

University at Buffalo School of Law

Digital Commons @ University at Buffalo School of Law

Journal Articles

Faculty Scholarship

2011

Looking at Zoos

Irus Braverman

University at Buffalo School of Law

Follow this and additional works at: https://digitalcommons.law.buffalo.edu/journal_articles



Part of the [Geography Commons](#), [Law Commons](#), and the [Zoology Commons](#)

Recommended Citation

Irus Braverman, *Looking at Zoos*, 25 *Cultural Stud.* 809 (2011).

Available at: https://digitalcommons.law.buffalo.edu/journal_articles/337

This is an Accepted Manuscript of an article published by Taylor & Francis in *Cultural Studies* on 10/11/2011, available online: <https://www.tandfonline.com/doi/abs/10.1080/09502386.2011.578250>.



This Article is brought to you for free and open access by the Faculty Scholarship at Digital Commons @ University at Buffalo School of Law. It has been accepted for inclusion in Journal Articles by an authorized administrator of Digital Commons @ University at Buffalo School of Law. For more information, please contact lawscholar@buffalo.edu.

Looking at Zoos

Dr. Irus Braverman

Associate Professor of Law & Adjunct Professor of Geography
University at Buffalo, State University of New York
625 O'Brian Hall, Buffalo, NY 14260
Cell 716-507-2275; Email irusb@buffalo.edu

Abstract

Looking at zoos from the perspective of zoo personnel, this article explores the importance of vision in the zoo's presentation of its animals as well as the major technologies that the zoo uses to intensify such animal visions. On the one end of the spectrum, zoogeography and immersion design are used at the zoo exhibit to enable zoogoers to see animals in their naturalistic settings. On the opposite end of the spectrum, animals are caged and cared for in the highly artificial settings of the zoo's holding area, with little or no exposure to the public gaze. In between these most visible and most invisible zoo spaces, the zoo also contains numerous other spaces with varying degrees of animal visibility. The zoo's gift shops, carousels, and promenades, despite not being exhibit spaces per se, nonetheless relay an important message that translates the zoo's mission of nature conservation into small acts of capital. Drawing on thirty-five semi-structured, in depth interviews conducted between May 2009 and December 2010, mostly with zoo directors, curators, registrars, and designers, the article moves beyond the established Foucaultian and post-Foucaultian notions of panopticon and exhibition to suggest that, rather than being an end in itself, the act of seeing practiced at the zoo serves to reify nature as a pre-existing entity and to reeducate the populace about the proper relationship between humans and animals.

Introduction

People look, and take sight, take seeing, for life itself... Sight and seeing, which in the Western tradition once epitomized intelligibility, have turned into a trap: the means whereby, in social space, diversity may be simulated and a travesty of enlightenment and intelligibility ensconced under the sign of transparency (Lefebvre, 1991: 76).

One would expect that an ancient institution such as the zoo would have long exhausted its selling powers, but the zoo continues to attract the masses. In the United States, there are now over 224 accredited zoos and aquariums (Vehrs, interview), and more than twice the number of zoos than in any other country in the world (Montgomery, 1995: 573). Over 175 million people visit zoos annually to see over a million individual animals in AZA-accredited zoos across the United States (*Animal Management*, American Association of Zoos and Aquariums, 2010), and many more flock to see animals in over 800 non-accredited zoos around the country.

Indeed, animals are the zoo's central attraction. Looking at zoos, this article explores the importance of vision in the zoo's presentation of animals as well as the major technologies that are used to intensify such animal visions. This discussion is

framed within a broader study of the type of nature displayed at zoo exhibits and of the particular strategies designed to facilitate what zoo personnel commonly refer to as an “illusion of nature” in these exhibit spaces. The zoo’s interpretation of nature, I argue, reinstitutes nature as a pre-existing entity and humans and nature as separate and remote.

The article’s initial focus on seeing at the zoo lead it to consider the equally powerful, yet often overlooked, invisible zoo domains. Both the invisible aspects of zoo exhibits as well as the invisibility of entire zoo spaces – and of holding areas in particular – are considered here. Holding areas are the flipside of exhibit spaces: far from the spotlight, animals are cared for there by human keepers and are surrounded by human artifacts. In terms of seeing animals, exhibit spaces – with their heightened focus on vision and spectacle and their naturalistic design – are situated on one end of the spectrum, and holding areas – with their intense human management and caged animals – are situated on the other end of the spectrum. The exhibit space is thus likened here to the front stage, and holding areas to the back stage, of a theatre production. Yet at the zoo, the spectators are usually active and the animal “actors” are passive, which offers a twist on Boal’s *Theatre of the Oppressed* (1979), in which the reverse is the case. One way or the other, the invisibility of the zoo’s holding areas both enables and supports the zoo’s visible counterparts, rendering them that much more conspicuous.

In between the two extremes of the most visible zoo and the most invisible zoo, the zoo also contains numerous other spaces with varying degrees of animal visibility. The zoo’s gift shops, carousels, and promenades, despite not being exhibit spaces per se – and thus receiving much less attention by zoo personnel – exhibit animals nonetheless. Although these spaces are not the main focus of the article, they relay an important

message that is largely missing at the zoo's two visual extremes but is at the heart of the zoo's mission: at these other zoo spaces, the message of nature conservation is translated into a message of capital.

Indeed, the article moves beyond the established Foucaultian and post-Foucaultian notions of "panopticon" and "exhibit" to suggest that the act of seeing practiced at the zoo is not an end in itself, but serves to reeducate the public about the proper relationship between humans and animals. Heightened vision is thus a tool for disciplining zoogoers into a conservation etiquette that relies on small acts of everyday consumption to save nature. Although seemingly disconnected, the myriad animal representations embodied in the different zoo spaces form a remarkably unified zoo agenda: zoo animals stand in for wild animals in a call for the help of humans.

Structurally, the article begins with a brief historical exploration of North American zoos up to their most recent manifestation as conservation-focused institutions. I then proceed to examine the role of nature at the zoo, specifically discussing the two strategies used by zoos in their design of naturalistic exhibits: zoogeography and immersion. As part of the discussion of the zoo's nature, I also examine the zoo's unseen natures: those aspects of the perceived wild that are obscured at the naturalistic exhibit.

Next, the article explores the zoo's heightened focus on seeing animals. Comparing this project to the panopticon and the exhibition, and to wildlife documentaries and pornography, it sketches some of the unique properties of seeing as practiced at the zoo. Noting that direct acts of consumerism usually occur outside of the traditional exhibit space, the article then moves to discuss the importance, and to identify the uniqueness, of consumption at the zoo. Finally, I discuss animal holding areas,

suggesting that these invisible geographies both enable and intensify the heightened visibility of the zoo's traditional exhibit and the overall conservation-through-consumption message of the zoo.

