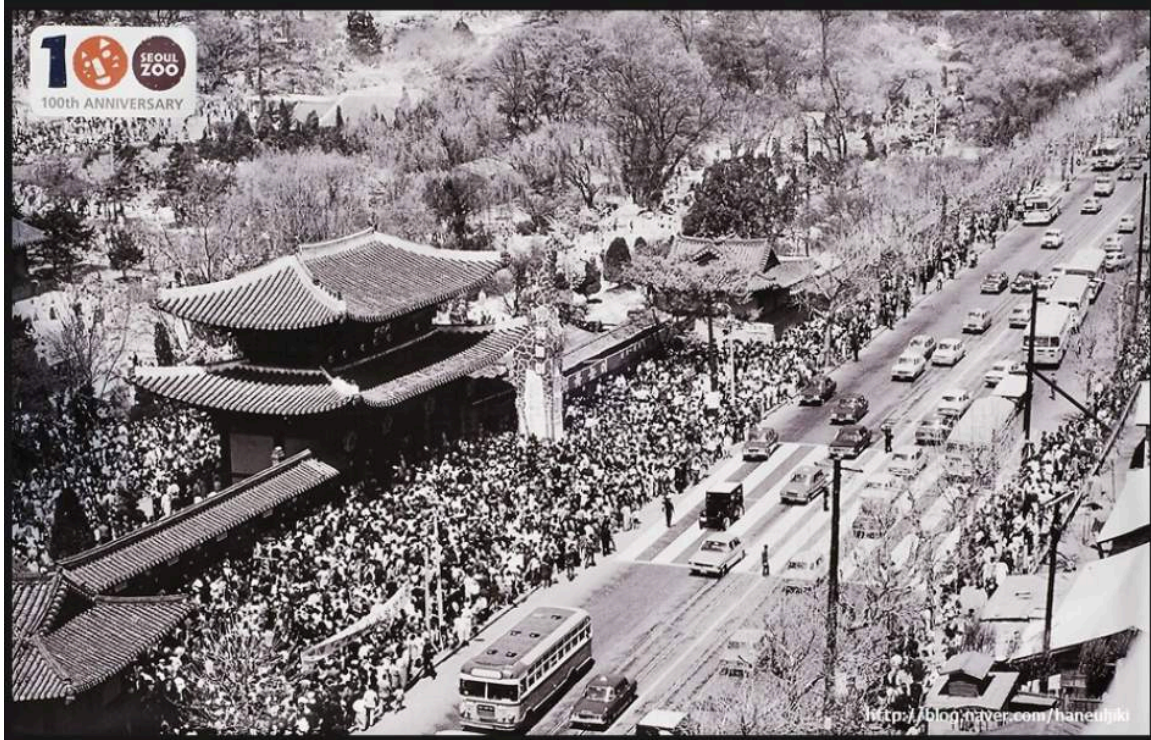


Figure 2: Changgyeong Park 1969 (Korean Zoo 2009).

In 1909, the Japanese, who ruled Korea from 1905 to 1945, founded the first Korean zoo in Changgyeong Palace, one of the five grand palaces located in the center of Seoul, the country's capital. Not much information exists about the history of the Seoul Zoo during the colonial period. According to Mayumi Itoh's *Japanese Wartime Zoo Policy*, King Soonjong, a member of the Yi royal family and the last king of the Joseon dynasty, first placed animals in the palace in order to lift his spirits as Korea sank deeper under Japan's imperial rule. When the Joseon dynasty crumbled in 1910, the palace fell under the Japanese Imperial Household Ministry's jurisdiction (Itoh 2010).



Figure 3: Japanese cherry blossom trees at Changgyeong Park (Kim 2012).

Although Japanese guidebooks from the 1930's claimed that the Korean royal family voluntarily transformed their palace into a public zoo, scholars such as Kenneth James Ruoff suggest that the Japanese government coerced them (Ruoff 2010). All but the main building was destroyed to make room for a zoological garden, a botanical garden, and a museum. The number of Japanese cherry blossom trees, planted at the palace in 1922, reached two thousand, and were meant to give Japanese visitors a sense of home during their walks through the gardens (Ruoff 2010). In place of the Yi family, the Japanese ornithologist Shimokoriyama Seiichi (b. 1883) became director of the institution, and Changgyeong Palace eventually lost its status as a Korean royal residence to become Changgyeong Park, or Shōkeien Gardens (Itoh 2010).

Japanese Imperialism and the Seoul Zoo

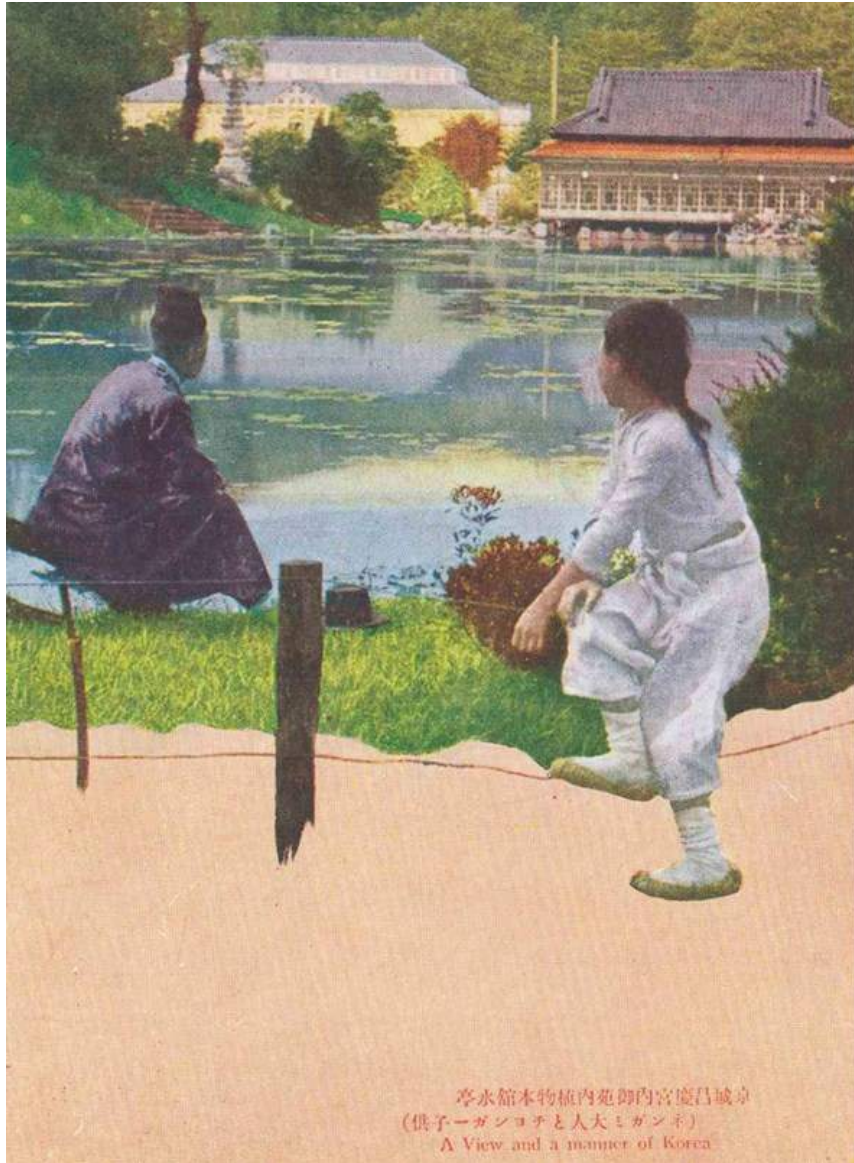


Figure 4: Japanese postcard from the 1930's depicting Changgyeong Park. The building on the left is the greenhouse built by the Japanese, whereas the building on the right is part of the original Changgyeong palace (1930 Changgyeong Park 2011).

Like the British, the Japanese sought to create imperial institutions in their colonies. Zoological gardens such as Changgyeong Park, the Taipei City Zoo in Japan's

other colony of Taiwan, and the Xinjing Zoo in Japan's puppet state of Manchukuo in northeast China, were meant to be icons of modernity imported by imperial Japan. Visitors at Changgyeong Park could witness the contrast of a modern greenhouse against the archaic backdrop of the original palace's surviving Korean architecture. They could also see rare animals in this setting (Ruoff 2010). By placing rare animals in the Korean royal palace, the Japanese colonial rulers invited comparisons between the captive beasts and the conquered monarch.



Figure 5: Children looking at a red-crowned crane in front of the Changgyeong Park aviary (1930 Changgyeong Park 2011).

Each zoological institution was also a direct representation of the Ueno Zoo, Japan's first modern zoo, a part of Japan's National Museum of Natural History, and patterned after the Menagerie of the Jardin des Plantes in Paris, France. Because of the

Ueno Zoo's status as an imperial national institution, local governments were banned from creating improved versions. As a result, the Ueno Zoo's flaws (e.g., its embodiment of a separation between zoos and the zoological community, profit management by bureaucrats, and prioritizing collections of exotic animals over native ones) were passed down from zoo to zoo, and colonies, such as Korea and Taiwan, were forced to follow Japan's imperial model for zoological institutions. Japanese zoos were seen as amusement parks, only creating new facilities for entertainment, and not attempting to improve animal care or exhibits (Itoh 2010). This reflects a broader global trend in zoos at the time. Up until the late 20th century, Western zoos defined their missions of educating and entertaining people through the capture and exhibition of exotic species (Hanson 2002). Oftentimes to the detriment of the animal's welfare, zoos were dedicated to the scientific instruction and leisure of the upper middle class. They were collections of animals that acted as symbols of wealth and prestige for the privilege of a select few (Wirtz 2007).

Between August 1943 and May 1945, the Japanese government disposed of well over two hundred "dangerous" animals throughout all their zoological institutions on the pretext that these animals would present a public risk should they ever escape during air raids. Such dangerous animals not only included large predators such as lions, leopards, tigers, and bears, but also large herbivores such as elephants, hippopotamuses, and bison. Japan gave the official order to exterminate animals at the zoo in Seoul on July 25, 1945. Very little information exists about this particular massacre due to the destruction of the zoo's early records during the Korean War. However, according to Yongdal Park, the only Korean employee at the Changgyeong Park Zoo, between 1943 and 1945, 150 of the

zoo's 361 animals, representing 72 species, were either poisoned or starved to death in accordance with Japanese policy (Itoh 2010).



Figure 6: A polar bear in his water tank at Changgyeong Park (Hong 2014). This was one of the many large predators that the Japanese ordered to exterminate during World War II.



Figure 7: Visitors feeding elephants at Changgyeong Park in 1979 (Eo 2013). Large herbivores such as elephants were also victims of Japanese wartime policies over zoos.



Figure 8: An elephant denied food and water at Tokyo's Ueno Zoo in 1943 (Itoh 2010).

Korea gained independence from Japan shortly after this episode, on August 15, 1945. Five years later, however, on June 25, 1950, the country entered into a three-year civil war that split the peninsula into North and South Korea. The fighting ended on July 27, 1953, when both sides signed the Korean Armistice Agreement. After the Korean War, while the north was thriving thanks to its greater abundance of natural resources and industry, South Korea's pride and economy were plummeting. Under the dictatorship of Jeonghee Park (1917-1979), who seized power in a coup-d'état and ruled from 1961 to 1979, the development of the Korean economy became the government's most important priority (Kamiya 1980). As a result, Korea's authoritarian past charted the economic path that, to a large extent, the nation still follows to this day.

Economic Rise and the Need for Leisure

Since the early 1970's, South Korea's economy has increased at an exponential rate, and the nation has undergone extensive urban development and environmental changes. Although the zoo at Changgyeong Park survived the Japanese colonial era and the Korean War, the former palace grounds were deemed too small to represent the rapidly developing economic wonder that Seoul had become. Seoul's population alone had increased by 27 % compared to the rest of the country, and the government worried that urbanization was leading to a shortage of green areas needed to accommodate family excursions. In addition, the zoo's location was a constant reminder of Japanese oppression. For these reasons, on January 5, 1977, the government began a plan to move

the zoo at Changgyeong Park to a different location, where it could develop free from its colonial past (Seoul Grand Park 1996).



Figure 9: The attempt to bring in a new giraffe to the Changgyeong Park Zoo in 1971 was met with difficulty as the giraffe was too tall to go through the front gate (Jeong 2007).

In June of 1978, the Korean government selected the city of Gwacheon, a rapidly growing suburb just south of the capital, as the zoo's new location. Gwacheon, in particular, was described as a "newly rising suburban setting" (Seoul Grand Park 1996). Around the same time as the zoo's construction, this rapidly growing suburb just south of Seoul was also selected by the Korean Horse Affairs Association to create a horse racetrack, known as Seoul Race Park. The government hoped that the introduction of such "leisure" facilities would accommodate the improved lifestyle of the Korean people.

As their nation's economy improved, more and more Korean families rose in social status. Nationally, people's lifestyles morphed into nuclear family units with

higher incomes and, on average, only five to six days of work per week. The development of Korea's industrial fields increased its ability to compete globally. This drive for global development caused an accumulation of knowledge and technological skills to improve human resources and education. In addition, as more and more individuals became aware of the numerous leisure centers abroad, the Korean government thought it necessary to establish such facilities at home. According to the zoo's historical archives from the 1980's, these factors influenced the decision to create a park with cutting-edge technology that would satisfy Korean citizens' thirst for leisure and alleviate their stress from living in an overcrowded city (Seoul Grand Park 1996).

Construction and Opening of Seoul Grand Park

By the early 1980's, South Korea finally had the resources not only to move the zoo to a different location, but also to create a whole new facility that would educate, and especially entertain, the public. The government estimated that most people would rather travel for amusement than cultural enrichment or education. The result was the creation of Seoul Grand Park, an "inexpensive, easily accessible leisure center that offers simple ways to learn while having fun and gaining recreation through experience" (Seoul Grand Park 1996). In 1984, the Seoul Zoo was moved to Gwacheon, and Changgyeong Park once again became Changgyeong Palace, ridding itself of the colonial baggage it once carried.

The Korean government did not select Gwacheon City solely for its urban development, but also because of the natural fauna and flora surrounding it. A suburban area was considered a much more suitable location for the zoo than a polluted city

environment because it would be easier to protect or conserve species next to the surrounding natural areas. The zoo's location adjacent to the mountains of Makgyedong also allowed for visitors to engage in hiking, a very popular recreational activity in South Korea. Aesthetically, the topography around the construction site, which had mountains to the west and water to the east, was also chosen because it conformed to the principles of Feng Shui, a Chinese philosophy that advocates harmony between buildings and their natural surroundings. Not only would the park's picturesque scenery be appealing to visitors, it was also valued as important for the animals' welfare as well (Seoul Grand Park 1996).



Figure 10: Aerial view of Seoul Grand Park after construction in 1984 (Yang 2014b).

Construction of Seoul Grand Park lasted from 1977 until 1986, though the zoo officially opened in 1984 at its new location. More than anything, the construction advisory committee directing the project wanted to rid the zoo of its Changgyeong Park image. The new venue was to be spacious and pasture-like—a vast improvement over the cramped quarters at the zoo’s previous location. The planners sought to blend modern buildings and facilities with the geographical features of the surrounding landscape. Such facilities were to be one-story buildings evenly spaced inside the zoo and concealed within the existing environment. Wide winding paths would avoid crowding and provide a pleasant and safe way for visitors to move around the zoo while making plenty of discoveries along the way (Seoul Grand Park 1996). Certain parts of the zoo were designed based on zoogeography. Other areas grouped animals from similar taxonomic groups together for convenience. For some exhibits, Carl Hagenbeck’s innovative design of natural looking exhibits with moats and ditches instead of bars were used to allow visitors a closer, more immersive interaction with animals. However, as in many Western zoos that adapted this method, the design of these natural-looking illusions at the Seoul Zoo was oftentimes merely for the aesthetic satisfaction of the visitors rather than the welfare of the animals (Seoul Grand Park 1996; Hanson 2002).



Figure 11: The Seoul Grand Park construction committee established in 1978 (Jo and Kim 2015).

On an international level, the zoo was an attempt to show the world how far South Korea had come. “Bigger than the Pyongyang Zoo! Aiming for world-class!” was part of the zoo’s construction vision. The government wished to create a recreational facility that would cause South Korea to appear more successful than its neighbor to the north. The original plan for the facility in Gwacheon was to create a park almost three times the size of Changgyeong Park. However, when the Korean president at the time heard that Seoul Grand Park would then be five times smaller than the zoo in Pyongyang, North Korea, he reportedly insisted on increasing the area of the park (Seoul Grand Park 1996, page 127; Choi 2014). Eventually, Seoul Grand Park ended up being 256,000 square

meters larger than the Korea Central Zoo in Pyongyang, or 5.5 times larger than the government had originally planned (Seoul Grand Park 1996).

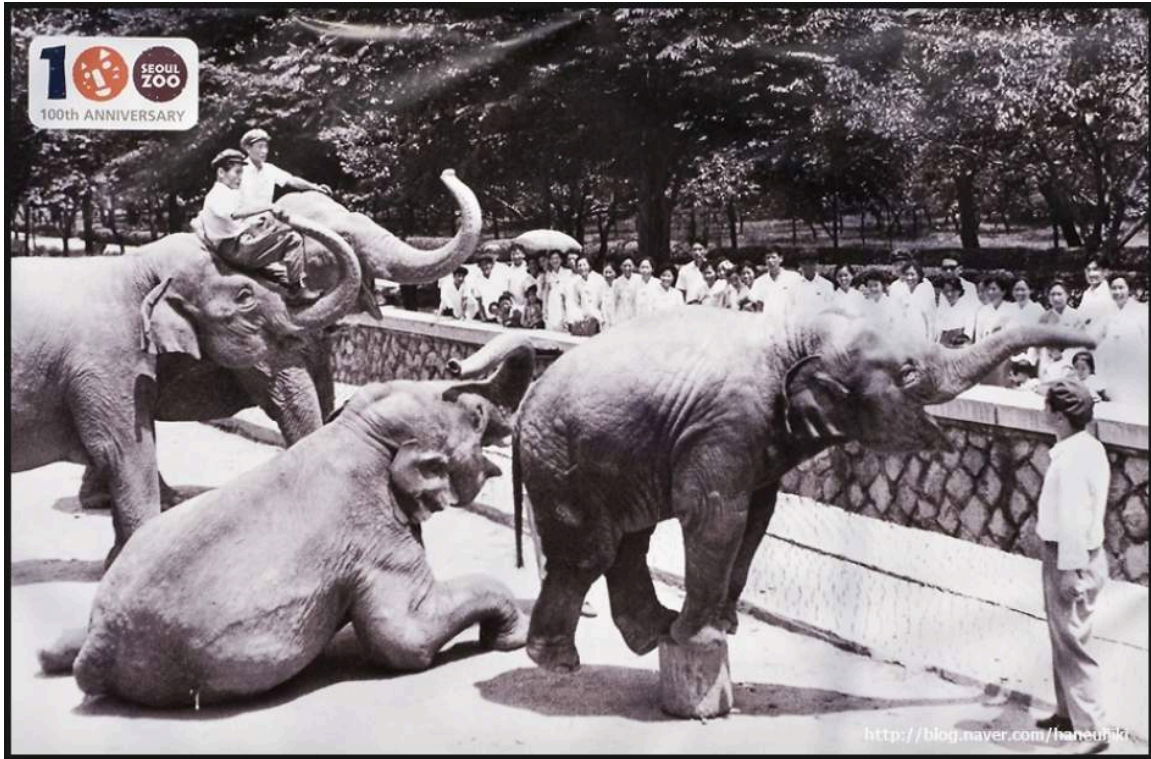


Figure 12: Elephants at the Korean Central Zoo in Pyongyang, North Korea in 1973 (Korean Zoo 2009).

Before and during the construction of the Seoul Zoo, the construction committee turned to examples of other zoos for guidance. Drawing inspiration from famous western zoos, such as the San Diego Zoo, Sea World, and the Bronx Zoo, South Korea also wanted to create its own Disneyland. In addition, the government felt that, although the number of visitors in Korean zoos had been considerable (34% of the population), this number was insignificant compared to the number of visitors to zoological gardens in Japan. According to the zoo's archives, the construction committee admired the vastness of American zoos, the exquisite style of Japanese zoos, European zoos' rational reflection of management, and the use of nature in South East Asian zoos. In an attempt to create

an institution that would both be world-class and attract more visitors, the construction committee attempted to reflect all of these aspects through Seoul Grand Park. The park, a ten-year project that not only contained a zoo, but also a botanical garden, an aquarium, a natural history museum, a youth facility, and an amusement park, was a very significant investment, ultimately costing 98.5 billion Korean won (approximately 82 million US dollars) (Seoul Grand Park 1996).

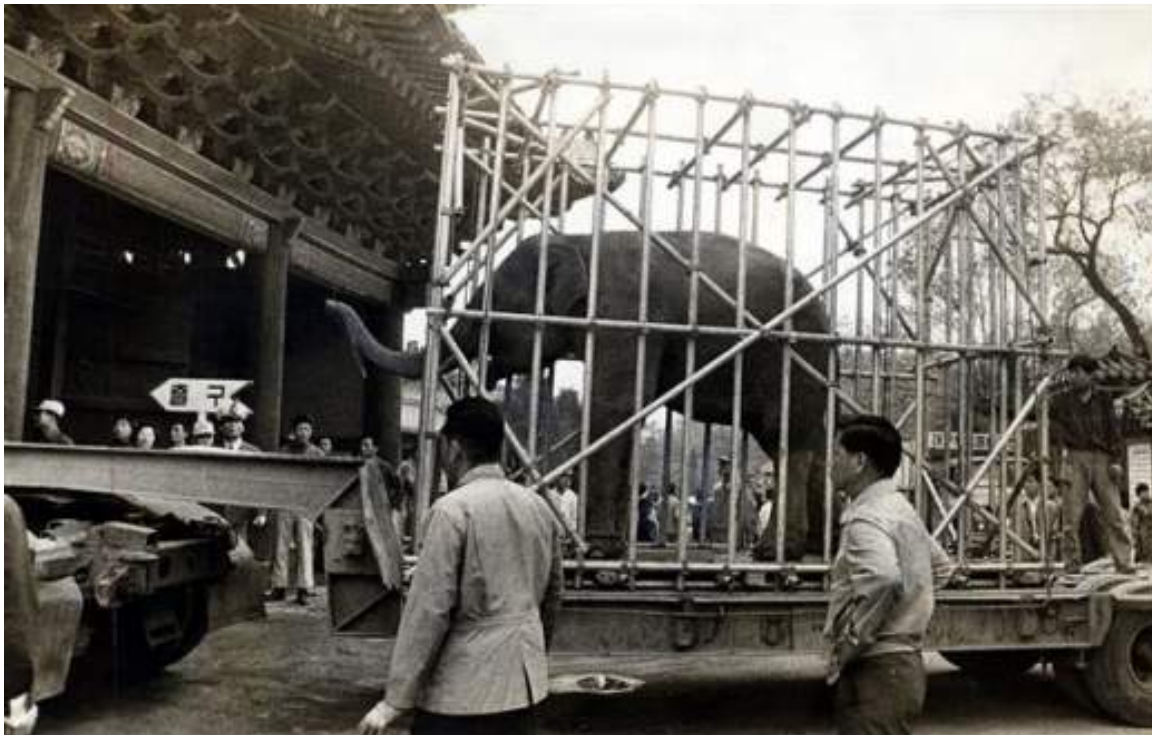


Figure 13: An elephant being transferred from the Changgyeong Park Zoo to Seoul Grand Park (Jo and Kim 2015).



Figure 14: Seoul Grand Park opening ceremony on May 1, 1984 (Korean Zoo 2009).

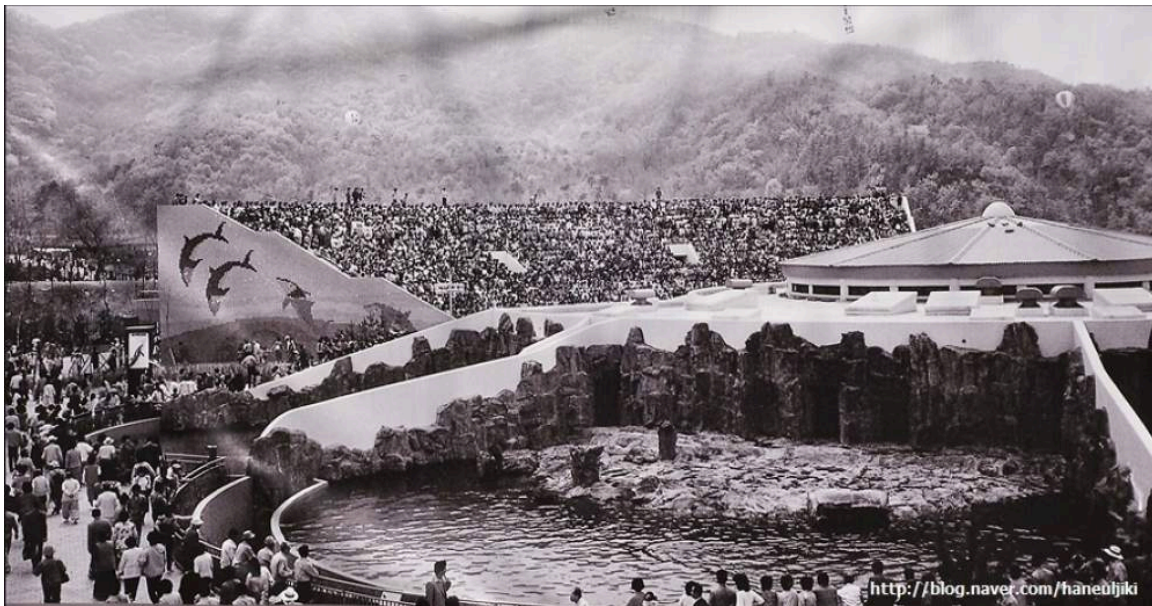


Figure 15: Seoul Zoo's first dolphin show on May 2, 1984, in honor of Seoul Grand Park's opening (Korean Zoo 2009).

In addition to the park's structure, extensive discussions of the zoo's name reflected its search for an identity. In the beginning, many suggested naming the park "South Seoul Grand Park" based on its physical location south of Seoul. Not only this, but Koreans often point to Gangnam, the southern district of Seoul, as a prime example of how fast the country developed. Since the late 1970's, Gangnam had gone from being one of the least developed parts of Seoul to becoming the most developed (Choi 1999). Naming the park after this district would reflect South Korea's economic achievements. However, some argued that this would cast a shadow over north Seoul, and, as a result, suggested naming the park "North Seoul Grand Park", or just "Seoul Grand Park" (Seoul Grand Park 1996).

Another suggestion was to name the park after the Cheonggye Mountain, the main mountain that borders the zoo. The government also considered naming it *Handongsan*, a pure Korean word, which means one big hill, or one tall mountain. Since approximately 80 percent of words in the Korean language originate from Chinese characters, the choice of an original Korean name with no such characters made it clear that construction of this park was purely a Korean achievement. Similarly, as to suggestions of outright nationalistic names such as "Whole Nation of Korea Grand Park", the name *Handongsan* was one way of separating the nation's personal achievements from the developments that Japan had forced into Korean society in the early-to-mid 1900's. In the end, the government decided to name the park "Seoul Grand Park". However, the name *Handongsan* remained as the title of the zoo's annually published journal (Seoul Grand Park 1996).

The word *handongsan* was also part of the zoo's original mission statement, which read "One tall mountain (*handongsan*) which, through love, unites cute and lively animals with warm-hearted people under the bright hot sun and fragrant refreshing forest" (Seoul Grand Park 1996, 141). Besides recreation, the zoo originally laid out three more of its basic functions, which included education, research, and conservation. In other words, besides being solely a place of leisure, the Seoul zoo was also meant to be a part of social education, a place for experts to conduct research, and an example of environmental management. However, the zoo's mission statement provided no specific goals in terms of conservation, education, or research.

Seoul Grand Park Mission

Many modern zoos have increasingly focused their mission statements on the conservation of wildlife species both within and beyond the zoo walls through various strategies such as coordinating environmental education programs, managing breeding and propagation, and developing partnerships with other research organizations (WAZA 2005a). In their essay, "Conservation Education in Zoos: an Emphasis on Behavioral Change," authors Eleanor Sterling, Jimin Lee, and Tom Wood emphasize the importance of zoological institutions maintaining a consistent message in order to encourage changes in behavior with regard to nature (Sterling et al. 2007). Zoologists such as Lesley A. Dickie and Chris West further emphasized that "zoos must also ensure that all their staff are aware of the conservation mission and have bought in to its importance, ensuring greater teamwork and a unified face" (West and Dickie 2007, 6). In other words, a focused and consistent mission statement is an essential aspect that helps foster positive

attitudes toward the environment between zoo visitors and staff members (Zimmerman 2007). WAZA especially has pushed for the integration of conservation as an essential part of the modern zoo's vision: "No individual zoo or aquarium can contribute to conservation in a meaningful way without integrating conservation into its organizational culture; integrated conservation must be its clear and explicit aim" (WAZA 2005a, 11).

Although the Seoul Zoo's initial mission statement was meant to be a positive description of the zoo's function, it did not set a fixed purpose for the institution with regard to its role in environmental management or to conservation education. In fact the zoo's mission statement was more of a description of what the zoo represented on a recreational level: a relaxing park where people may rest and refresh themselves. One might further say that this particular mission statement was a misrepresentation of what a true zoological institution should represent. Not all people are warm-hearted, not all animals are cute and lively, and it is difficult to unite the two through love if the zoo does not maintain a consistent message about fostering such love through conservation and education. As a result, the Seoul Zoo lacked an essential foundation needed to establish its role as a modern institution.

Throughout its history, the Seoul Zoo has been an essential part of South Korea's changing social landscape. The institution's journey from its origins at Changgyeong Palace to the mountains of Gwacheon, reflect the nation's struggle with colonial oppression, war, and rapid economic growth. When the zoo opened in 1984, it succeeded in becoming a Korean expression of modernity, but still struggled with laying out a solid foundation needed to support and maintain programs in conservation, education, and

animal welfare. Although conservation, research and education were considered fundamental duties of the zoo, entertainment seemed to be a greater priority in terms of visitors. Noticing that people preferred to avoid cultural education facilities, the government decided to emphasize recreational services at Seoul Grand Park to make leisure worthwhile (Seoul Grand Park 1996). As a result, as time went on, it became increasingly difficult for the zoo to find the funds necessary to maintain research, education and conservation programs, as well as to maintain its animals' quality of life in some cases.

Faced with globalization and a need to express its economic achievements, South Korea built Seoul Grand Park as a recreational resort, which lacked “an understanding, a vision, that zoos are not simply theaters housing passing shows for community education and recreation but conservation centers empowering their communities to join with others in responding to human-caused global extinction and helping to sustain a legacy of life” (Conway 2007, 16). One of the basic and most essential elements needed to build such a vision includes maintaining the welfare of zoo animals, “ambassadors” to their counterparts in the wild. The construction of the Seoul Zoo in the late 1970's was what brought awareness to the importance of welfare in South Korean zoos, a topic that is controversial to this day. The next chapter discusses the increasing significance of zoo animal well being in the Seoul Zoo's development.

The Journey from Sad Zoo to Happy Zoo

Animal Welfare, Animal Rights, and Conservation

Animal welfare concerns the humane treatment and well being of an animal's physical and mental state. According to the zoologist Michael Hutchins, "Welfare can be defined as a good or satisfactory condition of existence; thus animal welfare refers to the quality of an animal's life, whether in nature or in human care" (Hutchins 2007, 94). Animal welfare philosophers and advocates generally apply this type of welfare ethic to all sentient animals. Their argument begins with an animal's ability to feel pain as the only pertinent characteristic needed to deserve full moral consideration (Singer 1975). As a result, animal welfare advocates are often "looking to balance overall harms and benefits rather than to allow individual interests to 'trump' the good of the many" (Minteer 2013, 79). In contrast, the animal rights perspective argues that, "sentient beings have an intrinsic and inviolate right to life, liberty, and bodily integrity" (Hutchins 2007, 93). Proponents of animal rights generally take the animal welfare viewpoint further, by ascribing the moral equivalent of personhood to nonhuman sentient animals, especially mammals, thought to be capable of more complex cognitive experiences (Minteer 2013, 79). While certain animal welfare activists agree to human use of animals as long as one minimizes their pain and suffering, many animal rights philosophers and advocates believe that any type of killing or confinement of animals violate the above-mentioned fundamental rights.