The article draws on thirty-five semi-structured, in depth interviews conducted between May 2009 and December 2010, mostly with zoo directors, curators, registrars, and designers from northeastern zoos in North America as well as with zoo professionals from the American Association of Zoos and Aquariums (AZA). My first interview was with Buffalo Zoo's Director Donna Fernandes, who referred me both to other zoo directors and to various personnel at her zoo. From that point, interviewees were selected based on a snowball method. When possible, the interviews were conducted face-to-face; at other times, they were conducted by telephone. Most interviews were one to two hours long, but in several instances (e.g. Jean Miller) they lasted up to eight hours, and with Dr. Fernandes I conducted two interviews as well as four tours and numerous email and telephone follow-ups. In most cases, the interviews were recorded (with permission) and then transcribed. In addition to dozens of on-site visits at the Buffalo Zoo, I also spent several days observing at the Toronto Zoo and the Bronx Zoo. The article's extensive reliance on interviews, and its focus on the perspective of zoo professionals in particular, differentiates the analysis presented here from most scholarly endeavors about zoos (but see Davis, 1997; Friese, 2010; Thompson, 1999; Willis, 1999).

Although the perspectives of zoogoers, animal rights activists, and government officials affect zoo designs and practices, this article is more concerned with the perspectives of those who make the everyday decisions about how zoos look and what zoogoers see. These decisions translate into the zoo's position vis-à-vis human/animal

dynamics and its definition of nature at large. It is, in other words, through the grounded, mundane vision of zoo professionals that I attempt to look at zoos.

The Zoo: A Brief History

Contemporary North American zoos are very much a product of a long process of institutional evolution. Some trace the institution of the zoo back to exotic animal collections managed in ancient kingdoms, such as King Wen of China, King Solomon of Judea and Israel, and King Nebuchadnezzar of Babylon (Britannica, 2008). Zoos also existed in most of the Greek city-states, and the Roman emperors kept private collections of animals for study or for use in the arena. This type of zoo is often referred to as the “menagerie”: an aristocratic or royal animal collection that exhibited the power and wealth of the ruler rather than scientific or educational agendas, forming an “establishment of luxury and curiosity” (Methodical Encyclopaedia. 1782, as quoted in Wikipedia title “menagerie”).

The next major phase in the zoo’s institutional evolution was the zoological garden (hence the abbreviated term “zoo”). Here, zoos were designed as living museums, intended for the promotion of scientific agendas and for the education of the general public. The oldest existing zoo, the Vienna Zoo in Austria, evolved from the Imperial Menagerie at the Schönbrunn Palace in Vienna, and was opened to the public in 1765. In 1795, the *Jardin des Plantes* was founded in Paris with animals from the royal menagerie in Versailles, primarily for scientific research and education. The London Zoo was established in Regent’s Park in 1828, and opened to paying visitors in 1847. In 1860, Central Park Zoo, arguably the first public zoo in the United States, opened in New York. One of the distinct features of the zoological garden was its taxonomic focus. The

classification of animals according to scientific knowledge was a primary concern at this stage of the zoo's evolution, and animals were mostly exhibited in cages organized according to this classification (Zuckerman, 1980; Harpley, interview).

From the zoo's focus on human/nature separateness instituted by zoos in prior centuries, the 20th century saw a move on the part of many zoos toward ideologies of interconnection and unity within biological diversity (Mullan and Marvin, 1987, 1999: xiii). The initial steps in this direction are commonly attributed to Carl Hagenbeck from Germany. Considered the father of the modern zoo, in 1907 Carl Hagenbeck opened the first barless zoo in the world. Whereas in traditional zoos the means of achieving separation and enclosure were highly visible, Hagenbeck contrived to make them invisible. Specifically, he attempted to make all apparatus, all attempts at classification – indeed, any trace of human intervention – vanish in favor of seeing the animals themselves, presented in a manner that simulated nature (Baratay and Hardouin-Fugier, 2002: 263). “In his zoo of the future,” says the journal *Zoo and Aquarium Visitor* (2010), “nothing more than unseen ditches were to separate wild animals from members of the public.”

European zoos served as a model and as an impetus for building zoos in the United States. However, American zoos were also products of the movement to create public parks (Hanson, 2002). Indeed, late nineteenth century anxiety about moral and social order in the city led to the creation of large parks in the outskirts of cities. At the same time, national parks were formed following the same sentiments. American zoos came into existence during the transition of the United States from a rural and agricultural

nation to an urban and industrial one (ibid., 2). For the most part, they were founded as divisions of public park departments.

Influenced by English garden theory of informal landscape, the father of American landscape design Frederick Law Olmsted believed that nature can offer psychic recreation to tired city workers. Nature, under Olmsted's interpretation, was to be represented by winding paths and wide vistas to picturesque spots, with the least human artifice possible. Zoos added a variation to this theme by placing animals in the pastoral landscape (ibid.). But whereas Olmsted opposed the London Zoo for consuming precious space that could have been better used for green recreation rather than buildings, in the United States there was no shortage of space, and parks needed to attract visitors. With more land to work with and a naturalistic aesthetic, American zoo planners conceived of their parks in different terms from the formal urban gardens that were European zoos (ibid., 24). The zoo was portrayed as a moral diversion, making reference to the scripture to attract new respectable puritan audiences. American zoos also opposed the common European use of colonial architecture in the design of zoo buildings. American zoo designers usually preferred buildings that they thought blended rather than distracted from the visitor's experience of nature.

The atmosphere of the country park and the reform goals of the parks movement helped along the goal of the new zoos to instruct rather than merely to entertain. Claiming a measure of scientific truth, zoological parks encouraged popular natural history studies. Zoos used their landscape layout to advance this mission. Like public parks, they provided a retreat for city dwellers and a balance of nature and culture where a middle class ethos could be enforced (ibid.).

When ecology emerged as a matter of public interest in the 1970s, a few American zoos gradually made conservation their central role. This brought about the most recent stage in the zoo's institutional evolution: the zoo as a biopark or a conservation society (Kisling, 2000). Conservation is also considered a fundamental ethical concern by the central organization of contemporary American zoos: the American Association of Zoos and Aquariums (AZA). In its Preamble to the Code of Professional Ethics, originally adopted in 1976, the AZA states that: "Members of the American Association of Zoological Parks and Aquariums... have an important role in the preservation of our heritage." Through various mechanisms, AZA's mission trickles down to all accredited zoos in North America and beyond (Braverman, 2011b).

The various stages of the zoo's evolution are not only a thing of the past. Most contemporary North American zoos bear the traces of their convoluted history. They contain physical evidence of the pre-modern cage phase and its taxonomic properties, and the naturalistic design so equated with Hagenback's zoological parks is still prevalent in contemporary exhibit design. At the same time, the zoo has shifted drastically from an institution geared toward the entertainment of the public through spectacular animal exhibits, into a vehicle for the preservation of species and for the conservation of ecosystems (Braverman, 2011a). The myriad properties that have originated from these different institutional phases are inscribed onto the current physical geography of the zoo.

Interestingly, the zoo's transformation into an environmentally centered institution has not diminished the public's interest in this institution. Quite the contrary, various interviewees have pointed to the recent increase in ticket sales. This traces back to the questions identified earlier: what, according to North American zoo personnel, do

zoos aim to show zoogoers? How is this show performed? And what, then, are the unseen properties of the show?