According to many animal rights advocates, zoological institutions as a whole violate the premise that individual animals have a fundamental right to liberty and

autonomy. Most strong animal rights activists would agree that these principles are simply incompatible with zoological institutions, given the practice of captivity. For example, animal rights organizations such as the People for the Ethical Treatment of Animals (PETA) adamantly oppose the existence of these types of institutions because “zoos deprive animals of the opportunity to satisfy their most basic needs” (PETA 2015). Environmental ethicist Dale Jamieson also opposes the existence of zoos by emphasizing, among other reasons, that zoological institutions do not significantly aid in the preservation of endangered species. Rather than supporting zoos, which often do not have the proper equipment to practice large-scale breeding, he suggests investing resources in conservation facilities that specialize in the propagation of endangered species.

Although animal welfare/rights and the conservation movements have many similarities, they are very distinctly different concepts. All of these ideas are ethical perspectives that can overlap, but that can also diverge on many fundamental points. The animal welfare position, for example holds that every sentient individual animal deserves equal moral consideration. Prioritizing one species over another is viewed as *speciesism*, morally equivalent to racism or sexism (Singer 1975). Animal welfare proponents also believe in the humane anthropocentric use of animals. In contrast, animal rights proponents argue against any type of exploitation of sentient nonhuman animals for human benefit. Both the traditional animal welfare and animal rights approaches agree, however, that the ecosystems that the animals occupy are not morally considerable in and of themselves.

What this means is that just because a particular zoological institution upholds animal welfare ethics does not necessarily mean that the institution is conservation oriented and vice versa. Generally, discrepancies occur when the rights or interests of individual animals conflict with the need to preserve ecosystems or a particular species. The modern 21st century zoo's prioritization of a conservation ethic at times may severely conflict with the welfare of individual animals. Unlike the animal welfare or rights viewpoint, the conservation standpoint gives precedence to endangered species, and says that the willingness to protect ecosystems defines moral consideration of wild species (Hutchins 2007).

In South Korea's case, the entertainment purpose of the Seoul Zoo initially presented the biggest obstacle to maintaining the psychological and physical well being of its animals. Those that fought and continue to fight for the improvement of zoo animals' quality of life are primarily local animal rights organizations as well as everyday South Korean citizens driven by the principles of welfare ethics. Oftentimes activists who seek to promote animal welfare ignore the fine philosophical distinctions between animal rights, welfare, and conservation. For example, rather than attempting the radical approach of shutting down zoological institutions because they violate the fundamental rights of animals, current South Korean animal rights organizations seek to improve the overall quality of the life of zoo animals in the country. Yet, too much of an emphasis on individual animal welfare or rights may present more obstacles to the Seoul Zoo's transition into the 21st century and its attempt to focus more on research and conservation especially when the latter conflicts with the interests of the former.

Animal Welfare at the Seoul Zoo

From the very beginning, the Seoul Zoo indicated animal welfare as a number one priority in its exhibit designs. Under the motto “animal welfare first,” the institution sought to accommodate its animal tenants with enough trees and rocks for hideouts, appropriate lighting, ventilation, and enrichment, among other elements (Seoul Grand Park 1996). In fact, scholars such as Kyung Uk Cho claim that the manifestation of South Korea’s interest in animal welfare coincided with the construction of Seoul Grand Park’s zoo (Cho et al. 2009). However, over time, the animal facilities deteriorated due to lack of legislation and insufficient funds. As a result, the construction lost its initial welfare-based intent, and what is said to be the “prison-like” confinement of the animals became the center of a societal debate on the treatment of zoo animals in South Korea (Cho et al. 2009).

The Seoul Zoo’s current curator, Hyojin Yang, and director, Jeongrae No, believe that the Republic of Korea’s rapid economic growth both positively and negatively affected the quality of the zoo’s exhibit facilities. When asked about whether the increase in the country’s urbanization affected the zoo’s development, Director No explains that, “from the zoo’s standpoint, it was unable to follow the expansion of the economy” (No 2015). In other words, as Curator Yang explains, the Seoul Zoo could only develop extensively during the early 1980’s, but lack of investments caused this progress to stagnate and drastically stunted the institution’s growth. In addition, the South Korean government wanted to build Seoul Grand Park as a world-class recreational facility. For this reason, like many other zoos at the time, the Seoul Zoo did not take into

account all of the psychological and behavioral needs of the animals. As a result, the prioritization of leisure significantly limited the improvement of animal welfare facilities. To remedy this, Yang emphasizes that the zoo has made significant efforts to remodel exhibits little by little, while actively participating in discussions with concerned Korean citizens in an attempt to follow global trends in zoo animal welfare (Yang 2014a).

Ethical concern for the animals at the Seoul Zoo began with discussions by the general public. A group of anxious, animal-loving Korean citizens created Haho, an “environmental movement alliance for the protection of wild animals and the advancement of animal welfare” (Haho 2004). In 2002, Haho published the first ever report on zoo animal welfare in South Korea. The report—titled *Sad Zoo*—was a discussion of the animal welfare conditions at the Seoul Zoo. The report was critical of the zoo’s lack of enrichment and unnatural exhibit settings that often caused physical and psychological injury to the zoo animals (Haho 2004). Haho’s members gathered again in 2004 to discuss the direction of the Seoul Zoo and created a follow-up report, *Sad Zoo 2*, which highlighted changes since 2001, but indicated that not much had improved in three years (Cho 2007).

Dr. Jaecheon Choi, the current director of South Korea’s Biodiversity Foundation and chair-professor of Ewha Woman’s University ecoscience department, was one of the main individuals who helped bring awareness to the sad state of the Seoul Zoo. Inspired by a visit to the zoo with his son, Choi wrote a brief article, titled *I Hate Going to the Zoo*, which was an emotional retelling of his son’s impression of Korean zoos after having lived abroad in the United States. Choi recalls, “it only took two hours at the zoo

for my son—my son, who loved going to the zoo so much— to turn to me and ask me to go home because he felt sorry for the animals” (Choi 2014). Saddened by how the zoo in Korea had made his young son feel, Choi realized that this experience had opened his own eyes to the sad plight of the zoo animals. Looking back, he describes that; “In this young child’s eyes there was a difference with the zoos he visited in the United States. What I mean is, he could see that the animals did not seem happy. But as an adult, even though I saw a difference, I just thought circumstances can be this way” (Choi 2014). Needless to say, his son lost his love of visiting zoos and Choi felt inclined to open other people’s eyes to the lack of “happiness” in Korean zoological institutions (Choi 2014). As a biodiversity scientist moved by animal welfare issues, Choi illustrates an interesting merger between the conservation and welfare ethics, two concepts that have often been deemed as philosophically incompatible because the management of the former often involves the sacrifice of the latter (Minteer and Collins 2013).

Choi’s article was published in the *Hanguk Ilbo* newspaper on November 19, 2001 and closely coincided with the appearance of South Korea’s first-ever animal rights organizations. Although he had not been the first person to publicly condemn zoos, Choi says that this strange timing resulted in him becoming “the most hated person by the Seoul Zoo” (Choi 2014). The poignancy of his story touched many hearts and inspired emerging organizations such as Haho to investigate the Seoul Zoo and discover how harmful the zoo’s environment had become to these animals. News reports centered on the Seoul Zoo emerged about gorillas injuring their fingers or toes on the cement floors of their cage, or about the seals who lived in chlorine-filled pools that damaged their eyes (Choi 2014; Haho 2004). Such reports inspired *Haho* to publish *Sad Zoo* in 2002.

Improving Animal Welfare at the Seoul Zoo

The *Sad Zoo* reports were the first of their kind to examine the quality of animal welfare in South Korean zoos, making Haho the only organization in South Korea to take a deep interest in the state of its country's zoological institutions. In the first report, Haho monitored the Seoul Zoo every month for a year—from 2001 to 2002—detailing the animals' living environment as well as their physical and behavioral state. A few years later, Haho's *Sad Zoo 2* discussed the Seoul Zoo's improvements and setbacks since 2002, as well the direction the zoo should take with regard to its vision of animal welfare. These reports criticized the Seoul Zoo for creating an inadequate exhibit environment that lacked the proper ecological conditions for the species they contained, ultimately harming the animals (Haho 2004).



Figure 16: The second *Sad Zoo* report. Published in 2004, it was an evaluation of the animal welfare conditions at the Seoul Zoo by the civic organization Haho (Haho 2004).



Figure 17: A red fox at the Seoul Zoo (Photograph by Anne Safiya Clay).

For the most part, *Sad Zoo 2* indicated that the Seoul Zoo had gone through little to no improvement. When referring to the Seoul Zoo, the report emphasized, “the lethargic form of animals lifelessly lying on the cold concrete floor within a small space has now become the set standard for zoos” (Haho 2004, 5). Apart from a handful of improvements, such as the recovery of the lowland gorilla from his hand and foot injuries, the planting of trees and building of awnings to provide shade for the lions, elephants, and apes, as well as the development of one or two enrichment programs, other conditions at the Seoul Zoo not only remained the same, but also worsened. *Sad Zoo* indicated that most of the problems resulted from exhibits not reproducing the animals’ natural environment, along with a deficiency in funds to make this possible. Animals would be stereotypically pacing over hard concrete instead of running on soft grass, enclosures were much too small, and trees were planted merely for shade, not for any ecological purpose (Haho 2004).



Figure 18: Trees were planted for shade in the lions' enclosure (Photograph by Anne Safiya Clay).



Figure 19: African lions at the Seoul Zoo (Photograph by Anne Safiya Clay)

The Sad Zoo reports helped bring a few positive changes to the well being of the animals in Seoul's Grand Park zoo. In 2002, both as a response to animal welfare/rights proponents and in an effort to match the standards of zoos abroad, the institution created a plan to transform into an "ecological zoo", meaning that animals would be placed in exhibits similar to their natural habitats and that the zoo would place more emphasis on wild animal species conservation, education, and research (Seoul Grand Park 2002). In

2003, the Seoul Zoo began establishing enrichment programs for its animals, and, in 2005, the Animal Breeding Department became the Animal Welfare Department, indicating a movement toward animal wellbeing and away from the practical use of zoo animals (Cho et al. 2009; Kang et al. 2013).

After the first *Sad Zoo* report, the biggest improvement seemed to have been the establishment of more enrichment programs at the Seoul Zoo. Whereas young chimpanzees had previously been raised separately from older chimpanzees, the zoo began keeping the families together, stimulating chimpanzees' natural ability to teach and learn. Similarly, while previously only three of the many lions at the Seoul Zoo were allowed to roam the wide outside enclosure, the zoo slowly found a way to display all of the lions together, sparing individuals from spending their days in cramped cages backstage. In addition, whereas before 2002 the giraffes had been feeding from low troughs with the other ruminants, the zoo now created a system of pulleys to help stimulate the giraffes' natural behavior of feeding from high places. During this time, several other enrichment programs were also created to stimulate the natural behavior of the great apes (Haho 2004; Seoul Grand Park 2012; Kang et al. 2013).



Figure 20: Enrichment programs at the Seoul Zoo first began in 2003 (Photograph by Anne Safiya Clay)



Figure 21: Giraffe with enrichment toy (Photograph by Anne Safiya Clay).



Figure 20: A system of pulleys used help giraffes feed from high places (Photograph by Anne Safiya Clay).



Figure 22: Chimpanzee enclosure in 2004 (Haho 2004).



Figure 23: Chimpanzee enclosure in 2015 (Photograph by Anne Safiya Clay).



Figure 24: Large climbing structure built for chimpanzees. (Photograph by Anne Safiya Clay).



Figure 25: Orangutan exhibit at the Seoul Zoo (Photograph by Anne Safiya Clay).



Figure 27: Coati enclosure in 2004 at the Seoul Zoo (Haho 2004).



Figure 26: Coati enclosure at the Seoul Zoo in 2015 (Photograph by Anne Safiya Clay).

Because the Seoul Zoo was built as a place of human leisure, its priority was to entertain visitors and, as a result, like many other zoos at the time, it did not take into account all of the psychological and behavioral needs of the animals. Although the Seoul Zoo's archives emphasize plans to accommodate animals with large spaces and many places to hide, many exhibits still lack these elements to this day. Yunjeong Chu, the zookeeper in charge of caring for the bears at the Seoul Zoo expresses that what disappoints her most about the institution is that, although the overall scale of the zoo is very large, the space for the animals remains very small. In other words, the zoo, having been built for the comfort of people, was designed in such a way that it gave more space to its human visitors than its animal residents (Chu 2014).

One of the greatest challenges faced by many zoos, is keeping the zoo entertaining to attract people, but also keeping up the welfare quality of the animals. Looking back at the Seoul Zoo's history, Director Jeongrae No believes the concept of zoo animal welfare to have begun in the early 2000s, a little before 2003. He claims that the notion of animal welfare had already existed prior to this, but that animal welfare services were established in 2003 (No 2015). Indeed, 2003 represents the exact year when the Seoul Zoo first began employing enrichment programs for its animals (Kang et al. 2013). However, up until 2013, the Seoul Zoo still held animal shows, picture sessions with wild animals, and allowed visitors to feed its animals in addition to holding or petting baby animals (No 2015). As Inyeong Yeom, the Seoul Zoo's education coordinator explains to me, many times these types of activities put extra stress on the animals, who would be fed little in order to incite them into eating from zoo visitors' hands (Yeom 2014). Significant improvements in animal welfare facilities occurred

much later, demonstrating that progress in this area has been a long and tedious journey over the years, as the zoo was learning to integrate its role as a leisure resort and a scientific institution.



Figure 28: Nursery at the Seoul Zoo in 2004. The nursery was replaced with the Conservation Education Center in 2013 (Haho 2004).

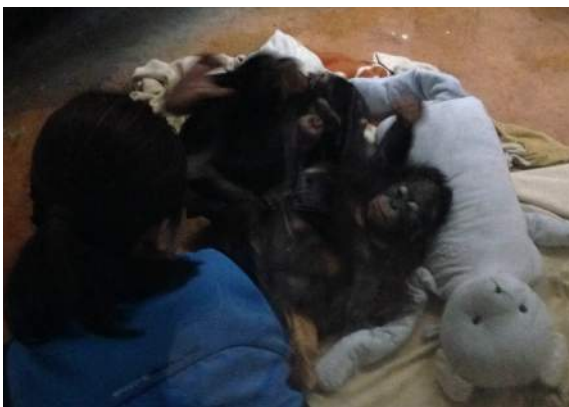


Figure 29: A young chimpanzee and orangutan are raised by zookeepers in an enclosure within the ape section of the Seoul Zoo (Photograph by Anne Safiya Clay).

The slow process of welfare improvement at the Seoul Zoo can also be attributed to lack of both consistent legislation and a strong professional association of zoos and aquariums in South Korea (Cho 2007; Cho et al. 2009). A 2009 study of welfare in Korean zoos evaluated the overall welfare level of all Korean Zoos to be close to average, with a numerical score of 2.86 out of 5 [1 (best), 2 (good), 3 (average), 4 (poor), 5 (worst)] at the time. The Seoul Zoo's overall score was 2.61. In this study, a

questionnaire was created based on the *Five Principles of Animal Welfare* in the *Secretary of State's Standards of Modern Zoo Practice*, which included providing (1) food and water, (2) a suitable environment, (3) health care, (4) an opportunity to express most normal behaviors, and (5) protection from fear and distress. Three evaluators (one veterinarian, one zookeeper, and one administrator) were asked to evaluate their own zoos. (Cho et al. 2009)

This study was the first formal evaluation of welfare in Korean zoos. The results revealed that domestic zoos prioritized provision of food and water, and had the most disregard for the provision of a suitable environment and the opportunity to express most normal behaviors. Although Cho and her colleagues were aware of potential biases within the study, they believed the results called for more stringent legislation regarding animal welfare as well as a standardized and organized animal management system. The report noted an “urgent need to provide animals with the required psychological and physical environment” (Cho et al. 2009) in order to go beyond simply providing them with food and water. Through this study, they were hoping to encourage an evaluation, feedback, and improvement system for South Korean zoological institutions.

Animal Welfare Legislation in South Korea

Animal welfare laws did not come into existence in South Korea until 1991, when the national government created the Animal Protection Law. On January 27, 2008, the law was revised and enforced to ensure the protection of domestic and laboratory animals from abuse. Though the effort to create this legislation may have indicated a rise in awareness of animal welfare, nowhere in the law does it include the welfare of zoo

animals (Cho 2007). The law has also been criticized by South Korean animal rights organizations as ineffective and merely a means for the government to create a false positive public image (KARA 2015a). Most terms in the document are vaguely defined, for example the word ‘animal’ is specified to mean “cattle, horse, swine, dog, cat, rabbit, chicken, duck, goat, sheep, deer, fox, mink and other species as designated by the Minister of Agriculture and Forest” (KARA 2015b). However, a 2011 revision of the law specifies an attempt to protect domestic and laboratory animals from hunger and thirst, the inability to express natural behaviors, pain and disease, and fear and distress. Nevertheless, to this day, the only mention of zoos within this law is a section that allows a city’s mayor to donate or sell abandoned animals to a zoological institution (KARA 2015b).