Nature at the Urban Zoo

Broadly, modern zoos developed as urban institutions (Anderson, 1995: 279). From the late nineteenth century, cities have come to be read as monuments to peoples' capacity for progress and order. Every large city had to have its own collection of life on earth (Montgomery, 1995: 573). It follows, then, that zoos – where nature was introduced to the metropolis and converted into a domesticated spectacle – have come to represent the ultimate triumph of modern man over nature, of city over country, of reason over nature's apparent wildness and chaos (see also Philo, 1995; Birch, 1990). That this process was accompanied by nostalgia for lost natures (Williams, 1973) and for the animals that were progressively removed from the everyday life of the urban dweller (Berger, 1980), is evident in the ambivalent human responses to nature that persist to this day (Soper, 1995).

Zoos tell us something, then, not only about the making of western popular culture but also about the complex construction of metropolitan cultures and identities; of what it was, and is, to be a city dweller (Anderson, 1995). In addition to being an island of rurality in the city, North American zoos are also extensions of suburban lawns. Notwithstanding, the majority of zoos are still situated in the city, and the zoo is quintessentially an urban institution. Indeed, the zoo has been identified as a product and symbol of the alienation of urban life: over-crowding, anxiety, aggression, and nervous disorders characterizing both (Morris, 1969). If the city is a human zoo, the zoo is a reproduction of the modern city (Baratay and Hardouin-Fugier, 2002: 224).

As part of its location in the metropolis, the zoo offers an affordable escape from urban life into something other, defined by zoos as nature. The escape that the zoo provides for its visitors, according to Breheny and other zoo personnel interviewed here, is their transplantation into a completely different space from the urban one in which they live, one that is natural and wild. “Our guests come here,” says Susan Chin, Vice President of Planning and Design and Chief Architect of Bronx Zoo, “to get that respite from the urban environment” (interview). “You have places to go where you can see trees and squirrels and ducks and muskrats,” she continues, “It’s an oasis. It’s Eden. It’s a place where you can get away from the dust, the dirt, the grime, the buildings.” Paul Harpley, Manager of Interpretation, Culture & Design at the Toronto Zoo, similarly states in an interview that “without the city, there would also not be a zoo in the way we think about zoos, because we wouldn’t need to bring the other to the urban.”

According to western common thought, nature denotes a sphere of authenticity and purity (Davis, 1997: 8) and of an ultimate other (Soper, 1995; Williams, 1973). Based on this notion of otherness, contemporary American zoos have been trying to create what some of the interviewees here refer to as an “illusion of nature.” “My job is to instill in these people – that have absolutely no connection whatsoever to nature anymore – the appropriate sense of awe, respect, and appreciation for animals,” says Jimmy Breheny, Director of Bronx Zoo, in an interview.

To create an illusion of particular, geographically situated natures, animals in many contemporary North American zoos are displayed within naturalistic settings. The next section considers two major design techniques used by many contemporary zoos in

North America to facilitate such a naturalistic construction: zoogeography and immersion design.

Naturalistic Designs

“Who can afford to go to Africa right now?” asks designer Chin of the Bronx Zoo. Visiting the zoo “is like a family vacation,” she adds. The zoo appeals to the public, not by taking people to the nature in their backyards, but rather by providing a vicarious journey into a distant and exotic nature in a faraway land. In line with this goal, nature at the zoo is usually geographically situated. For the most part, it is based on mappings of the world according to continents, such as Africa and Eurasia. Like other vehicles of mass communication, including *National Geographic* magazine and nature programs broadcasted on television (Wilson, 1992), the zoo provides its visitors with a highly visualized local experience of a disappearing global nature (Anderson, 1995: 282; Montgomery, 1995). Yet unlike televised presentations, the zoo’s presentation of nature promises an authentic experience of real nature. The heightened geographical focus of the zoo is most manifest in what is called “zoogeography.”

Zoogeography is the study of the distribution patterns of animals in nature and the processes that regulate these distributions (Brown and Lomolino, 1998; Harpley, interview). It is a specific interpretation of nature in that it creates pockets of nature that are identified by their geography, rather than through their habitat (say desert or rainforest) or other taxonomic means. This approach manifests itself in a continent-based organization of the zoo (e.g. African and Eurasian sections). The Toronto Zoo was the first in the world to introduce zoogeography design on a large scale, says Harpley of the Toronto Zoo. “We basically had the whole world represented,” he explains.

The ambition to render the whole world, as represented in assemblages of animals and habitats, subordinate to the controlling vision of the spectator is not a new thing. It was already present at the Great Exhibition of 1851 by Wylde's Great Globe, a brick rotunda which the visitor entered to see plaster casts of the world's continents and oceans. Similarly, it renders the project of specular dominance feasible by affording an elevated vantage point over a micro-world that claims to be representative of a larger totality (Bennett, 1988: 97). The color map of the zoo's whole world (see, e.g., Figure 1) signals that the vision will be thorough and universal. Similar to tourist attractions, it shows the customer what she will see and how she will see it. This encyclopedic wholeness echoes the zoo's claim to create another world, helping define nature as found in remote places (Davis, 1997: 95).

Figure 1 here: map of Buffalo Zoo

Within the walls of the average contemporary zoo, enormous distances of both space and time shrink and the most profound variations in climate and landscape collapse. Penguins from the Arctic swim a few yards away from Kenyan lion, giraffes roam near polar bears. The zoogoer moves through the species and landscapes in whatever pattern and at what pace she chooses (Montgomery, 1995: 589), or at least so she is made to believe. In fact, her movement is very much planned and controlled (Davis, 1997; Willis, 1999) and is centered on vision. Remarkably, most zoos require a great deal of walking, something that many Americans at the dawn of the 21st century find hard to do (Willis, 1999: 677). Indeed, the walk is part of what establishes the "difference" between the geographic regions as well as a sense of authenticity.

In addition to zoogeography, the illusion of nature in the midst of the modern zoo's urban space is also created through what is commonly referred to as "immersion

design.” “By immersion I mean that you’re really designing a space that people feel like they are part of the habitat,” Chin explains in an interview. Immersion design is, in other words, not only the idea of showing animals in the context of nature rather than in the context of architecture, as Jon Coe, the exhibit designer who first coined this term in 1975, explains (2009). It is also the soliciting of experiences that make people feel part of, rather than external observers of, this nature. Borrowing from theatre discourse, one can refer to the new zoogoers as spect-actors (Boal, 1979) – the passive/active participants in the creation of the theatrical act.

Immersion design requires paying close attention to the minute details of exhibit space, says Bronx Zoo Director Jimmy Breheny. In his words,

It drives me crazy: you go to certain zoos and you’ll see a fence or you’ll see a stainless steel food pan. You’re going to spend 16 million dollars on this exhibit to make people think that you’re transporting them to the Congo Basin and then they’re going to go there and see a gorilla picking sliced carrots out of a stainless steel food pan?! [That] doesn’t make any sense to me. That’s the kind of the attention we give to detail. [A]t no point do you see the apartment that’s 300 feet away. You don’t see that because that would make you forget that you are in the Congo (interview).

Although much less pronounced than sight, another important sense evoked at the immersion-designed zoo is sound. Here from the website of the Saint Louis Zoo:

Have you ever noticed that in almost every habitat you hear an amazing variety of insect drones and chirps, bird calls and frog choruses? The Zoo has recreated these sounds of nature in its exhibits, thanks to a state-of-the-art audio system installed along the visitor pathways. Keep your ears open for the chatter of macaque monkeys in the trees, the high-pitched squeaks of bats in the cave and the sudden rattle of a Missouri rattlesnake coming from the undergrowth (*What Is an Immersion Exhibit*, 2010).

During our shared walk through the Congo Exhibit, which has won numerous national and international awards, Breheny points out the recorded bird chirping. He also

tells me that most of the trees and rocks in the exhibit are artificial. The artificial has been disguised so well that it must be pointed out for me. Designer Chin further alludes to this as a “blurring of lines” between the authentic and the artificial, adding that:

[This is] our whole point, we don’t want you to know where that line is. We want to blur the line so you feel like you’re in nature. We don’t want you to feel like you’re in a contrived space, though sometimes it’s going to be pretty obvious like in Madagascar. But even then, as you walk through Madagascar because you’re in a building, you might forget for a little while that you’re in a building in the Bronx Zoo. When you’re looking at those lemurs and they are leaping about and they’re doing their thing, you might actually forget (interview).

When I inquire whether zoogoers are instructed about which materials in the exhibit are artificial, Breheny replies: “Why would we want to do that? For 90 percent of the people who come here, this is as close as they are going to get to a field experience” (interview).

Whereas zoos have been using artificial elements in the first place because they are much easier to manage and maintain than most natural elements, at the exhibit their artificiality is hidden through making them seem natural. Architect Gwen Howard of Buffalo Zoo further illustrates the level of detail that goes into exhibit design:

The fake is very prescribed. You’re going to build me one tree; it’s going to be this diameter, this kind of species; it’s going to have six primary branches, and off of each of those would have a minimum of three to five secondary branches (interview).

Since the eye alone cannot be trusted to distinguish the authentic from the artificial (Mitman, 1999: 13), the zoo exhibit – although intended to make one feel as though she is part of nature – in fact erodes the boundaries between nature and artifact. Although they are supposed to be blind to these tricks, one need not conduct interviews with zoogoers to know that most are well aware that they are not in Kenya but in Buffalo NY. Indeed, most zoogoers probably also realize that much of the zoo’s landscape is

artificially designed. “Has anyone really been immersed in a zoo exhibit and forgotten that they were in a zoo in the middle of the city?” asks Vicki Croke along these lines. “Most of us never go under the spell – we can see the exit sign, and we detect the very un-junglelike smells of hotdogs and popcorn,” she replies (Croke, 1997: 81).

Indeed, the zoo is actually a middle landscape – a machine in the garden (Hanson, 2002; Marx, 1964). The intensely focused, close, and clear sight speaks not only to the beauty of nature but also to the technical ability to reconstruct that beauty and make it even more perfect (Davis, 1999: 103). This depiction may also explain the myriad zoo spaces situated outside of the zoo exhibit that not only do not comply with the immersion principles but actually produce the opposite effect: gift shops, food vendors, animal shows, themed rides, and petting or children zoos, if to name the most popular (Braverman, 2011c).

Along the same lines, the zoo’s nature is explicitly not a precise simulacrum of wild nature “out there.” Quite the contrary, on many grounds, the zoo differentiates itself from the wild. For example, zoo design must include elements that promote a safe and sanitized environment for both zoogoers and zoo animals, such as moats, glass windows, air pipes, and exit signs. This goes to reinforce the idea that such a wild exists somewhere.

Also different from what is normally perceived as happening in the wild, most predatory relationships are eliminated from zoo exhibits. “You don’t see animals killing animals,” says Breheny of the Bronx Zoo. “Our visitors could never see that,” he adds, “they make no connection between a piece of hamburger on a styrofoam plate and a cow.” Cindy Lee, Curator of Fish at Toronto Zoo, explains similarly that

You wouldn't want that seal to do what it does in the wild, which is balance a fish or a penguin on its head and rip it up into pieces while throwing it into the air. You wouldn't want your child to see a lion tear up a goat. It's inhumane. They do eat animals here but the animals are killed humanely (interview).

Paul Shepard frames this notion particularly well:

The extension of the human idea to the wild...will see in the behaviours and interrelationships among animals infinite cruelties and will seek to prevent them... [H]umane action will try to prevent dogs from eating cats and men from eating dogs (2005).

However, certain animals are excluded from this humane outlook. Lee Ehmke of Minnesota Zoo tells me, for example, that "Fish are murdered on a daily basis in front of the public" (interview; see also Figure 2). "The further down the food chain they are," he explains, "the less people are concerned about these animals." The event that comes closest to hunting in most modern North American zoos is feeding snakes with whole prey. Yet this event is usually confined to holding rather than exhibit areas so as not to offend the public (Ludwig, 1981: 316). Except for the rare occasion, internal zoo regulations dictate that even when away from the public eye in the confines of the zoo's holding areas, animals can neither hunt for prey nor can they be fed live animals.

Insert Figure 2 here

The Zoo's Unseen Natures

At the zoo exhibit, immersion design aims at a successful geographical and mental transportation from the urban to the natural. For this purpose, blurring the lines between the natural and the artificial does not suffice; the human work invested in the exhibit's construction must also be made invisible. The Jungle Exhibit at the Bronx Zoo, for example, depends upon the continued labor of architects, zoologists, botanists, graphic designers, construction workers, welders, carpenters, painters, electricians, plumbers, audio specialists, gardeners, cabinet-makers, and glaziers (Mullan and Marvin, 1987, 1999: 54). Along with all other non-animal labor, this labor is naturalized to transparency. Under this reconstruction of the natural space, it is especially important to ensure the invisibility of buildings. "The most dangerous animal in the zoo is the architect," former director of Bronx Zoo William Conway was quoted saying (*ibid.*: 52), illustrating the suspicious attitude of zoo officials toward buildings and their human designers.

Indeed, although masses of people frequent zoos at any given time, humans are strikingly absent from the zoo's exhibit space. Lee Ehmke, Director of Minnesota Zoo, strongly opposes any inclusion of humans in zoo exhibits (interview). "At the Vienna zoo," he explains, "human artifacts are injected into natural themes to try to tell a story about the relationship [between] people and animals." "However, I think it can be very confusing to people to have the human element mixed with the animal," he concludes. The human role is carved out carefully: on the one hand, humans are frequently referred to as the cause of animal extinction and for habitat destruction at large; yet at the same time, humans are also presented as having the power to make a difference (see, e.g.,

Figure 3). Through exhibiting a strict dichotomy between humans and animals, the zoo exhibit systematically reiterates the strict dichotomy between humans and animals. In other words, the zoo reinforces an image of an edenic first nature (Smith, 1984), observed and thus objectified by man. Additionally, zoo exhibits are designed in such a way that human zoogoers do not encounter too many other human zoogoers (Willis, 1999).