Since the construction of Seoul Grand Park, there seems to have been a few feeble attempts at creating laws or regulations that would standardize the management of zoo animals. These, however, fell through as the Korean National Assembly prioritized other issues, such as human rights and the economic and modern development of the country (Cho 2007). Because South Korea has been a member of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 1993, South Korean Zoos had been required to acquire approval from their local environmental office to exhibit endangered species. However, these institutions were not required by law to uphold the proper standards of care and safety. The need for such standards became more urgent in light of recent dangerous incidents in zoological parks (Choi 2013b). The first of these major accidents occurred in November 2013, when a Siberian tiger at the Seoul Grand Park Zoo fatally mauled one of the zookeepers. The tiger had somehow

escaped out of its cage into the corridor used by the zookeepers (KBS News 2013). A similar incident occurred a year later at Children's Grand Park in Seoul, where a lion killed another keeper as he was installing equipment in the enclosure (YTN News 2015).

As a result, legislation specifically concerning the welfare of zoo animals and exhibit standards in zoos has only developed recently on a national level. In June 2012, the first official national standards for the proper rearing of zoo animals were established under the *Wild Animal Protection and Related Management Act*. Since 2013 to present, the Korean National Assembly has been working on the *Zoo Act*, a piece of legislation that will be the first law in Korean history to place animal care and safety restrictions on zoo administrators. So far, the law would require every zoo to uphold strict standards for the rearing and the accommodation of endangered species. The law will also more rigorously regulate the export and import of endangered species. Most importantly, the act will also give the government the power to close down any zoological institution that violates this law (Choi 2013b). Although it is not clear whether there has been any discussion with the World Association of Zoos and Aquariums (WAZA) on the development of these standards, the Seoul Zoo, as a member of WAZA since the year 2000, has used the association's ethical standards as a guide.

Because zoos are part of a social landscape, they must be conscious of their social responsibilities. This includes animal welfare, the existence of which, in zoos, inspires trust from the community. It is important for zoos to be regulated by a cooperative association and strong legislation both for public outreach on environmental issues and for the benefit of conservation. In an article on the influence of regulations and policy on

zoos in conservation, Bengt Holst, the chief of the Copenhagen Zoo, and Lesley A. Dickie, the director of the European Association of Zoos and Aquaria (EAZA), insist that not only must zoos be aware of their ethical and legal responsibilities, but they must also communicate with the public, actively participate in lobbying for appropriate legislation, and openly corresponding with other institutions in making decisions related to environmental issues. Only in this way can zoological institutions help fulfill global conservation goals and be encouraged to communicate with and provide resources for other zoos or outside conservation organizations (Holst and Dickie 2007). However, Holst was at the center of a controversy in 2014 when the Copenhagen Zoo euthanized a young giraffe because he was considered a surplus individual genetically within the European Association of Zoos and Aquariums (EAZA). As a result, this case seems to indicate the need for an association purely for the benefits of maintaining genetically viable populations for the propagation of endangered species. In South Korea's case, however, the establishment of a strong association could also be beneficial to upholding the animal welfare standards of individual animals (Goldman 2014).

Korean Association of Zoos and Aquariums

Until 2002, the Republic of Korea lacked an official zoo association. Back when the country was under Japanese colonial rule, the Changgyeong Park Zoo was a member of the Japanese Association of Zoological Gardens and Aquariums (JAZGA), a collaborative network of Japanese zoos created in June 1940 to facilitate information and animal exchanges (Itoh 2010). After the Korean War, various public and private zoological gardens other than Changgyeong Park were opened in South Korea between

1965 and the year of the Seoul Grand Park Zoo's opening. As the number of institutions grew, so did the frequency of exchanges of information and funds between them. The difficulties in managing so many exchanges resulted in the founding of an institutional association for Korean zoos that would coordinate all domestic zoos under one organization (Cho 2007).

The first meeting of the association happened in 1985, one year after the opening of the Seoul Zoo. By the tenth meeting in 1994, the organization was officially named the Korean Association of Zoos and Aquariums (KAZA). Its primary goal was to promote friendship and exchanges of information between Korean zoos in order to improve their development. In 2002, the South Korean Ministry of the Environment officially accepted KAZA as a corporation. Composed of nineteen members—thirteen zoos, four aquariums, and two related institutions—the association held annual meetings to exchange information and discuss the progress of its members. Until the year 2013, the executive chairman within KAZA would be the director of the Seoul Zoo, an institution that was being praised as a representative of the development of all Korean zoos (Cho 2007).

Unlike the Association of Zoos and Aquariums (AZA) in the United States, KAZA still does not have a system of accreditation to establish membership. The only requirement for membership is being a full-time zoo or aquarium located within the Republic of Korea. In 2007, out of the twenty existing zoos in South Korea, only seven zoos were excluded from membership based solely on the grounds that these institutions were too connected to amusement facilities to be considered true zoos. Also, unlike the

AZA, KAZA lacks any legal support or authority (Cho 2007). In its early years, KAZA's responsibilities amounted to surveying research, preparing seminars and workshops, and allowing zoos to exchange information through lectures and presentations (Cho 2007; Yang 2014a; No 2015).

However, in 1998, KAZA helped organize the basic layout for the *Seoul Metropolitan Zoo Management Regulations*, a set of standards for zoos located in Seoul. This document was a response to an urgent sense of needing to catch up to the status of foreign zoos. In the past, South Korea had often turned to examples of other zoos in the world for guidance, as can be seen in the construction of the Seoul Zoo. However, as time passed, world standards on the management of zoos drastically changed, and the city of Seoul found that its zoos were falling behind. With the help of KAZA, the Seoul metropolitan government claimed it would effectively regulate zoos in managing the health of their animals and the safety of their visitors, while fostering kindness to animals and contributing to the protection of the environment (Cho 2007).

Contrary to what its overall goal seems to suggest, the *Seoul Metropolitan Zoo Management Regulations*, which have no legal authority on a national level, had no mention of the ethical treatment of zoo animals and seem to be much more visitor-oriented than animal welfare driven. Apart from a section requiring regular animal health inspections, the rest of the guidelines merely state what zoos can do in terms of research and entertainment, rather than how they can do things in an ethical or effective manner. The only guidelines concerning animal exhibits mention that exhibit information panels should be accurately informative and easily viewed by visitors. In addition, the

document condones entertaining and educating the general public through the use of animals in shows, a practice that current Korean animal rights activists are still actively trying to abolish (Cho 2007). For these reasons and because of a lack of resources for species management, both KAZA and the Seoul metropolitan government were unable to create an effective set of regulatory guidelines for South Korean zoos.

In recent years, KAZA has become an obstacle to legislation concerning zoo animal welfare. While claiming to be sympathetic to the intent of the upcoming *Zoo Act*, the association fears that one strict set of standards meant to regulate all Korean Zoos would be unrealistic given that each zoo faces uniquely different conditions. KAZA has also claimed that regulating zoos is its domain, and that its organization is the only one adept at handling situations when it comes to domestic zoos. According to this association, the surveillance of zoos and aquariums as well as the introduction of an accreditation system should not be the responsibility of civic organizations, such as the Korea Animal Rights Advocates (KARA), who are pushing for strict regulations of animal facilities for the improvement of animal welfare. In contrast, KAZA prefers current standards to remain lax and tolerant (Choi 2013b).

However, KAZA is an association that seems to have failed in its responsibility to zoological institutions. Seoul Zoo curator Yang describes it as a collapsing organization, which no longer holds annual meetings, and seems to have lost a large part of its purpose due to the little amount of animal exchanges between Korean zoos (Yang 2014a). Until 2012, the director of the Seoul Zoo had always been the KAZA's executive chairman. Director Euiwon Mo, the director previous to current Director

Jeongrae No, was the last of the Seoul Zoo directors to run the association. Although Seoul Zoo Director No claims that the Seoul Zoo soon plans to take charge of KAZA, there seems to be no indication of this happening in the near future (No 2015).

The current KAZA director is also the director of Zoo Zoo Theme Park, a decrepit circus-like zoo outside of Seoul, which has faced many accounts of animal abuse and is being sued by the Korea Animal Rights Advocates organization. A few of the many attractions there include walking chained endangered Asiatic bear cubs around the park, crocodile and walrus shows, animal parades, as well as picture sessions with full grown orangutans. The lawsuit centered on Zoo Zoo Theme Park represents an ongoing fight lead by KARA to abolish the oftentimes-cruel practice of animal shows in South Korean Zoos. The lack of stringent legislation concerning the welfare of zoo animals has made this task especially difficult, although KARA has succeeded in the elimination of a few aspects of some animal shows (Jeon 2014). In her paper on animal welfare in Korean Zoos, Kyung Uk Cho blames the poor economic state of South Korea after the Korean War for the late appearance of animal welfare standards. Referring to the Korean government's exclusive focus on human rights as speciesism, she insists that the country's current economic position allows for humanitarianism towards animals as well (Cho 2007).

Korea Animal Rights Advocates (KARA)

Founded in 2002, the Korean Animal Rights Advocates is a nonprofit organization in South Korea that aims to give animals the respect they deserve as sentient beings by fighting against the exploitation of animals in entertainment, experimental lab

testing, farms, and zoos. The organization is very critical of their country's ineffective welfare legislation and often organizes campaigns to foster awareness of the ethical treatment of animals. Recently, KARA has been one of the strongest advocates for stringent zoo legislation. Their hope is to eliminate the use of animals in shows at zoological institutions and to create a more natural environment for the welfare of the animals (KARA 2015a).

Despite their name, KARA takes an animal welfare approach rather than an animal rights stance with regard to zoological institutions. Whereas the animal rights ethic argues that animals have the same rights as humans and should therefore live a life free of human interference, animal welfare focuses on the well being of animals, supporting the humane treatment of animals, including attention to their physical and mental health (Minteer 2013). In accordance with the animal welfare ethic, KARA contends that humans are responsible for the animals in their care, and it seeks to ensure that animals in captivity are appropriately cared for, not exploited for entertainment. Therefore, rather than fighting to abolish zoos, which are incompatible with the animal rights ethic, KARA calls for more stringent standards on the care of captive animals.

KARA's Co-director Jinkyong Jeon has said that zoos in South Korea still solely exist for the viewing and entertainment of visitors. From her point of view, there can be no such thing as a perfect zoo, because zoos cannot offer animals the natural habitat where they originated. However, she believes that, despite this, if zoological institutions make realistic attempts to recreate an animal's natural habitat, then this will not only significantly benefit the welfare of the zoo animals, but the happiness of visitors who

view them as well (Jeon 2014). For this reason, KARA has insisted that South Korean zoos become less exclusive and more open to working with outside research organizations in an effort to improve understanding of animals' natural habitats (Choi 2013b). Jeon also hopes that this type of research would be emphasized more so in the display and conservation of endangered native Korean species than non-native species in domestic zoos (Jeon 2014).

The state of South Korean animal protection laws has made it especially difficult for organizations like KARA to crack down on places with poor welfare standards. Institutions such as the Zoo Zoo Theme Park have been especially uncooperative, even to the extent of prohibiting KARA members from entering the zoo. In Co-director Jeon's opinion,

Civic organizations are hoping that zoos will change their perception about animals and take up the role of reintroducing them to the wild. However, these possibilities are still limited. We are even going to the extent of suing a zoo to close down animal shows. Because the situation is like this, zoos are unable to reach the citizens' standards and the law is unable to follow. This is why the role of zoos is still only to attract visitors for leisure (Jeon 2014).

However, despite the battle between KAZA, KARA, and theme parks such as Zoo Zoo, the Seoul Zoo has succeeded in several recent welfare improvements thanks to its cooperation with non-profit organizations such as the Korea Animal Rights Advocates.

Seoul Zoo's Recent Animal Welfare

Changes in animal welfare within the Seoul Zoo reflect a strong dynamic between the different views regarding the well being of animals in South Korean zoological institutions. After predators killed two zookeepers in two separate incidents in 2013 and

2014, a public outcry demanded new laws on zoo enclosures and practices. Moreover sharp criticism from the Korean animal rights community has stimulated growing concern for animal welfare at the Seoul Zoo. Rather than seeking to abolish such institutions all together (the position of the most radical animal rights activists), organizations such as KARA insist on improving zoos by communicating their concerns to zoo officials who can effect substantial reforms. Finally, zoo visitors themselves seem to be increasingly aware of the “happiness” of the animals at the zoo, and the Seoul Zoo is attempting to satisfy these visitors.

Over the years, animal welfare has increasingly become an important priority at the Seoul Zoo. The institution has started to realize the importance of animal welfare in the public’s perception, and has been very cooperative with the Korean Animal Rights Advocates when making improvements to their facilities and management. The zoo’s curator, Hyojin Yang believes that the most significant development of the Seoul Zoo in the last thirty years has been its openness to negotiations and discussions with local Korean civic organizations. Understanding that there is an increasing social interest in the wellbeing of animals, the Seoul Zoo has held several events and campaigns related to animal welfare (Yang 2014a).

Yang also says that, these days, the zoo participates more than ever before in discussions with outside animal rights and conservation organizations (Yang 2014a). The release of three illegally captured bottle-nosed dolphins back to their native habitat near Jeju Island, South Korea, in 2013 is a prime example of this type of collaboration. Two of the dolphins, named Chunsam and Sampal, were from the Pacific Land Aquarium on

Jeju Island. The third dolphin, named Jedol, had spent years living at the Seoul Zoo after he had been illegally captured and sold to the institution. The discovery of this prompted the Seoul Zoo to release Jedol back to the wild in close collaboration with KARA and experts from other institutions such as Ewha Woman's University's EcoScience division (Bridgeman 2013). The release has so far been an overall success and a demonstration of the Seoul Zoo's effort to engage in discussions both with local nonprofit organizations and with academic institutions.

KARA's co-director Jeon says that the Seoul Zoo is heading in the right direction in terms of its vision and goals in remodeling exhibits (Jeon 2014). Director Jeongrae No said that, "Zoos must meet the best configuration of nature" (No 2015). In light of this sentiment, Jeon is happy with the zoo's recent efforts to remodel exhibits in ways that are ecologically similar to the animals' native habitat, although she does recognize that the Seoul Zoo is greatly restricted by legal regulations when making major construction changes (Jeon 2014). Although the Seoul Zoo is run by the city of Seoul, its location in the city of Gwacheon makes the remodeling and expansion of animal enclosures difficult. The zoo must receive permission not only from the city of Seoul, but also from the city of Gwacheon if it wants to make major adjustments to its facilities. As a result, improvement of facilities at the Seoul Zoo has been a very slow process (Yang 2014a).

The head of the Seoul Zoo's education programs, Inyeong Yeom, believes that 2009 marks the beginning of serious action in animal welfare at the Seoul Zoo (Yeom 2014). In 2009, the Seoul Zoo redesigned the gorilla exhibit upon the arrival of a male lowland gorilla named Ujiji from Howletts in the United Kingdom. That same year was

also known as the year of the gorilla, a joint initiative of the World Association of Zoos and Aquariums (WAZA), the Convention on Migratory Species (CMS), and the United Nations Great Apes Survival Partnership (GRASP). In honor of this and of their new arrival, the Seoul Zoo started the Happy Gorilla Project as an initiative on how to provide more comfort to Ujiji as he adapted to his new environment. Curator Hyojin Yang reports that the outside enclosure's cement floor had been replaced with grass. Trees were planted and the gorillas were provided more places to hide from the public (Yang 2014a; Seoul Grand Park 2009).

The 2009 Happy Gorilla Project was the start of a series of radical improvements in terms of animal welfare. Director Jeongrae No describes this year as the time when the notion of animal welfare started to expand. However, he says that changes toward animal welfare only genuinely happened from 2012 to 2013. Up until those years, the zoo had been holding several types of animal shows. The Seoul Zoo's flamingo show, a tradition passed on from Changgyeong Park, consisted of chasing flamingos around to the sound of waltz music. This type of performance only ended in 2014. Another practice, which consisted of taking certain adult and baby zoo animals outside their enclosures for visitors to pet and take pictures, was terminated in 2012. The only ongoing animal show at the Seoul Zoo is currently the dolphin show. However, since 2013, the zoo has made efforts to educate people on the ecology of dolphins through their show, rather than just have the dolphins perform for pure entertainment (No 2015).



Figure 30: Gorilla enclosure at the Seoul Zoo in 2004 (Haho 2004).



Figure 31: Gorilla enclosure at the Seoul Zoo in 2015 (Photograph by Anne Safiya Clay).



Figure 32: Gorilla enclosure at the Seoul Zoo in 2015 (Photograph by Anne Safiya Clay).

This period also marked an effort to care more for the health of their animals. In 2012, the zoo began working harder to improve the nutrition in the animals' feed. That year, they began investing in research on ways to improve their animals' diet. Following this trend, by 2013, visitors were no longer allowed to feed wild zoo animals for fear of transferring bacterial diseases and disrupting their strict diets. That same year, the Seoul Zoo began to apply the concept of positive reinforcement training to strengthen the bond between zookeepers and animals and also to relieve the animals' stress whenever they needed to go through situations such as medical procedures. Following this, by 2014, the zoo finally required each animal to receive regular medical checkups (No 2015; Kang et al. 2013; Seoul Grand Park 2013b).

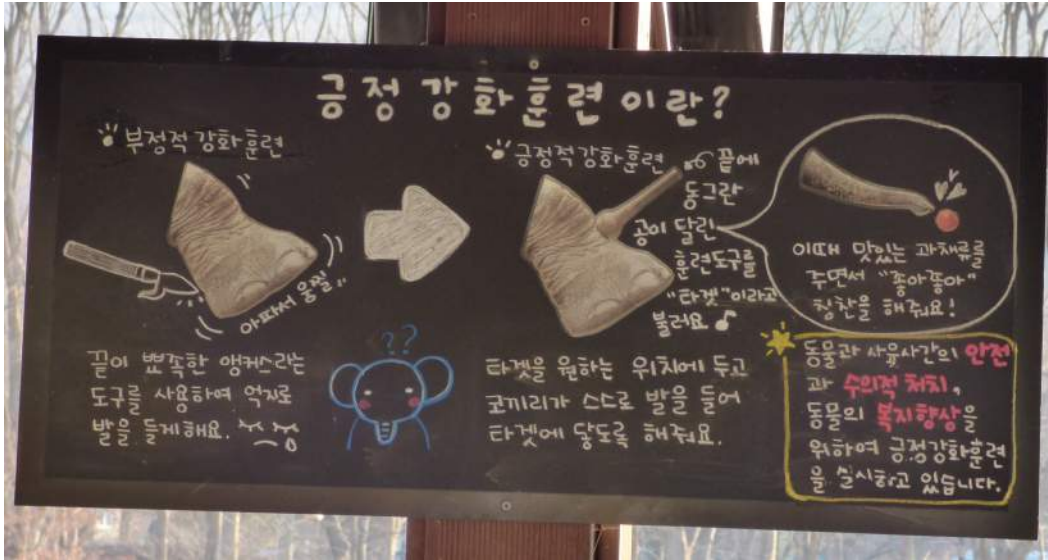


Figure 33: A sign explaining 'positive reinforcement training' to Seoul Zoo visitors (Photograph by Anne Safiya Clay).

In 2013, the Seoul Zoo also replaced their Artificial Nursing Center with the Conservation Education Center. The Artificial Nursing Center was where zookeepers would raise those baby animals that had been rejected by their mothers. Visitors could go inside and look at them through glass panels. The zoo also had opportunities for visitors to pet these same young animals, which included tiger or lion cubs, primate infants, and others, and would sometimes send them to local orphanages for a day, for children to enjoy. Realizing the stress that these situations put on these young animals, the zoo decided to close down the nursing center, and zookeepers began rearing rejected infants in areas where the mother could hear, smell, or see her offspring (No 2015; Seoul Grand Park 2013b).

Since 2014, the Seoul Zoo has put more emphasis on enforcing and educating its visitors on zoo etiquette in videos and signs around the park. Zoo etiquette consists of

refraining from shouting, throwing objects or feeding animals, tapping on glass, or doing other actions that might give the animals any added stress. Recently the Director of Seoul Grand Park has also insisted on creating a “green zoo” with plenty of forest areas supposedly for the animals’ happiness (Seoul Grand Park [2015b]). Yet, because of the difficulty in expanding the area of most enclosures, it seems as though the green zoo would be more advantageous to zoo visitors, who benefit from more space than the animals.

Overall, the Seoul Zoo’s journey from sad zoo to happy zoo has been obstructed by a deficiency of funds and regulations. The focus on visitors’ leisure and amusement along with the absence of a manual on caring for the psychological and ecological needs of each animal also contributed to a lack of awareness of zoo animal welfare. Yet the Seoul Zoo’s recent improvements reflect a significant effort on the part of the institution to collaborate with citizens on these issues. The Seoul Grand Park Zoo realizes the importance of building trust in the public eye through the gradual improvement of their facilities. At the same time, animal welfare can never be the most important priority of any zoo, since zoos, by their very nature, sacrifice the interests of individual animals (who presumably would be better off in the wild) for some greater purpose, such as public education, research, or conservation. Like other administrators of 21st century zoos, the leaders of Seoul Grand Park seek to balance these conflicting priorities, as they increase their involvement in conservation and research projects.

Seoul Zoo's Conservation Responsibility with Respect to Welfare

Among other things, KARA has encouraged zoos to participate more in research on animals' natural behavior and ecosystems to help improve enclosure environments at the zoo. Although Co-director Jeon believes that some animals, such as elephants, do not belong in zoos because there is no way to closely reproduce their native environment, she does recognize that zoos can play a significant role in conservation and reintroduction (Jeon 2015). However, an emphasis on research and conservation may cause more problems when research begins conflicting with animal welfare. An article by Kyung Uk Cho blames speciesism for South Korea falling behind in developing animal welfare standards, because the country had been prioritizing human rights over animal rights. However, the concept of speciesism will continue to exist if the Seoul Zoo plans to uphold conservation goals and expand its research, merely because conservation prioritizes ecosystems and endangered species over individual animals (Hutchins 2007).

According to Dr. Hang Yi, a professor at the College of Veterinary Medicine at Seoul National University, zoological institutions cannot make animal welfare their main priority because it ultimately means the dissolution of the zoo. Yi has been an avid critic of the Seoul Zoo placing precedence on animal welfare over conservation. In his view, "The zoo's most important purpose should be conservation, not welfare" (Yi 2015). Yi feels that the pressure from local NGO's and animal rights organizations has convinced most of the zoo workers that its only role is to maintain the happiness of its animals. Although he has regularly organized workshops that stress the importance of improving and discussing the Seoul Zoo's conservation goals, he believes that the zoo's obsession

with welfare has created a disregard for conservation and that the institution is more concerned with maintaining its public self-image than properly restoring endangered species (Yi 2015).

Many of those who work at the Seoul Zoo, share Curator Hyojin Yang's sentiment that "the animals' happiness and comfort is most important [for a successful zoo]" (Yang 2014a). Yang's sentiment is that, if the animal is happy then people will sense this and be more responsive to the zoos' overall messages about protecting the environment. Proper welfare not only establishes deep connections between the zoo and its visitors, it also allows for animals to display their natural behaviors in a captive setting. David Hancocks' *A Different Nature* explains how people's perception and interest about an animal becomes more positive when the animal is comfortable with its environment (Hancocks 2003). The World Association of Zoos and Aquariums also specifically states that, "Whilst conservation of wildlife is the core purpose of modern zoos and aquariums, animal welfare is our core activity" (Gusset and Dick 2015). In other words, any actions made by zoos for conservation must also be as compatible as possible with welfare standards. For this reason, and from a moral standpoint, animal welfare should not be disregarded.

Modern day zoos have a responsibility to understand and present what the challenges between the conservation and animal welfare ethics are. They must do this in order to balance animal rights with conservation, the first of which implies that individual animals deserve moral consideration and the second of which implies concern for wild animals is expressed in the willingness to protect ecosystems (Hutchins 2007). So far the

Seoul Zoo has focused much on welfare, in an attempt to create a better quality of life for their individual animals, something that was very difficult for them to offer in the past.

Although animal welfare is important, the zoo needs to go a step further and really highlight conservation. It is not merely enough for the Seoul Zoo to recognize their animals' individual welfare as their ethical responsibility. The institution needs to be aware when its conservation responsibility conflicts with welfare and carefully consider the circumstances. In the words of WAZA's *Ethical Guidelines for the Conduct of Research on Animals by Zoos and Aquariums*,

Zoos and aquariums must balance the welfare of individuals against the conservation of species or ecosystems when assessing potential projects. The primary aim of the modern zoo and aquarium is one of conservation, and whilst this may be perceived as a 'greater good' and acknowledged as such, it does not imply that ethical considerations can be ignored (WAZA 2005b).

Although there has been an increase in communication between the Seoul Zoo and local animal rights organizations, the state of the Korean Association of Zoos and Aquariums indicates a lack of communication between the Seoul Zoo and other domestic zoos. This, along with a lack of resources for research, has greatly limited the Seoul Zoo's potential role in the conservation of endangered species as the institution enters the 21st century.

Free Jedoli

Jedol's Release

On July 18, 2013, an Indo-Pacific bottlenose dolphin named Jedol, often affectionately referred to as Jedoli, from the Seoul Zoo was released to the oceans of Jeju Island. His story is reminiscent of the 1993 American motion picture *Free Willy*, in which a young boy fights against all odds to free a captured orca named Willy from his miserable existence in an amusement park. Illegally caught in a net by fishermen near Jeju Island on May 1, 2009, Jedol was sold to the Seoul Zoo, spending four years performing shows for visitors. The truth behind his capture was discovered in July 2011 after an investigation by local Jeju authorities (Seoul Grand Park 2013: 77). According to professor Yikweon Jang of Ewha Woman's University, those who first pushed for Jedol's release were animal welfare organizations such as the Animal Freedom Association, Hot Pink Dolphins, and the Korea Animal Rights Advocates. In May 2012, the mayor of Seoul announced a plan to collaborate with the Seoul Zoo to return Jedol to his home (Jang 2013).

Jedol's release would cost the city approximately 750 million Korean won (656,750 US dollars). This large sum at first caused many in the Seoul city government to be reluctant to cooperate. However, along with the help of animal welfare and academic organizations, the Seoul zoo was able to negotiate with the city, and plans to rehabilitate Jedol were put in place (Seoul Grand Park 2013). The project received an enormous amount of national interest. Jang remarked that no animal in South Korea's recent history had spurred as much media attention as Jedol, the dolphin from Jeju (Jang

2013). Scholars from all over the Republic of Korea and some other parts of the world came to share their knowledge and support. Internationally renowned primatologist and conservation activist Jane Goodall visited the Seoul Zoo to bid Jedol a farewell before his transport to Jeju Island. Former dolphin trainer and founder of the Dolphin Project Ric O'Barry, along with marine biologist Naomi Rose also made the long trip to South Korea to assist in the rehabilitation of Jedol and four other illegally captured dolphins.



Figure 34: The Seoul Zoo's bottlenose dolphin named Jedol, at his last show in 2013 (Seoul Grand Park 2013b).



Figure 35: Jedol's transport to Jeju Island (Seoul Grand Park 2013b).

The eventual successful reintroduction of Jedol and two female dolphins, Chunsam and Sampal, was considered a significant achievement at the Seoul Zoo. All three animals readapted to their environment and assimilated into a wild pod. This marked the first time any Asian country had reintroduced a captive dolphin, and the Seoul Zoo was proud to have played a significant role in such a historic event. Jedol was named animal of the month in the 2013 issue of the zoo's annual journal *Handongsan*,

which praised his release as “being an exemplary representation of the cooperation between society and a citizens’ committee comprised of academics, civic organizations, and government officials” (Seoul Grand Park 2013, 78). Without a doubt, the Seoul Grand Park Zoo would have probably been unable to return Jedol to his homeland without the collaborative help of animal welfare organizations and academic institutions such as Jeju National University and Ewha Woman’s University.

Jedol’s release primarily created awareness toward animal welfare and spurred a conversation within South Korean society about the use of marine wildlife in shows. The Seoul Zoo encouraged these discussions by holding a workshop asking for their visitors’ opinions on their ongoing dolphin show. Awareness about Jedol brought many to think negatively about such presentations, and, as a result, the Seoul Zoo shut down the dolphin show it had been holding for 29 years, replacing it with a program that focused more on educating others about the ecology of dolphins (Jang 2013; Seoul Grand Park 2013). However, for the Seoul Zoo, Jedol’s reintroduction signified much more than the happiness of one animal. The event symbolized the types of collaborations that the zoo wished to attain to help harmonize the relationship between animals and people.

Jedoli is a perfect example of the interchangeable dynamic between conservation and animal welfare at the Seoul Zoo. At first glance, the return of a dolphin to his home after having been confined for years to an existence in a zoo aquarium may be seen as purely animal welfare-based. However, Director Jeongrae No describes this as an act of conservation on the part of the Seoul Zoo (No 2015). The World Association of Zoos and Aquariums defines conservation as “the securing of long-term populations of species

in natural ecosystems or habitats wherever possible” (WAZA 2005a, 9). Yet, how could the zoo’s release of one dolphin have a significant long-term effect on securing the dwindling population of Indo-Pacific bottlenose dolphins in the oceans of Jeju Island? One could hardly call that conservation. Nevertheless, Professor Jang from Ewha Woman’s University’s EcoScience lab writes that the event did have a significant effect on South Korea’s conservation agenda. Not only did mass media coverage create awareness for the 114 remaining dolphins in Jeju, but it also enforced legal policies on poaching. Jedol’s captors had been punished and the illegal dolphin trade had significantly decreased (Jang 2013).

Overall, however, categorizing the release of a bottlenose dolphin to the ocean as conservation was significant because its success represented the type of collaborative social, academic, and scientific support that the zoo aspires to have for its other conservation endeavors. The 2013 issue of the zoo’s annual journal, which also classifies Jedol’s return to the ocean as an example of conservation, says, “Jedol’s release stemmed from a re-examination and a new establishment of the relationship between people and animals; human beings and nature” (Seoul Grand Park 2013: 83). This sentence summarizes what the zoo seeks to establish in its new vision: resetting a harmonious relationship between society and the natural world through collaborations in conservation and animal welfare. Yet current circumstances and disconnects between the zoo and other institutions make this difficult. On one hand, Jedol’s freedom is an example of how welfare and conservation can work together to aid in bringing awareness to environmental problems. On the other hand, it also shows that in order for this to work, one must collaborate successfully with the right people. In addition, the appeal of a

charismatic animal, such as the dolphin, matters to the public. Ultimately, the Seoul Zoo is still struggling to attain the same successful outcomes with Jedol as with the long-term reintroduction of other indigenous species.

South Korea's Conservation Agenda

After surviving thirty-five years of oppressive Japanese imperialism and a subsequent three long years of civil war, the Korean peninsula suffered a severe loss of forests throughout the nation. Japan's push to modernize the country led to increased industrialization, pushing farmers farther and farther into the mountains as they destroyed habitats for agriculture. The violence of the Korean War ended up reducing these forests to less than 40 percent their original abundance (Seeley et al. 2015). As a result, in the 1970's and 80's, the Republic of Korea organized a massive reforestation project that succeeded in restoring the entire peninsula's lost forests. When South Korea's economy rapidly developed, its society transformed from a rural and agrarian economy to an urban and industrial one. As the context of the Korean economy shifted, the purpose of Korean forest resources changed as well (Tak et al. 2007).

The reforestation project in the 1970's and 80's was designed to aid the development of Korea's agrarian economy by offering a supply of domestic timber, preventing soil erosion for farming, and providing forestry jobs to locals in rural areas. At the time, the nation needed these trees for rural development, but in subsequent years timber from domestic forests became more costly than imported lumber. However, Korean citizens' increasing demand for ecotourism sites to escape from city life, along with a cultural attachment to local fauna and a dwindling amount of biodiversity due to

rapid industrialization, justified the use and preservation of Korean forests through the establishment of national parks and leisure resorts such as Seoul Grand Park (Tak et al. 2007).

Not only did Japanese colonialism and the Korean War devastate Korea's forests, but also, these events significantly depleted much of the wildlife on the peninsula. During the colonial period, Japanese soldiers often organized safaris, overhunting native predators, such as tigers, leopards and bears to extinction. The Japanese saw these hunts as providing a benevolent service to the Korean people, ridding them of dangerous vermin and, as a result, bringing the country closer to modernization (Seeley and Skabelund 2015). For this reason, many Korean conservationists hold the Japanese responsible for the disappearance of the peninsula's charismatic predators. A pamphlet from the Korea National Park Service (KNPS) reflects this view: "the Japanese colonial government deliberately and indiscriminately slaughtered some 70,000 animals including tigers, leopards, and Asiatic black bears. This was the direct cause of the extinction of many large mammals on the Korean peninsula" (KNPS 2014)

However, according to Joseph Seeley, a Stanford graduate student in East Asian history, and Aaron Skabelund, Brigham Young University professor of Japanese history, holding the Japanese as solely responsible for the extinction of these animals would be ignoring "habitat destruction and professional hunting, both of which were happening at an increasingly rapid pace before the colonial era and would have continued even if Japan had not colonized Korea" (Seeley and Skabelund 2015: p. 485). Indeed, especially during the Joseon dynasty, Koreans frequently hunted large predators both for sport and

protection as a rise in agriculture and population caused both worlds to collide (Seeley and Skabelund 2015: p.483).