Beyond the zoo's attempt to avoid reminders of human work, it also seeks to erase the reminders of human fragility. Anything that threatens the pleasant feelings prompted by the zoo's image of nature is rendered invisible, including disease, competition, and, above all, aging and death. Breheny provides an example:

We have animals here that get old. Sometimes they don't move as good or their coats aren't as shiny and they may be blind in one eye. They're not attractive to look at. You'd be surprised that we get letters [complaining] about that. So which is it? Do you want us to kill everything when it's in its prime and breed more so that everything is bright eyed and bushy tailed or is it okay for us to exhibit older animals or animals with handicaps? (interview)

Insert Figure 3 here

Breheny's frustration expresses the daily dilemmas of zoo directors, who struggle to strike a fine balance between the display of animals for public pleasure, for public education, and for animal conservation, while also providing the animal with optimal individual care. Zoo directors thus constantly negotiate the image of nature reproduced at the zoo. Nature at the zoo must be harmonious and pleasant, and manicured to elicit compassion and awe rather than alienation and fear. It is also a nature that should not distract visitors from the zoo's central mission: animal conservation. Designing a *zoo* nature that is accessible to the human zoogoer but that is devoid of her presence in effect contributes to the objectification of *wild* nature and thus to its alienation. Put differently,

by reinforcing the human/nature split, the zoo's sanitized and human-free depiction of nature makes "wild nature" remarkably unachievable.

Seeing Animals

You have to try to design your zoo so... that people can see the animals (Harpley, interview).

[People] want to see animals and they want to see them doing stuff, living their lives (Chin, interview).

Up until now, the article has explored the particular image of nature produced at North American zoos. This section focuses on *how* zoos produce such a nature. The heightened visual display of animals is central to the zoo's construction of nature. Exploring some of the properties of such sight-centered displays, this section considers how they might differ from traditional forms of spectacle and exhibit.

According to Tom Mason, Toronto Zoo's Curator of Birds and Invertebrates:

The animals here allow themselves to be seen. They wouldn't allow themselves to be seen by humans, their number one predators, in the wild. But here they feel safe to show themselves, and otherwise there would be much less sense in keeping them in captivity. [S]till, the number one complaint I hear from visitors is that you walk and walk and you hardly see any animals (interview).

Implicit in this description is the inherent contradiction in the mission of contemporary American zoos: the act of seeing animals, which is an essential component of the zoo's mission, in itself already undermines the animal's wildness and thus also the zoo's message of authenticity. Also undermining the animal's wildness in Mason's depiction is what he perceives as the animal's "willingness" to submit itself to human inspection. A new entity emerges, an animal that is situated somewhere in between the domestic, the wild, and the artificial: the zoo animal (Mullan and Marvin, 1987, 1999). Zoo animals are

not domesticated but are also not wild; they are not hybrids but they never fully embodying their species. They are body doubles, stand-ins for the real animals, ambassadors for their conservation (Hanson, 2002) and a living cemetery of all that is diminishing (Willis, 1999: 674). Indeed, the zoo cheetah may look like a wild cheetah, and its genetic code may be similar to one, but released into the wild it cannot in fact be one: its cultivation has failed to include all the skills, practices, and awareness that cheetahs in the wild have acquired (Willis, 1999: 674; Malamud, 1998). “Imagine having to teach a monkey how to eat a banana,” says Vicki Croke. “These are plastic monkeys,” she concludes (1997: 199). From a different perspective, zoo animals are also the flesh-and-blood equivalents of the stuffed bears and cheetahs that zoogoers buy at the zoo’s gift shop (ibid.).

While visitors tend to complain about their restricted view of zoo animals, one rarely hears similar complaints about the zoo’s restrictions on smell. Quite the contrary, “A lot of people complain about [the Gorilla] area because... it’s kind of stinky,” tells me Gwen Howard, architect for the Buffalo Zoo. “But that’s what a gorilla smells like,” she continues, “They smell like a men’s locker room.” Powerful air ventilation systems were installed in Buffalo Zoo’s rainforest exhibit to keep animal and human airways separated (Howard, interview). This highlights yet another limitation of immersion design: humans are brought close enough to see but not to smell (or to pass on germs). Indeed, whereas the zoo is all about seeing, and to a lesser extent, also about hearing, it is much less about smelling. As in museums, touch is also strictly prohibited at the zoo, except in the confined sections of the petting or children zoo (Braverman, 2011c). The zoo’s

preference toward seeing, of all human senses, is not incidental. Through seeing, humans have taxonomized, managed, and, more generally, objectified the animal world.

In contrast to the old-style cage exhibits where animals were fully and constantly exposed to the gaze of the public, a convincing nature display inevitably renders the designers of zoo space less control of the animal spectacle. Indeed, despite the seemingly omnipotent ability of designers to control human and animal behavior through their design of exhibit spaces, designer Chin of the Bronx Zoo emphasizes the limits of her power to control what actually goes on in the exhibit. In her words,

The animals are going to do whatever the animals want to do. You can't control them nor should you. These are wild animals; they do what they want (interview).

Chin's perception of zoo animals as wild corresponds with the zoo's basic message of authenticity. It is also somewhat different from Mason's idea of the animals willingly exposing themselves to human vision because they feel safe. In the end of the day, if zoo animals were not accurate representations of wild animals, there would be little or no reason to invite visitors to the zoo to see them, nor would there be an incentive to capture them in the first place. Chin's undermining of the zoo designer's powers reaffirms the wildness of these animals, in turn establishing that the most effective way of seeing them is at the zoo.

Zoo designers have come up with a few spatial tricks in order to bridge the inherent contradiction posed by seeing wild animals and thereby undermining their wildness. Architects Jones and Jones, a firm based in Seattle that specializes in zoo design, propose a number of general "viewing guidelines," which include:

1. Ensure that the animals are seen as only a part of the surrounding landscape which they co-occupy with the viewer;

2. Provide selected views only into the exhibit;
3. Augment the sense of anticipation by sequential staging of approach views before the animals are actually seen;
4. Screen out the cross-viewing of other people and exhibits;
- ...
8. Eliminate views of animals from outside the zoo and from parking and entry areas (cited in Mullan and Marvin, 1987, 1999: 65).

Clearly, despite their renewed attention toward zoo animals, the main focus of zoo designers is the zoogoers. Ultimately, it is from their perspective that the exhibit is designed (Croke, 1997: 79).

One of the more common tricks used by contemporary North American zoo designers is the glass window. Adapted from the aquarium, glass windows enable visitors to get “real close, literally face-to-face, with the animal” (Breheny, interview). The glass also ensures a variety of vantage points, enabling a level of spectatorial domination never attained with the old-fashioned barred cage (Willis, 1999: 679). Animals can now be viewed from the front, side, and back, topside and bottom, creating a controlled intimacy between observer and observed. At the same time, the glass panel demarcates the absolute separation between the human and the animal worlds. The glass lets us see without having to touch or be touched, without having to smell or be smelled, without being threatened. It is an internalization of the camera that turns animals into images (ibid.: 682). By contrast, in “wild nature” animals are practically never seen except by their traces, and at most they are fleetingly glimpsed at as they bound away.

Another tactic for enhanced seeing involves the design of secure and temperature-specific places in strategic viewing points, which attracts animals into using these spaces and thereby exposing them to the eyes of visitors. For example, exhibit designers use light to attract lizards to high visibility locations and heating to make for more hospitable locations for certain primates. In addition, secure niches and nesting spots are designed

near windows and viewing points. According to Howard, “it’s really kind of staged reality. You force them to do the thing they would naturally do, [but to do it] in a prime viewing spot.” Vanishing mesh is yet another trick used at zoo exhibits for heightened vision. “Vanishing™ Coil Mesh - Second only to nature,” reads the slogan of one of the companies that professionalizes in manufacturing these expensive and finely woven thin fences, which become invisible as one looks through them and at the same time separate between various animal species and between animals and humans.

Another spatial trick used by zoo designers to foster a sense of awe and respect toward zoo animals, especially primates, is the elevation of their exhibit space. This way, the human gaze is directed upward rather than downward. “[When] you’re looking down on something, you’re not fully appreciating what they are,” explains designer Chin of the Bronx Zoo (interview). This is also important for the animals, Chin adds. “If they’re up there it’s really hard to get eye contact with them. But some animals, like leopards, feel better up high so you want to give them that, you want them to feel comfortable.” The spatial design of the zoo exhibit, and especially the visual dynamics between humans and animals, promote a sense of awe and respect toward a remote nature that cannot be touched nor looked at in the eye but can only be known through a particular form of observation.

To complicate the direct project of observing animals, some zoos have become quite specific about the sort of looks that visitors should and should not perform. For example, signs that were once posted at the Gorilla Exhibit at the Buffalo Zoo instructed visitors that “Staring a gorilla in the eyes is considered a threat.” The signs also suggested that “If a gorilla looks your way, nod and lower your head, glance away [and] don’t stare!

Crouch or kneel down, so the gorilla is above or across from you, this posture puts them at ease” (Griffin, email communication). Indeed, of all animals at the zoo, the gorilla, especially the dominant male, is most likely to return the gaze, thereby contesting human domination (Willis, 1999: 678). Other animals tend not to look at the humans looking at them. Along the same lines, John Berger questions of the very possibility of humans to see animals at the zoo. In his words,

The zoos cannot but disappoint. The public purpose of zoos is to offer visitors the opportunity of looking at animals. Yet nowhere in a zoo can a stranger encounter the look of the animal. At the most, the animal’s gaze flickers and passes on. They look sideways. They look blindly beyond. They scan mechanically. They have been immunized to encounter, because nothing can any more occupy a central place in their attention (1980: 26).

Berger argues that our gaze cannot be exchanged with the animal because for us the animal exists only as an object (1980: 5).

Insert Figure 4 here

More generally, North American zoos use at least three different viewing styles: mass, controlled closeness, and incidental (Davis, 1997: 97). Stadiums for shows are the most efficient way for seeing animals – they offer a spectacle for mass viewing. As opposed to the stadiums, the museum-like displays and dioramas bring the viewer up close, offering distanced intimacy with the animal. Finally, the incidental look breaks up the landscape into small niches, creating a sense of casualness and preciousness that relieves the organized gaze of the stadium. Each structure manipulates movement to help people keep seeing.

The reliance on heightened forms of vision in nature’s display is not unique to zoos. It also happens, for example, in wildlife documentaries. Yet zoo officials assert that

the seeing that takes place at the zoo is unique. Pat Thomas, General Curator at the Bronx Zoo, says, for example, that: “seeing and hearing and smelling an animal and seeing it interact with others of its own kind – or [with] other species in some instances – can inspire care in a way that no reading about it in a book or seeing it on TV will ever do” (interview).

In addition to the power of intimate seeing in physical proximity, many zoos are also engaged in projects of seeing through cameras and audio devices. According to Eldon Smith, Manager of Administration, Conservation, Education, and Research in Toronto Zoo, Black-Footed Ferrets have cameras pointed at them to monitor them in nest boxes, mostly for conservation, education, and behavioral purposes (interview). The new polar bear exhibit, he adds, “will have cameras so they can monitor the bears in the exhibit and see what’s going on.” “You want to be able to see,” Smith concludes, “even though you’re not there.” The camera is a hidden observer that does not elicit a response from the animal filmed, but produces images as though there were no observer (Mullan and Marvin, 1987, 1999: 76). In this sense, the camera also violates the animal’s normal invisibility, depriving it of its own ability to see, and of its agency to expose itself to, the gaze (Berger, 1980: 14). Moreover, the camera embodies the inherent tension between authenticity and artifice. Does this machine, which offers a cheap mechanical reproduction, lead to a wider and more democratic appreciation of authentic nature? Or does it turn nature into yet another imitation that entices an emerging consumer culture (Mitman, 1999: 13)?

In light of its heightened visual regime, it is no wonder that the project of seeing at the zoo has been compared to pornography: zoo and porn participants, it has been

asserted, are both visual objects whose meaning is shaped predominantly by the perversions of a patriarchal gaze (Acampora, 2005: 75). Michel Foucault's examination of Bentham's panoptic design (1977) – interestingly inspired by the design of Louis XIV's menagerie at Versailles (Mullan and Marvin, 1987, 1999: 43) – is also quite relevant here. At the zoo, the animal's body is recorded, registered, and mapped to render it visible to power and knowledge (Braverman, 2010). In this sense, the zoo can be compared with other carceral institutions such as the prison, the asylum, the hospital, and the school. Yet whereas these various institutions utilize vision as a disciplinary tool — through the subject's internalization of the gaze – vision at the zoo causes the reverse: through being exposed to the human gaze, animals are normalized to ignore the gaze. Indeed, the ultimate goal of the “zoopticon” is to acculturate animals sufficiently to ignore their human spectators (Acampora, 2005: 79).

Moreover, unlike human prisoners, zoo animals are displayed as if they are not in captivity so that they may engage in behaviors that spectators imagine them performing in the wild. Additionally, unlike the rhetoric of punishment associated with human prisons, the zoo animal is incarcerated not as punishment, but rather as a consequence of the devastating actions of humans. “Do you think we like seeing wild animals held in captivity?” a curator asks me (Mason, interview). “The animals are deprived of their individual freedom in order to save the rest of their species and even their entire habitat,” he explains. The animals are, in other words, subject to collective incarceration: collective not in the usual sense but in that they are individually imprisoned in the name of their particular animal collective and for actions conducted by another collective: humans. Ambassadors for their species (Hanson, 2002), the animals have no say in this

exhibitionary complex. Indeed, unlike with human prisoners, who are disciplined to act normatively, the behavior of zoo animals does not make a difference for the course of its incarceration. Arguably, the inward focused gaze enabled by the panopticon is meaningless in the context of animals, which cannot be the full, realized subjects of disciplining. At the same time, the very exposure to human observation erases what is considered to be the most manifestly natural trait of wild animals, namely, their capacity to freely elude or engage others (Acampora, 2005: 70). The interaction that is sought—encountering the zoo animal—becomes impossible, as the real animal disappears and the conditions for seeing are undermined (Berger, 1980).

Beyond its panopticonian elements, the zoopticon is also a technology of exhibitionary power (Bennett, 1988: 74). The exhibition operates through the transfer of bodies and objects from the enclosed private domains in which they had previously been displayed to a restricted public (and in the case of zoos, this manifested in aristocratic menageries), into progressively more open and public arenas (in this case the modern zoo). Through exercising the power to command and arrange things and bodies for public display, exhibitionary technologies seek to enable people, *en masse* rather than individuals, to see rather than to be seen and to know rather than to be known. Here, the focus is on the observer rather than the observed. From this perspective, the interiorized gaze by the zoogoer becomes a form of self-governance. Tony Bennett further articulates this idea:

Not, then, a history of confinement but one of the opening up of objects to more public contexts of inspection and visibility: this is the direction of movement embodied in the formation of the exhibitionary complex. A movement which simultaneously helped to form a new public and inscribe it in new relations of sight and vision (ibid.: 85-86).