Back in his office at Seoul National University, Professor Hang Yi describes Koreans' relationship with nature as a very complex result of local and outside cultural influences. In much the same way as the medieval historian Lynn White attributes the destruction of nature to Judeo-Christian ideals, Yi attributes the killings of large predators during the Joseon dynasty to the rise of Confucianism, a philosophy, which prioritizes the cultivation of harmony through human dominion over the natural world (Lynn 1967). The Joseon dynasty also restricted Buddhism, which, in contrast to Confucianism, encourages its followers to become one with their natural surroundings and, as a result, prohibits the killing of living things. In addition, Yi blames the influences of Communist and Capitalist ideals for the loss of Korea's culture of respecting nature. He hopes not only to help restore this respect, but also to create conservation awareness by appealing to the Korean peoples' attachment to culturally symbolic animals, such as the Amur tiger, the Amur leopard, and the Asiatic black bear (Yi 2015).

Nationalism and the Reintroduction of Large Predators

The tiger and the bear, two large predators targeted as dangerous during the Japanese colonial period, play key roles in Korea's creation story. The earliest version of this tale appears in *Samguk Yusa*, a 13th century collection of traditional Korean fables and myths. According to legend, Hwanung, the son of Hwanin, a prominent Korean deity known as the "Lord of Heaven", descended into Baekdu Mountain where he ruled a kingdom with his heavenly subjects. A tiger and a bear both prayed to Hwanung that he

might make them human, and the son of Hwanin ordered them to seclude themselves in a dark cave, eating only garlic and mugwort for one hundred days. Frustrated with this new lifestyle, the tiger gives up after a few days and leaves the cave, condemned to remain a tiger for the rest of his life. The bear, on the other hand, perseveres through the trial and is changed into a beautiful woman. She then marries Hwanung and gives birth to Dangun, the founder of the first Korean dynasty (KNPS 2014; Seeley and Skabelund 2015). The appearance of these animals in this story is significant for their cultural importance in Korea's national heritage.



Figure 36: An illustration from a 1909 edition of the French newspaper, *Le Petit Journal*, depicting two tigers attacking a Korean home. The caption reads, "The Reign of the tiger in Korea: Ever since the Japanese prohibited the bearing of arms, tigers are propagating terror". The corresponding article blames the Japanese for leaving the Korean people defenseless against dangerous native predators (Le Règne du Tigre 1909).

Despite their negative reputation in Korean myths, tigers have evolved to represent the Korean people. In answer to my question about the Amur tiger's significance in Korean folklore, Yi said that frequent encounters between the animal and Korean people resulted in paintings and stories that portrayed the tiger as a foolish and humorous character rather than a terrifying beast (Yi 2015). However, at the same time this animal grew into a noble symbol of loyalty and filial piety, representing Korea's fight against oppression. A pair of 1926 articles in the Korean journal *Kaebiyok* describes a correspondence between a South East Asian tiger displayed in the Changgyeong Zoo and a Korean tiger living on Baekdu Mountain. The captured tiger, relieved to have ended up in a "tiger country" with "the outline of a tiger" exclaims "Nicer to meet Koreans like you more than Japanese, who come from a country where there is not even a shadow of tigers" (cited in Seeley and Skabelund 2015: 491). These monologues are direct examples of how Koreans used tigers as symbols of rebellion.



Figure 37: Tiger being fed at the Changgyeong Park Zoo (Hong 2014).



Figure 38: Map of the Korean peninsula in the form of a tiger, drawn in 1908 by Namseon Choi, a leader of the Korean independence movement (Seeley and Skabelund 2015).

In the same way that Koreans used tigers to resist colonial oppression, the Japanese also acknowledged the killing of such culturally significant predators as a way of subjugating the colony. As a result, although they continued to freely hunt large predators until the end of the Korean War, Koreans blame much of their loss of biodiversity on the Japanese (Seeley and Skabelund 2015). In many ways, the eventual restoration of large predators could be seen as a way of ridding the country of its colonial baggage, and bringing Korea back to its pre-colonial greatness.



Figure 39: 1860 Japanese painting depicting the Japanese defending themselves against Korea, represented by a tiger (Seeley and Skabelund 2015).

By the end of the Korean War, the Amur tiger, or Siberian tiger, had ceased to roam the Korean peninsula. In its place, a nostalgia for the return of large predators set in: “zoos that had previously only housed Bengal tigers eagerly imported Siberian tigers and quickly bestowed on them the moniker of ‘Korean’ tiger” (Seeley and Skabelund 2015: 495). Currently, the Seoul Zoo holds about 24 Siberian tigers. The tiger is also often advertised as the zoo’s star animal and a large intimidating tiger sculpture guards the entrance gates to the institution. According the Seoul Zoo’s head tiger zookeeper

Hyodong Han, one of the main reasons for the zoo's emphasis on this animal is that the tiger was a native species to Korea. The concept design for transforming the Seoul Zoo into an Eco-zoo with emphasis on Korean endangered species states, "the tiger was recognized as the flagship species for Korea with powerful symbolic significance for the country" (Seoul Grand Park 2001, 31).



Figure 40: Large tiger sculpture guarding the entrance of the Seoul Grand Park Zoo (Photograph by Anne Safiya Clay).



Figure 41: Two of the twenty-four Siberian tigers at the Seoul Zoo (Photograph by Anne Safiya Clay).

However, this phenomenon seems to stem more so from a cultural than an ecological need for tigers to exist in Korea. Seeley and Skabelund mention South Korean Forest Service’s ongoing plan to build a 6,000 square meter tiger park near the Baekdu Daegan mountain range. Announced in November 2011, the project’s apparent purpose is to create a natural breeding site to ensure the protection of the Siberian tiger. Yet, as both authors mention, “It mattered little that adult Siberian tigers may have ranges as

large as 400 square kilometers, an area more than a third larger than South Korea's entire landmass [...] That tigers were even in the most superficial manner returning to rural Korea was newsworthy" (Seeley and Skabelund 2015: 476). South Korea's history and modernization has made it so that the tiger no longer serves the ecological purpose it used to when it previously roamed the country. Reintroducing the species to the densely populated country would, on an environmental level, be superfluous and unnecessary both to the Korean people and to the animals themselves. Rather than nostalgically displaying an animal as Korean because of its charisma and cultural significance, institutions such as the Seoul Zoo should find more ways of focusing on endangered species that are currently essential to South Korea's natural ecosystem.

Professor Hang Yi has expressed frustration with this unrealistic obsession of wanting to return the tiger to its Korean homeland. As the chair of the Tiger and Leopard Conservation Fund in South Korea, Yi recognizes the unlikelihood of reintroducing the tiger to South Korea, and believes in finding alternative ways to support tiger conservation (Yi 2015). Appealing to the Korean people's attachment to the tiger as a national symbol, Yi wrote a 2010 article entitled "Five Hundred Korean Tigers Are Still Living." The 500 tigers refer to a group of individuals still freely roaming the easternmost part of Russia. He writes that, although the tigers are in Russia, they are still Korean tigers and that investing in their protection could eventually mean their return to the Korean peninsula through China into North Korea (Yi 2010). Rather than building superfluous tiger parks, Yi believes South Korea needs to find effective ways to work together with countries such as China, Russia, and North Korea to help restore forests and protect the existing population of Amur tigers (Yi 2015). However, despite his pleas,

projects such as the tiger forest have so far raised much more significant financial support than Yi's Korean Tiger Conservation Fund (Seeley and Skabelund 2015).

When Yi talks about conservation, it is clear that the governmental institutions he works with factor in the cultural and nationalistic importance of the species they choose to reintroduce or preserve. Yi has used the type of symbolic relationship that currently exists between tigers and Koreans to promote support for the conservation and reintroduction of other species. During his interview, he tells me of the government's growing interest to bring back large carnivores to the country's forests. He advises against the reintroduction of the wolf, arguing that this animal's questionable cultural reputation would be a major obstacle. Instead, he suggests restoring the Amur leopard as a smaller alternative to the Siberian tiger. Although the leopard may not have as much of a nationalistic connotation as the tiger, historically the two species were often interchangeably referred to by the same name, 'beom'. Yi speculates that this may aid in the successful reintroduction of Amur leopards around the Demilitarized Zone between North and South Korea (Yi 2015).



Figure 42: Gray wolves at the Seoul Zoo (Photograph by Anne Safiya Clay).



Figure 43: Snuwolffy, one of the two gray wolves cloned by Seoul National University in 2005, on display at the Seoul Zoo (Photograph by Anne Safiya Clay).

This pattern of ascribing cultural or national significance to species' reintroductions can also be connected with the current ongoing mission of restoring the Asiatic black bear to South Korea's Jiri Mountain National Park. In Korea's creation story, the bear not only passes the test and becomes human, but she also holds the role of the founding mother of the Korean people, demonstrating that this animal holds as much cultural significance as the tiger. The bear's importance could explain part of the reason why both the South Korean government and the Seoul Zoo are investing resources in its restoration.

Ultimately, the goal is to bring the current population of thirty-four bears to fifty bears, the national park's minimum viable population, by the year 2020 (KNPS 2014). Similar to the tiger park, however, some may question whether South Korea is really the right place to reintroduce more large predators such as the black bear. A 2001 analysis of Jiri Mountain's population viability also predicted that the area could demographically support a viable population, but that one would have to either enlarge the park or continue to provide supplemental individuals to guarantee long-term genetic diversity (Park 2001). This, along with a highly probable increase in human-bear conflicts, raises the question of whether or not it may be more worthwhile to invest resources and government funds into restoring populations that have a better chance of surviving long-term in this highly industrialized nation.

However, unlike the extinct Amur tiger, the Asiatic black bear still plays an active role in the ecosystem of South Korean forests. Their status as an umbrella species makes them essential to controlling the populations of other species in the ecological

community. In addition, other than North and South Korea, this particular subspecies, *Ursus thibetanus ussuricus*, only exists in southern Siberia and northeastern China (KNPS 2014). Seoul Zoo curator Hyojin Yang believes that these environmental reasons, rather than the animal's cultural symbolism, have pushed the conservation project forward. She explains that the South Korean Ministry of the Environment began rehabilitating the Asiatic black bear with the intent to improve the nation's environment. In her eyes, the Asiatic black bear restoration project is the Seoul Zoo's most successful conservation project (Yang 2014a).

Conservation at the Seoul Zoo

The Seoul Zoo has an essential role in the conservation of Asiatic black bears in South Korea. Although the bears finally became a locally protected species in 1982, the poaching of bears for oriental medicine caused the population to dwindle to a little over five individuals living in the Jiri and Odae mountains by the late 20th century (MOE and KNPS 2014). In an attempt to salvage the species, Professor Hang Yi organized an Asiatic black bear population and habitat viability assessment workshop in collaboration with the International Union for Conservation of Nature (IUCN) at the Seoul Zoo in 2001. The workshop evaluated four major problems that could ultimately only be solved through close cooperation with the Seoul Zoo; namely, successful restoration of a minimum viable population of Asiatic black bears required (1) more information on wild populations, (2) the ability to obtain purebred bears, (3) an augmentation of individuals, and (4) extensive information about breeding captive bears (Asiatic 2001).



Figure 44:
An Asiatic
black bear at
Jiri
Mountain
National
Park
(Photograph
by Anne
Safiya
Clay).

The Seoul Zoo used diplomatic relations to exchange animals with Russia, China, and even North Korea in order to receive individuals of the native subspecies of Asiatic black bear. Bear cubs are initially bred at the Seoul Zoo and then sent to Jiri Mountain National Park where they are then habituated and released into the wild. Because a sustainable and genetically viable population of bears in that area requires continued addition of individuals, the project depends on the Seoul Zoo for bears. According to Gyeongyeon Eo, the head of the Seoul Zoo's research laboratory, the zoo has, since 2001, sent a total of 15 bears to Jiri mountain, a little under half of the current population.



Figure 45: An Asiatic black bear at the Seoul Zoo (Photograph by Anne Safiya Clay).

From its foundation in 1984, the Seoul Zoo had called for a “scientific and efficient administration” in addition to a “safe and pleasant visit” (Seoul Grand Park 1996). However, a real emphasis on scientific research and conservation only seemed to have appeared fifteen years later. In 1999, Seoul Grand Park collaborated with the Seoul National University College of Veterinary Medicine to establish the Korea Wildlife Conservation Center, an extension of Seoul Grand Park exclusively dedicated to the conservation of native endangered species. The following year, the South Korean

Ministry of the Environment designated Seoul Grand Park as the first environmental protection institution for Korean endangered species. That same year, the Seoul Zoo was planning the Eco-Zoo project, in an attempt to make conservation of Korea's indigenous species the zoo's ultimate focus (Seoul Grand Park 2001).

Initially, the Ministry of the Environment designated a total of ten native species the object of conservation facilities at Seoul Grand Park. That number has increased to twenty-one in 2014. The Seoul Zoo has been praised with steadily promoting conservation endeavors by aiding in the propagation and rehabilitation of endangered species, and has been named a leader in terms of research resources. However, my discussions with individuals at the Seoul Zoo, academic institutions, and conservation organizations suggest that, although the Seoul Zoo is South Korea's leading zoological institution, it is greatly limited due to a lack of resources and funds. Rather than leading in the conservation of twenty-one species, the zoo seems to be especially invested in only three: the Asiatic black bear, the red fox, and the Asian leopard cat.

Current Seoul Zoo director, Jeongrae No, believes a focus on conservation is the most important element of a successful zoo. During his three years as head of the Seoul Zoo, he has done much to implement an emphasis on conservation in the institution's vision, especially in terms of education. He strongly believes that rather than being a showcase for people, the zoo should be an active breeding site for indigenous endangered species that can then be restored to their native habitats. No affirms that the Seoul Zoo fulfills a leadership role relative to other Korean zoos. In addition to being the only domestic zoo with a research laboratory, it is also the only zoological institution to be

involved in environmental protection. Although he recognizes that the Seoul Zoo has not been able to attain as much of a conservation role as it would like because of a shortage of funds and resources, he also tells me that communication between domestic zoos is fluid, often facilitating exchanges of information or animals. However, the current state of the Korean Association of Zoos and Aquariums seems to suggest otherwise.

Lack of Resources and Structural Limitations

Among professor Hang Yi's greatest frustrations with the Seoul Zoo are the many disconnects within the institution. He tells me that it is difficult to make objective criticism for fear of hurting other people's feelings. Yi blames this sentiment for the zoo's refusal to accept his criticism of their conservation methods. In a similar manner, the Seoul Zoo's head lab coordinator, Gyeongyeon Eo, also expresses his frustration regarding the exclusive nature of institutional organizations in South Korea. When asked whether the Seoul Zoo collaborates well with outside organizations, he replies, "academic institutions do what they do, conservation organizations do what they do, we do what we do" (Eo 2015). His words reflect the unfortunate reality of the zoo's lack of opportunity to share resources with other institutions in close partnership.

Eo feels that the difficulty of working together with other institutions is highly unfortunate. According to him, the Seoul Zoo on its own cannot do some of the research it would like with its current facilities: "How can we do research that we are unable to do? We need to collaborate with research institutions that do better than us. We need to find a win-win situation" (Eo 2015). Seongyong Han, the director of the Korean Otter Research Center agrees that more collaborative research with the Seoul Zoo would be

extremely helpful to his organization. Although he praises the current director for making efforts in expanding the zoo's role in conservation, he points out that the zoological institution's status as a subdivision of the leisure-oriented Seoul Grand Park makes it difficult for the zoo to establish independent collaborations. Han also indicates that there is no concrete data sharing network system in South Korea. For example, he notes the absence of a gene or tissue bank. As a result, whenever he needs a sample for research, he must always arrange to receive it directly from the zoo director (Han 2015).



Figure 46: One of the otters at the Korean Otter Research Center (Photograph by Anne Safiya Clay).