Rather than Bennett's juxtaposition of the panoptic and exhibitionary gazes, this article suggests that at the zoo they exist simultaneously. The zoopticon operates through two gazes: the first is the Foucaultian gaze, which focuses on the body of the animal for the purpose of governing it, which, as mentioned, is associated with (but is also rather different from) the panoptic technology utilized in prisons. Additionally, at the zoo the gaze is panoramic. This time, then, the focus is on how the gaze influences those who gaze, rather than those who are gazed at. By enabling its visitors to witness the human domination of nature, the zoo publicly instructs the populace about the proper relationship between culture and nature, in turn reinforcing the separation between the two as well as the idea of an authentic nature.

Whereas seeing is central to the modern zoo's function, it is not an end in itself. Rather, seeing is the technology used by zoos for promoting nature's conservation (Donahue, 2006). Director of Minnesota Zoo Lee Ehmke reflects on the zoo's mission. In his words, "I think part of it is that we want them to appreciate the animals as something greater than just something brought here to perform and be an unusually more beautiful thing for people to look at, but to understand them as part of a greater whole" (interview). "Animals are just the hook," says Breheny of the Bronx Zoo along the same lines (interview). Through an exposure to these animals, he says, a detailed educational project can take place that emphasizes the role of humans in conservation.

The modern zoo visitor is asked not only to imaginatively recontextualize the animal within that environment from which it was separated (Mullan and Marvin, 1987, 1999: xiv), but also to feel responsible for the disappearance of that environment and to react accordingly by donating money or by performing other everyday actions, such as

recycling and building bird nests (see, e.g., Figure 4). In this sense, the educational project initiated by zoos is very much centered on capital (Tafuri, 1976: 83), which serves here as a form of social redemption. Indeed, the zoo's subtle ideology not only juxtaposes humans and nature, with humans in the position of power; it is also an ideology of redemption, interwoven throughout with a message of capital. Put differently, beyond its function as a place for witnessing nature, the zoo is also a place for consuming this nature.

Whereas exhibit areas are where the central animal performance takes place, and, as such, they are also the zoo's pivotal space, acts of capital occur largely outside of this space. At the zoo's non-exhibit areas, animals come in various forms and shapes: from the plastic horses of the carousel to the stuffed plush animals at the gift shop. In most of these manifestations, animals are meant to sell. Although the gift shop is the zoo's most apparent space of capital, acts of consumption (and thereby of redemption) are also scattered throughout this space. At the Buffalo Zoo, for example, signs invite visitors to buy crackers to feed the elephants for a dollar each. Pressed-penny machines are also conveniently located throughout the zoo. Additionally, large signs declare corporate sponsorships of particular animals and exhibits. At the Buffalo Zoos, for example, signs announce that the *Buffalo Exterminators* sponsor the otter exhibit and that *Time Warner* sponsors the two Amur tigers, which are named, accordingly, "Thyme" and "Warner." The Buffalo Zoo even organizes an annual art show – "Art Gone Wild" – where art produced by animals, for example paintings by giraffes and elephants, is exhibited and sold to the public. As in Susan Davis' study of San Diego's "Sea World" (1997), a virtual maze of advertizing, public relations, and entertainment renders the zoo an exhaustively

commercial space. Indeed, the zoo is a site of controlled sales of goods (foods and souvenirs) and experiences (rides and performances), all themed to fit the zoogoer's image of nature (ibid.).

Yet consuming at the zoo is distinct from shopping at the mall. First and foremost, it is different because of the product offered: nature. According to western common thought, nature denotes a sphere of authenticity and purity that stands in stark contrast with today's consumer society (Davis, 1997). It follows that as a place of nature the zoo represents the non-commercial world outside the marketplace. Perhaps in an attempt to bridge the two contrasting notions – of the zoo as a place of recreational consumption, on the one hand, and of the zoo as presenting and preserving an anti-commercial nature, on the other hand – such acts of consumption are configured by the zoo as non-traditional. More than merely selling a product, the zoo also sells an ideal: “Buy a panda bear, save a panda bear,” is the zoo's implicit redemption-through-consumption message. Along these lines, the zoo employee behind the counter at the Buffalo Zoo's gift shop tells me: “Whatever you spend goes into saving animals.” The zoo's Director Fernandes further explains that by supporting the zoo, one indirectly also supports the zoo's conservation efforts. Indeed, many zoo officials perceive the zoo's moral stance as legitimizing the acts of consumption performed there. From a slightly different angle, in *Uncommon Ground*, Jennifer Price argues that shopping for nature commodities at the mall is a safe way to express environmental concerns within the familiar satisfactions of consumerism, even while this activity is construed to dampen awareness of the environmentally exploitive aspects of mass consumption itself (1996).

Another aspect of the zoo's unique relationship with consumerism is its frequent call to zoogoers to consume in more ecologically responsible ways. A sign posted at the Buffalo Zoo's polar bear exhibit reads accordingly: "10 ways to consume wisely: Plant a tree... Turn your lights off... Use reusable clothbags for shopping," etc. Similar notions are expressed at the Buffalo Zoo's rainforest exhibit. "Be a Rainforest Protector! Doing our part to save rainforests," reads the sign at the entrance to this exhibit. It also reads: "Buy baskets, jewelry and clothing made by native groups living in and around rainforests. By earning money this way they can stop cutting down the rainforest for fuel or crops... Refuse to buy anything made from old-growth rainforest woods... Cross off foods made with palm oil...". Indeed, it is mostly through signage – and therefore through directed and controlled vision – that the zoo instructs zoogoers about how to properly consume.

Additionally, contemporary North American zoos reflect a society of abundance and abundant access and of active free time (Montgomery, 2005: 573). Seeing animals is, in other words, a tightly choreographed performance that promotes the zoo's much more ambitious project of saving nature. The main actors in this theatre are the zoo animals. Yet whereas at the theatre the actors presume an active role, at the zoo the animal actors are passive while human spectators hold the power. This is an interesting variation on Boal's "theatre of the oppressed" (Boal, 1979). For Boal, the passive spectators should be empowered into becoming spect-actors. What would a spect-actor animal look like, one wonders.