The Asiatic black bear and the red fox project are probably two of the only ongoing projects at the Seoul Zoo where the institution actively works with an outside conservation organization. Seoul Zoo's lab coordinator Eo mentions that the zoo has bred and provided a total of six red foxes to the Sobaek Mountain red fox restoration facility (Eo 2015). However, Director Han of the Korean Otter Research Center says that although the Seoul Zoo would like to participate in the breeding and reintroduction of

endangered species, many of these conservation organizations merely regard the Seoul Zoo as a source for an emergency stock of individuals, and as a result, the zoo has no opportunity to participate in the conservation research related to these projects (Han 2015).



Figure 47: A red fox at the Seoul Zoo's breeding center (Photograph by Anne Safiya Clay).

Out of the Seoul Zoo's current conservation programs, the breeding and propagation of the Amur leopard cat is the institution's only exclusive project. Seoul National University professor Hang Yi has criticized the zoo for being disorganized in its releases of this animal. He claims the manner in which the zoo releases the leopard cat not only has no significant ecological effect, but also neglects to properly acclimatize the animal before release. In his opinion, the zoo only performs such actions to gain favor with the public (Yi 2015). In actual fact, when describing the process of releasing the Amur leopard cats into the wild, Seoul Zoo lab coordinator Eo mentions that the captive-bred offspring of rescued wild leopard cats go through vaccinations and de-worming

before being experimentally released into the wild to see how well they adapt to their environment. Out of the five animals released, only two leopard cats are still living (Eo 2015).



Figure 48: One of the five Amur leopard cats released by the Seoul Zoo (Yi 2014).

Like Professor Yi, The Korean Otter Research Center Director Han is also critical of the zoo’s reintroduction project, but for different reasons. By comparing the Amur leopard cat project with the Asiatic black bear restoration mission, he points out that the Seoul Zoo is sorely lacking in the amount of resources and equipment it needs to properly manage successful reintroductions. Whereas the Asiatic black bear project received much financial support and many expert opinions, the Seoul Zoo does not have the same amount of expertise or manpower to do necessary tasks such as frequent monitoring of the leopard cats’ radio and telemetry transmissions. Han says that this limit of resources and researchers causes there to be little to no data collection on the reintroductions. To Han, this is one of the main reasons why outside organizations do not seek to participate with the zoo in research: “the problem is, if the zoo wants to receive support and respect from environmental organizations, then they must act at a higher level” (Han 2015)

Han recognizes the importance of zoos in engaging and educating the public in conservation and pressing environmental issues. He firmly believes “[conservation education] is the zoo’s core purpose” (Han 2015). Han emphasizes a need for more zoological institutions in South Korea that can fulfill this conservation role. However, he recognizes that currently a majority of Korean zoos do not have the proper funds or resources to create the type of education or conservation programs that they should. He also fears that the upcoming zoo legislation regarding zoo animal welfare might cause poorer zoos more complications. According to him, “changing the law is good, but there is a problem. In order to really fix this problem, there needs to be financial support along with the regulations” (Han 2015). The problem refers to the shutdown of zoos that are financially disadvantaged relative to meeting the criteria of the new legislation. Han believes this would be problematic in a country that needs more zoological institutions to educate lay people in the conservation of Korea’s indigenous wildlife (Han 2015).

Conservation Education at the Seoul Zoo

What the Seoul Zoo lacks for in its conservation initiatives, it attempts to make up for in its education programs. Seoul Zoo Director No insists that the zoo must send a strong conservation message to its visitors. He tells me, “The message we want to give is not for people to look at these animals because they are impressive, but for people to practice conservation as a result of seeing these animals” (No 2015). According to the head of Seoul Zoo’s education team, Inyeong Yeom, Director No has pushed for the Seoul Zoo’s education programs to include elements about ecology and conservation. Yeom says that these courses have changed much over the sixteen years that she has

worked at the Seoul Zoo. At the beginning of her career, she only managed two existing programs for kindergarten and elementary school students. Now this curriculum has expanded to thirteen ongoing programs in addition to over twenty-five courses in the zoo's database for kindergarten, elementary, and middle school children. Yeom believes educational programs at the Seoul Zoo are vital to help ordinary people understand the zoo's research. "While practicing conservation, zoos must tell their visitors what kind of research they do in a way that is fun and comprehensive. This is why I think environmental education is important" (Yeom 2014).



Figure 49: A celebration of the orangutan Bomi's first birthday (Lee 2009).



Figure 50: Children practicing to be veterinarians (Lee 2009).

Originally, the programs at the Seoul Zoo were limited to the physiology and behavior of one species instead of the complex ecological relationships between a species and its environment. Children would choose one type of animal and learn about it in depth every day of the program. Occasionally they would go out to feed the particular animal they were studying. Realizing the need for a greater variety of programs, Yeom expanded the education sector with the help of biology experts. She describes how education at the Seoul Zoo gradually changed from talking only about the ecology of one species to the conservation of endangered species in general. Using various themes, the Seoul Zoo attempts to mention conservation in all of its programs, encouraging children to examine what could be done to aid in the disappearance of certain animals. For example, because the year 2015 is the year of the sheep according to the Chinese zodiac, the zoo was planning courses about the long-tailed goral, an endangered species of wild mountain goat in South Korea (Yeom 2014).



Figure 51: A long-tailed goral, an endangered species of mountain goat in South Korea (Photograph by Anne Safiya Clay).

Although it is vital for zoological institutions to invest resources in educating future generations on environmental issues, it is even more important to reach the current generation, in other words, those individuals who have the power to make immediate decisions for the environment. The Seoul Zoo has attempted to do this by replacing the animal nursery with the Conservation Education Center in 2013. The center mainly holds lectures on the conservation of native Korean species, and visitors can come listen to them at will. They also attempt to bring awareness to the illegal exotic pet trade in Korea. Juhui Bae, the zookeeper in charge of the center, says that the establishment of the center itself shows how much the Seoul Zoo's consciousness regarding its role in education has changed. The zoo's goal is now to instill this awareness about environmental issues in its visitors. However, Bae laments that not many people seem to be interested in the new education programs at the center. In fact, most of those who attend the lectures all the way through are individuals who already have a significant interest in environmental conservation. Yet, Bae does not give up hope, telling me that she believes reaching even one person is important in order to bring change.



Figure 52: The Seoul Zoo's Conservation Education Center (Photograph by Anne Safiya Clay).



Figure 53: A slow loris exhibited inside the Seoul Zoo Conservation Education Center in order to bring awareness to the illegal exotic pet trade (Photograph by Anne Safiya Clay).



Figure 54: Two wild Hodgson's bat, an endangered species in South Korea (Photograph by Anne Safiya Clay).

Rather than preaching to the choir at a specialized facility, such as the Conservation Education Center, it may be more effective to reach visitors by creating more habitat-based exhibits that can demonstrate how an animal lives in its natural state. As mentioned in the previous chapter, the Seoul Zoo has been working on naturalizing and modifying a few of its exhibits. Recently the tiger exhibit was completely remodeled according to the conservation master plan for the EcoZoo concept, which hoped that, “the opportunity to allow visitors and animals to study each other nose to nose, with nothing in between but a pane of glass, will make the conservation message memorable and believable” (Seoul Grand Park 2001). However, the remodeling of exhibits is very constrained due to the legal ramifications the zoo must go through as part of Seoul Grand Park.



Figure 55: One of the tiger exhibits at the Seoul Zoo (Photograph by Anne Safiya Clay)



Figure 56: One of the tiger exhibits at the Seoul Zoo (Photograph by Anne Safiya Clay).

Many exhibits at the zoo still do not accurately represent habitats and are therefore not suitable to educate visitors on their own. The baboon exhibit, for instance, contains generic representations of African huts as shelter for the baboons. Similarly to the architecture of Western Zoos during the colonial era, this exhibit is more so a nonspecific representation of the people of Africa, than of the animals from that continent. However, it could also be said that the more naturalistic tiger exhibit does not offer an accurate representation of the Siberian tiger's ecosystem as well. Using native Korean plants and stones, this particular exhibit is designed to look like a majestic representation of the Korean mountains. It is an exaggeration of nature meant to represent an idealistic portrayal of the animal as the "Korean" tiger, which used to roam

throughout the peninsula. Yet although the representation may be inaccurate, the exhibit's appeal to the Korean people may be enough to get people to care about the species' fate as well as the importance of protecting other indigenous species from extinction.



Figure 57: One of the baboon exhibits at the Seoul Zoo (Photograph by Anne Safiya Clay)



Figure 58: A mandrill peering out from under his hut at the Seoul Zoo (Photograph by Anne Safiya Clay).



Figure 59: A Hamadryas baboon with Egyptian hieroglyphs in the background (Photograph by Anne Safiya Clay).

The zoo has tried to make up for certain setbacks in exhibit design by putting up more detailed signs about the animals around each exhibit. Generally blackboards titled *Keeper's Note*, these often contain hand-written pieces of information ranging from fun facts about the animals to explanations about the significance of each of their enrichment toys. The zookeepers also decorate their notes with cute cartoon drawings of animals, bringing more dynamism to the signs. Some signs also include information about the

conservation of certain endangered species, such as the gorilla. Yeom also says that the zoo often hands out leaflets or quizzes to visitors who visit the zoo, offering gifts as incentives to visitors who complete them. In addition, other than conservation, the zoo's efforts in education demonstrate an effort to create a greater awareness about zoo animal welfare. Not only do the keeper's notes attempt to educate visitors on animal enrichment, but children who participate in the zoo's courses occasionally design and create enrichment toys for animals (Yeom 2014).



Figure 60: A compilation of various signs around the Seoul Zoo. They were made by zookeepers to explain fun facts about the animals, emphasize zoo etiquette, and educate on enrichment and conservation (Photograph by Anne Safiya Clay).

Although the zoo has made many improvements by emphasizing education on conservation, zookeeper Juhui Bae describes the difficulties of effectively reaching out to people as a result of the standard for other zoos in South Korea. Although the Seoul Zoo is regarded as a leader to other Korean zoos, Bae expresses frustration on how the latter affect the former's outreach to the public. That which is deemed acceptable in other zoos

often hinders transferring messages about conservation and the proper treatment of zoo animals:

Other [Korean] zoos still allow visitors to feed, touch, and take pictures with the animals. This is viewed as natural to attract more people. [...] Only our zoo is trying to go in a different direction. [...] Things we always hear from the visitors who come here is: ‘why can’t I feed the animals? Why can’t I take pictures with them? Why can’t I touch them? [...] If this zoo keeps going in the right direction, while emphasizing [education, conservation, and welfare], hopefully we can change people’s perception in some way. But, if other zoos keep allowing visitors to touch or feed the animals, then people will keep thinking that that type of behavior is acceptable (Bae 2015).

Yeom describes a similar problem within the education courses for children as well.

People who bring their children to the zoo’s courses often wonder why they cannot feed or take pictures with the animals. Yeom realizes that the zoo is going through a transition period and that for now much of the courses consist of explaining why certain activities are no longer practiced at the zoo for the animals’ welfare. She hopes that, someday in the future, visitors will begin to ask more about species conservation, the protection of endangered species, and the environment.



Figure 61: A zookeeper walks a young Asiatic black bear cub on a chain at the Zoo Zoo theme park in Ilsan, South Korea (Photograph by Anne Safiya Clay).



Figure 62: An orangutan gets fed snacks before taking pictures with visitors at Zoo Zoo theme park in Ilsan, South Korea (Photograph by Anne Safiya Clay).

The Seoul Zoo's Interchangeable Dynamic of Conservation and Welfare

The Seoul Zoo should work on making its exhibits more “natural-habitat-like” not only for the welfare of the animals, but also to enrich people’s understanding of these animals’ role in the ecosystem. Overall, the Seoul Zoo’s focus on the conservation of indigenous species is positive. However, there needs to be more collaborative research between academic organizations, combined with a stronger focus on teaching about the ecological importance of restoring an animal that goes beyond the cultural appeal of a species. Yet, although the zoo is limited in areas such as research and conservation, it is working hard to improve those areas it has direct control over, such as the well-being of its animals and the education of its visitors. As a result, the words conservation and welfare have in a sense become interchangeable terms at the Seoul Zoo.

In many ways, the harmonization of welfare and conservation at the Seoul Zoo fits into the framework of “compassionate conservation,” which “builds on an agenda that calls for ‘doing science while respecting animals’ and for protecting animals because they are intrinsically valuable, and do not only have instrumental value because of what they can do for us” (Bekoff 2015). This concept not only pertains to wild animals, but zoo animals as well. According to Marc Bekoff, former professor of ecology at the University of Colorado, Boulder, although compassionate conservation challenges the idea that individual animals must be sacrificed for the greater good of the ecosystem or the human species, this is not an animal rights position per se. However, it creates an innovative view of conservation in which empathy plays a role in decision-making. This “allows for—but does not dictate—outcomes in which the interests of others supersede those of humans” (Bekoff 2015). The Seoul Zoo’s decision to release their bottlenose dolphin, Jedol, back to the oceans of Jeju could therefore be interpreted as an act of compassionate conservation.

Jedol’s return to the ocean is not only a story that touched many people’s hearts but it also indicated a change of consciousness at the Seoul Zoo. Some might argue that his release was a mere ploy to improve the zoo’s public image. However, Jedol’s story is powerful for the Seoul Zoo because it symbolizes the zoo’s overall vision for the future. This act of animal welfare not only helped bring awareness to the welfare plight of dolphins in zoos, but also to their endangered state in the wild. Even though the release of one dolphin may not be significant to the environment, the amount of attention such an event brings may go a long way. Unfortunately, there is not as much attention brought to projects that the zoo itself is doing exclusively. However, the efforts put into freeing

Jedol represent the type of successful collaboration to which the zoo aspires. On the shore of Jeju Island, the dolphin research team erected a large stone with the words “Jedoli’s dream was the ocean” carved into it. For the Seoul zoo, however, the successful fulfillment of Jedol’s dream demonstrated the possibility of engaging many social actors in a conservation project that had strong popular support.



Figure 63: A large stone is erected on Jeju Island in honor of Jedol the dolphin's successful release (Seoul Grand Park 2013b).



Figure 64: The stone reads, "Jedoli's dream was the ocean" (Seoul Grand Park 2013b).

Conclusion

The development of the Seoul Grand Park Zoo from its foundation as a leisure resort in 1984, to its present-day condition as a twenty first century modern zoo in 2015 reflects a changing dynamic in the interrelationship between animal welfare and conservation at the institution. Overall, increased urbanization led to the creation of Seoul Grand Park as an entertainment facility to help satisfy the improved lifestyles of the Korean people. However, as a result of this focus on improving leisure facilities for visitors, the zoo neglected much of the animals' psychological and behavioral requirements. In addition, up until now, the zoo's reputation of being a subdivision of the larger leisure-oriented Seoul Grand Park has negatively affected its partnerships with outside research and academic organizations.

However, although the Seoul Grand Park Zoo still "acts as a place for citizens to enjoy their leisure time in a healthy way" (Seoul Grand Park 2015a), it is trying to be one with a more ecologically-oriented vision. The zoo works hard to participate in conservation projects of indigenous species despite its lack of researchers, equipment, and funds. In addition, the Seoul Zoo has significantly expanded its education programs and has recently been trying to act more upon its 2001 vision to become an Eco-zoo by making slight changes in areas it directly controls. Perhaps the biggest change at the Seoul Zoo in the past thirty years has been its increasing cooperation with Korean welfare organizations along with its active effort to enrich the lives of the animals in its care. In 2015, the institution modified its website, describing the zoo as an area which,

“provide(s) relax(ing) places for the visitors and more ecological shelter(s) for animals, so people become happy watching the happy animals” (Seoul Grand Park 2015a).

As it develops its vision, the Seoul Zoo needs to be aware of the differences between conservation and animal welfare ethics in order to create a balance and understand how to address potential conflicts between the two. Although the Director No emphasizes research and conservation as one of the Seoul Zoo’s ultimate goals, currently welfare seems to be taking precedence over conservation as the zoo’s primary aim. Western zoos also face the same dilemma about where to place their priorities. For example, in 2014 the Copenhagen Zoo was under fire for having euthanized a young giraffe under the pretext that he was a surplus animal because his genes were already sufficiently represented in zoological institutions around the European Union. The giraffe was then dissected in front of zoo visitors of all ages for educational purposes (Goldman 2014). In contrast, the Seoul Zoo has attempted to create a fusion between welfare and conservation both through its education programs and its 2013 release of the bottlenose dolphin Jedol, which brought national attention to the illegal trade of endangered marine animals. Realizing that animal welfare inspires trust from the community, the Seoul Zoo offers a new perspective on prioritizing the welfare of individual animals to aid in conservation.

Currently, the Seoul Zoo is following international WAZA standards to the best of its ability, but, not only is the zoo short on resources for research, it is in urgent need of a solid review board or association that would facilitate collaborations with outside organizations. In order for significant progress to occur at the Seoul Zoo, there needs to

be an overall change in the framework of zoological institutions in South Korea. A strong association would require South Korean zoos to prioritize their ethical responsibilities toward the animals in their care and would also facilitate communication regarding conservation research. However, these types of radical changes are difficult to make because of the poor state of many zoological institutions.

This lack of funds and resources also affects the Seoul Zoo not only in terms of animal welfare, but also in its role in environmental conservation. Although it would like to do more conservation related research, the Seoul Zoo is caught in a vicious cycle where its deficiency in funds and resources causes environmental organizations, which have the necessary equipment and data, to be reluctant to work with them. As a result, the Seoul Zoo is unable to do all the research it would like and is not recognized as a highly scientific institution. However, within the context of South Korea's rapid urbanization, the Seoul Zoo can be a powerful tool for educating the public about preserving native biodiversity in South Korea. In order for this to happen, there needs to be a realization that the zoo can be helpful in research and there needs to be funding to help the Seoul Zoo perform at a higher level. In addition, the Seoul Zoo must develop more habitat based exhibits in order to educate more individuals on local and global environmental issues. Most of all, there also needs to be an increase in collaborative research, not only so that the zoo can successfully aid species reintroductions, but especially so that it can teach others about conservation research on a deeper level.

Because oftentimes the welfare of individual animals is sacrificed at the expense of conservation research, the two concepts have traditionally been thought to be

incompatible. However, recent concepts, such as compassionate conservation, offer a framework where conservation does not happen at the expense of individual animal welfare. The dynamic of harmonizing welfare and conservation at the Seoul Zoo reflects hints of compassionate conservation. With the right resources, perhaps the Seoul Zoo could develop into an institution where acts of welfare aid more in conservation education and bringing awareness to environmental problems.

References

- “AECOM Design and Planning wins Seoul Grand Park Competition.” 2010. *Horticulture Week*. 22 January: 13.
- "Animal Rights Uncompromised: Zoos." People for the Ethical Treatment of Animals. N.p., n.d. Web. 20 Oct. 2015. <<http://www.peta.org/about-peta/why-peta/zoos/>>.
- “Asiatic Black Bears PHVA.” Papers presented at Seoul Grand Park, Gwacheon, South Korea, April 2001.
- Bae, Juhui. 2015. Interview by author. Gwacheon, South Korea. April.
- Bekoff, Marc. 2015. “Compassionate Conservation: More than ‘Welfarism Gone Wild’.” *Huffington Post*, February 9.
- Bridgeman, Laura. 2013. “Captive Korean Dolphins Released Back into Ocean.” *Dolphin Project*. July 25. <http://dolphinproject.org/blog/post/captive-korean-dolphins-released-back-into-ocean>.
- “1930 Changgyeong Park.” 2011. *Tistory.com*. Accessed November 2015. <http://qlstnfp11.tistory.com/711>.
- Cho, Kyung Uk. 2007. “A Study on the Development of Animal Welfare in Korean Zoos.” *Konkuk University Graduate School*
- Cho, Kyung Uk, Byung In Choe, Hwi Yool Kim, Jin Soo Han, and Jin Suk Kim. 2009. “A Basic Study on the Animal Welfare Evaluation in Korean Zoos.” *Korean J Vet Res* 49.1: 91-99.
- Choi, Hyaeweol. 1999. “Shifting Human Resources in South Korean Science and Technology.” *Comparative Education Review* 43, no. 2: 212-232.
- Choi, Jaechon. 2014. Interview by author. Seoul, South Korea. October.
- Choi, Jun Young. 2013a. “해외사례 통해 본 동물원 관리제도 개선방안 (Improving the Management of Zoos through Foreign Examples).” *국회입법조사처 이슈와 논점 (National Assembly Research Service Issue and Point)*. 706. (September)
- Choi, Woori. 2013b. “서울대공원의 홍학이 날지 못하는 ‘슬픈 이유’ (The Sad Reason why Seoul Grand Park’s Flamingos cannot Fly).” *한겨레 (Hangyeore)*, September 2. <http://www.hani.co.kr/arti/PRINT/598143.html>.
- Chu, Yunjeong. 2014. Interview by author. Gwacheon, South Korea. November.
- Conway, William. 2007. “Entering the 21st Century.” In *Zoos in the 21st Century: Catalysts for Conservation?*, edited by Alexandra Zimmermann, Matthew Hatchwell, Lesley A. Dickie, and Chris West, 12-19. Cambridge: Cambridge UP.

- Eo, Gyeongyeon. 2015. Interview by author. Gwacheon, South Korea. November.
- Eo, Gyeongyeon. 2013. “동물박사가 들려주는 동물이야기: 진화하는 동물 (Animal Stories Told by an Animal Expert: the Evolving Animal).” *Seoul Newspaper*, December 20.
<http://www.seoul.co.kr/news/newsView.php?id=20131220016003>.
- Goldman, Jason G. 2014. “Ethics at the Zoo.” *Scientific American*, February 13.
<http://blogs.scientificamerican.com/thoughtful-animal/ethics-at-the-zoo-the-case-of-marius-the-giraffe/>
- Gusset, Markus and Gerald Dick. 2015. “Towards Positive Animal Welfare.” *WAZA Magazine*.
- Haho. 2004. “슬픈 동물원 (Sad Zoo).” *서울대공원 동물원 보고서 (Report on the Seoul Grand Park Zoo)*, July.
- Han, Hyodong. 2014. Interview by author. Gwacheon, South Korea. November.
- Han, Seongyong. 2015. Interview by author. Hwacheon, South Korea. April.
- Hancocks, David. 2001. *A Different Nature: The Paradoxical World of Zoos and Their Uncertain Future*. Berkeley: University of California.
- Hanson, Elizabeth. 2002. *Animal Attractions: Nature on Display in American Zoos*. Princeton, NJ: Princeton University Press.
- Holst, Bengt and Leslie A. Dickie. 2007. “How do National and International Regulations and Policies Influence the Role of Zoos and Aquariums in Conservation?” In *Zoos in the 21st Century: Catalysts for Conservation?*, edited by Alexandra Zimmermann, Matthew Hatchwell, Lesley A. Dickie, and Chris West, 22-33. Cambridge: Cambridge UP.
- Hong, Jiyeon. “원숭이 재롱, 홍학 군무...국민 행복지수 높아여줬죠 (Cute Monkey antics, Dancing Flamingos...Increasing the Citizens' Happiness Level).” *Nate Pann News*, May 9. <http://pann.news.nate.com/info/255568611>.
- Hutchins, Michael. 2007. “The Animal Rights-Conservation Debate: Can Zoos and Aquariums Play a Role?” In *Zoos in the 21st Century: Catalysts for Conservation?*, edited by Alexandra Zimmermann, Matthew Hatchwell, Lesley A. Dickie, and Chris West, 92-109. Cambridge: Cambridge UP.
- Itoh, Mayumi. 2010. *Japanese Wartime Zoo Policy: The Silent Victims of World War II*. New York, NY: Palgrave Macmillan.
- Jamieson, Dale. 1985. “Against Zoos.” In *In Defense of Animals*, edited by Peter Singer. New York: Basil Blackwell, 1985.

- Jang, Yikweon. 2014. “고향으로 돌아간 제돌이 (Jedol’s Coming Home).” Unpublished paper.
- Jeon, Jinkyong. 2014. Interview by author. Seoul, South Korea. December.
- Jeong, Jiseop. 2007. “망국의 설움 속 태어나 만국의 동물 낙원으로 (Born amongst the Sorrow of a ruined people, Becoming a Paradise for the Ruined People’s Animals).” *Chosun News*, November 1.
http://news.chosun.com/site/data/html_dir/2007/11/01/2007110100053.html.
- Jo, Jinyeong and Gyeongrok Kim. 2015. “국내 첫 돌고래 쇼, 동물원엔 75만 명이 몰렸다 (First Dolphin Zoo in the Nation, 750,000 People at the Zoo).” *Jungangilbo*, May 13.
http://m.gangnam.joins.com/news/article/article.aspx?total_id=17787715.
- Kamiya, Fuji. 1980. “The Korean peninsula after Park Chung Hee.” *Asian Survey* 20, no.7 (July): 744-753
- Kang, Minyeong, Yongjin Kim, Jonghun Song, Hyojin Yang, Gyeongmi U, and Yangmuk Yim, Eds. 2013. *동물행동풍부화 실전백과: 서울대공원 풍부화 10년의 기록 (Types of Animal Enrichment: 10 Years of Animal Enrichment at Seoul Grand Park)*. Seoul, South Korea: Seoul Grand Park.
- Kim, Eungyeong. 2012. “100년 전 낡은 잡지 속에 살아있는 역사 (History from 100 Years Earlier, Alive in an Old Magazine).” *Yeongnamilbo*, October 13.
<http://www.yeongnam.com/mnews/newsview.do?mode=newsView&newskey=20121013.010160734230001>.
- Korea Animal Rights Advocates. 2015a. “About KARA.” *animalrightskorea.org*. accessed October 2015. <http://animalrightskorea.org/kara-info/about-kara.html>.
- Korea Animal Rights Advocates. 2015b. “Korean Animal Welfare: Korean Animal Laws.” *Animalrightskorea.org*. Accessed October 2015.
<http://animalrightskorea.org/animal-welfare/korean-animal-protection-law-2008-version.html>.
- Korea National Park Service (KNPS) Species Restoration Technology Institute. 2014. *Hello! Asiatic Black Bear: Asiatic Black Bear Back to Nature through the Species Restoration Project*. Republic of Korea: Park Bo-hwan.
- “대한민국 동물원 100주년 (1909~2009) (Korean Zoo 100 Year Anniversary 1909~2009).” 2009. *하늘지기 (Haneuljigi) Photolog*. Accessed November 2015.
<http://prologue.blog.naver.com/PostThumbnailView.nhn?blogId=haneuljiki&logNo=90043648688&categoryNo=3&parentCategoryNo=0>.
- “Le Règne du Tigre.” 1909. *Le Petit Journal*. December 12.
- Lee, Won-hyo. 2009. *Story of Seoul Grand Park*. Seoul, South Korea: Oh Se-hoon.

- Minteer, Ben A. and James P. Collins. 2013. "Ecological Ethics in Captivity: Balancing Values and Responsibilities in Zoo and Aquarium Research under Rapid Global Change." *ILAR Journal* 54 (1): 41-51.
- Minteer, Ben A. 2013. "Conservation, Animal Rights, and Human Welfare." In *Ignoring Nature No More: The Case for Compassionate Conservation*, edited by Marc Bekoff, 77-93. Chicago: University of Chicago Press, 2013.
- No, Jeongrae. 2015. Interview by author. Gwacheon, South Korea. May.
- Oh, H.J., M.K. Kim, G. Jang, H.J. Kim, S.G. Hong, J.E. Park, K. Park, C. Park, S.H. Sohn, D.Y. Kim, N.S. Shin, and B.C. Lee. 2008. "Cloning endangered gray wolves (*Canis lupus*) from somatic cells collected postmortem." *Theriogenology* 70 (2008): 638-647.
- Park, Soyoung. 2001. "Habitat-Based Population Viability Analysis for the Asiatic Black Bear in Mt. Chiri National Park, Korea." *CBM:s Skriftserie* 3: 149-165.
- Rho, Jeong R., Robert B. Snygleym Jae C. Choe. 2009. "Age of the Jeju Pony (*Equus caballus*) at first reproduction: potential costs for foals and mothers that first reproduce early in life." *Journal of Ethology*. 27.3 (September): 483-488.
- Ruoff, Kenneth James. 2010. *Imperial Japan at Its Zenith: The Wartime Celebration of the Empire's 2,600th Anniversary*. Cornell: Cornell UP.
- Seeley, Joseph, and Aaron Skabelund. 2015. "Tigers—Real and Imagined— in Korea's Physical and Cultural Landscape." *Environmental History* 20.
- Seoul Grand Park. 1996. *한국동물원80년사 서울대공원: 전국동물원/수족관 (Korean Zoo 1980s History of Seoul Grand Park: Zoo/Aquarium for the Whole Country)*. Seoul, South Korea: Seoul Metropolitan Government.
- Seoul Grand Park. "Seoul Grand Park Zoo: Conservation Masterplan Concept Development." Paper presented at Seoul Grand Park, Gwacheon, South Korea, April 2001.
- Seoul Grand Park. "서울대공원 생태동물원 조성 기본계획 (Basic Construction Plan of Seoul Grand Park EcoZoo)." Paper presented at Seoul Grand Park, Gwacheon, South Korea, October 2002.
- Seoul Grand Park. 2009. *Seoul Zoo 한동산 (Handongsan)*. Vol. 25.
- "서울대공원 (Seoul Grand Park)." *서울대공원*. N.p., n.d. Web. 06 Nov. 2013a. <<http://grandpark.seoul.go.kr/>>.
- Seoul Grand Park. 2013b. *Seoul Zoo 한동산 (Handongsan)*. Vol. 29.

- "서울대공원 (Seoul Grand Park)." *서울대공원*. N.p., n.d. Web. 06 Sept. 2015a.
<<http://grandpark.seoul.go.kr/>>.
- Seoul Grand Park. 2015b. "동행의 숲: 함께 만들어 주세요 (Accompanying Forest: Let's Make it Together)." Seoul, South Korea: n.p.
- Sterling, Eleanor, Jimin Lee, and Tom Wood. 2007. "Conservation Education in Zoos: an Emphasis on Behavioral Change." In *Zoos in the 21st Century: Catalysts for Conservation?*, edited by Alexandra Zimmermann, Matthew Hatchwell, Lesley A. Dickie, and Chris West, 37-50. Cambridge: Cambridge UP.
- Tak, K, Y. Chun, and P.M. Wood. 2007. "The South Korean Forest Dilemma." *International Forestry Review* 9, no. 1: 548-557
- WAZA Executive Office. 2005a. "Building a Future for Wildlife: The World Zoo and Aquarium Conservation Strategy." *World Association of Zoos and Aquariums*.
- WAZA. 2005b. "Ethical Guidelines for the Conduct of Research on Animals by Zoos and Aquariums." *Zoos' Print* 20 (12): 12-13.
- West, Chris, and Lesley A. Dickie. 2007. "Introduction: Is There a Conservation Role for Zoos in a Natural World under Fire." In *Zoos in the 21st Century: Catalysts for Conservation?*, edited by Alexandra Zimmermann, Matthew Hatchwell, Lesley A. Dickie, and Chris West, 3-11. Cambridge: Cambridge UP.
- Wirtz, Patrick H. 2007. "Zoo City: Bourgeois Values and Scientific Culture in the Industrial Landscape." *Journal of Urban Design*. 2, no. 1: 61-82.
- Yang, Hyojin. 2014a. Interview by author. Gwacheon, South Korea. December.
- Yang, Hyojin. 2014b. "동물박사가 들려주는 동물이야기: 서울대공원 개관 30년 (Animal Stories Told by an Animal Expert: The 30 Year Reformation of Seoul Grand Park)." *Seoul Newspaper*, May 2.
<http://www.seoul.co.kr/news/newsView.php?id=20140502015003>.
- Yeom, Inyeong. 2014. Interview by author. Gwacheon, South Korea. November.
- Yi, Hang. 2015. Interview by author. Seoul, South Korea. March.
- Yi, Okjin. 2014. "삿 5마리 자연으로...서울대공원, 생태균형 위해 포식자 '삿' 방사 (5 Amur Leopard Cats Released...Seoul Grand Park Releases Predators for Ecological Balance)." *Chosun.com*, March 21.
http://news.chosun.com/site/data/html_dir/2014/03/21/2014032100625.html.
- Zimmermann, Alexandra, Matthew Hatchwell, Lesley Dickie, and Chris West, Eds. 2007. *Zoos in the 21st Century: Catalysts for Conservation?* Cambridge: Cambridge UP.

"서울대공원 호랑이에 물린 사육사 중태 빠져 (Zookeeper in Critical Condition After Having Been Bit by a Tiger at the Seoul Zoo)." KBS News. N.p., Web. 24 Nov. 2013. <<https://www.youtube.com/watch?v=uMwLuFjs43M>>.

"능동 어린이대공원 사육사 사자에 물려 중태 (Zookeeper Bitten by Lion at Children's Park in Critical Condition)." YTN News. N.p., Web. 24 Nov. 2013. <<https://www.youtube.com/watch?v=uMwLuFjs43M>>.