Insert Figure 5 here

Pat Thomas, General Curator of the Bronx Zoo, refers to the Congo Exhibit as an excellent example of how the zoo educates its public toward conservation. “You could essentially pick whatever project you want and that’s where your money would go to save gorillas in Central Africa,” he says in the interview. “There is also a little drop box where if people wanted to put in extra money they could,” Thomas adds. “You wouldn’t expect that there would be a whole lot of money in that drop box,” he says, “But after visitors see our gorillas, literally inches away from them, I was impressed how much money people would put in that drop box. So at least in the short-term, those animals are inspiring people to care, to throw in an extra dollar or two.” Contemporary zoos thus not only see themselves as havens for wildlife protection but also devote much effort into convincing the public to perceive them as such. Jimmy Breheny, Director of Bronx Zoo, summarizes this approach:

It’s really pretty simple. You want to go to the zoo to see the animals. We like those animals. Well, these animals are endangered, they might be extinct in your children’s lifetime. Well, that’s a shame, we shouldn’t let that happen. Well how do we not let that happen? You can’t just save the animals without saving the environment. When you look at the environment, it’s really a community of animals that function together in a habitat situation and that’s why this whole thing about arks and zoos and whatever - yeah, but only if you’re going to use it as a tool to save the real thing. People used to talk about saving species but you can’t save species without saving habitat (interview).

The language of money is not only prescribed to the visitor, but also practiced by the zoos themselves and utilized by legal norms that pertain to their actions. For example, the Endangered Species Act of 1973 maintains that any commerce of an endangered species entails a permit, which requires the initiation of an “enhancement program,” namely a contribution to the life of the same species in the wild (Braverman 2010b). “Generally, zoo animals do very little to benefit their species in the wild,” tells me Senior

Biologist Mike Carpenter of the Fish and Wildlife Service in an interview. He continues, so “we discount this animal entirely to benefit the animals in the wild.” To obtain a pair of panda bears from China, for example, the purchasing zoo was required to pay one million dollars per panda to the Chinese government, which in turn was mandated to invest this money in protecting panda bears in the wild. Zoo animals are thus not only ideological but also financial ambassadors of their collective kind.

The Zoo’s Invisible Geographies

Alongside the zoo’s highly visible naturalistic exhibits there are also the zoo’s non-exhibit spaces. The article has already alluded to the zoo’s gift shops, food vendors, themed rides, and sign-ridden promenades. These areas are at best disconnected from – and at times even contrary to – the aims of the zoo’s naturalistic settings. Furthermore, each of these areas embodies a slightly different image of the zoo animal. This section explores yet another of the myriad non-exhibit zoo spaces: holding areas. These are unique in that they are strictly off-limits to the general public, thus constituting a space that is largely invisible to the public eye.

Essentially, holding areas are the zoo’s infrastructure. In the words of Minnesota Zoo Director Lee Ehmke,

All the management facilities, the holding areas, and the spaces for keepers are parts that distract from the message of an animal in the environment. But obviously, they are critically necessary for keeping the animals healthy and happy and safe in the zoo. So I think it’s basically about emphasizing that message of animals as a part of habitat that leads to the desire to hide the infrastructure (interview).

Tom Mason, Curator of Birds and Invertebrates at the Toronto Zoo, explains why holding areas are necessary elements of animal caretaking:

We want to be able to lock them up at night. That's better for their own safety as well as the safety of visitors. We don't want any Joe that just happens to wander in to be attacked. We bring in birds at night, for example, otherwise other predators will eat them. I am not talking about zoo predators, because the birds are protected from those by fences and notes. I am talking about wild-wild animals. These animals wouldn't show their face around here when there are humans around. They would come in at night only, and then we are not there to protect the animals (interview).

Per Mason's perspective, the zoo unnaturally designs its holding areas to protect the zoo's wild animals from the even wilder animals of the unnatural urban environment. This, again, reinforces the idea that beyond the wild/domestic dichotomy of animals, a third entity – zoo animals – also exists.

“There is a very functional animal management routine that used to be part of what you would see in a zoo,” Ehmke of Minnesota Zoo describes more generally (interview). “You know, the classic cat-house with an outdoor cage and an indoor cage.” “That all still exists functionally in these new habitats,” he continues, “but the outdoor spaces have become much more naturalized, bigger, and more theatrical because of the message for the public.” The inside spaces, he implies, have remained strikingly similar to their historical counterparts. In this sense, whereas the zoo spaces that are visible to the visiting public have moved toward exhibiting naturalistic features, its invisible spaces do not look much different than one would imagine them prior to Hagenbeck's revolutionary zoo design at the turn of the century, with some exceptions regarding enrichment requirements and overall animal welfare (Croke, 1997: 79; Braverman 2010b). Indeed, in 1995, an American Zoological Association conference article stated: “It is still the rule rather than the exception for most zoo animals to spend the greater part of each day in concrete cubes of cages” (cited in Baratay and Hardin-Fugier, 2002: 221). A bifurcated

space is thereby constructed: a visible outdoor stage, which follows a naturalistic design that hide human features, on the one hand, and a invisible backstage indoors, which is not concerned with concealing such human involvement, on the other hand.

The holding area is also where most animal training occurs. In Ehmke's words,

This is stuff that we do anyway, even if the public doesn't see it. It's very important for managing the animals because the idea of just letting the animals out in a big naturalistic space [is not so great]. What happens when you need to check its teeth or give it a booster shot? It used to be that the only thing you could do was really stress the animal out by capturing it or darting and immobilizing it. Today, a lot of that management comes through getting the animals to voluntarily give a blood sample or to show their teeth – [all] for a positive reward. It's a much less stressful existence for the animal [and] much less stressful for the veterinarians and the animal care staff. We do that a lot behind the scenes in zoos (interview).

Animals holding their tail out of a cage for a shot to win a positive reward in the form of a blueberry muffin are not exactly the image of wild nature that zoo professionals believe visitors expect to see at the zoo. Consequently, the zoo renders such everyday scenes of animal management invisible to the eyes of the public.

The most striking feature of holding areas is the existence of cages. Also, whereas exhibits are made to seem boundless, holding areas are much smaller and more confined.

In Howard's words,

We design a lot of that support space almost like a battleship or submarine [so] that every inch means something. I don't want to have a luxurious mechanical room and holding area. I want to spend my 500 dollars per square foot on stuff the public is going to see (interview).

Howard's battleship imagery illustrates the level of functional planning as well as the spatial and financial constraints that zoo architects must comply with when planning holding areas (see, e.g., Figure 5).

Insert Figure 6 here

Finally, whereas exhibit spaces are made to look natural, there are no such concerns with non-exhibit space. When used in holding areas, for example, artifacts are not hidden. During a tour of the rainforest holdings at the Buffalo Zoo, one of the keepers explains why a broom brush is situated in one of the cages (see Figure 7): “We put treats in there, like cereal and stuff like that. It mimics a plant that they’d have to go through all the different leaves to grab different fruits or vegetables or seeds.”

Similarly, both a television set and a fish tank have been installed at the gorilla holding area at the Buffalo Zoo (see Figure 8). “They were very interested in the fish tank for a while,” the gorilla keeper informs me, “but as the novelty of it has worn off, [and] they only look at it occasionally. The TV seems to catch their interest when there are cartoons or animals shows on, but the ‘people shows’ don’t interest them as much” (Griffin, email communication).

Insert Figures 7 & 8 here

Since exhibit and holding spaces are different in their function, two distinct professions have assumed responsibility for their separate design: exhibits are designed by landscape architects, and holding areas by architects. Architect Howard illustrates some of the manifestations of this professional and spatial split. In her words,

The exhibit architects are really good at exhibit design, [but] they are not technical architects... They’re not necessarily good with holding areas [nor with] mechanical rooms and all that... They couldn’t do a set of stairs to save their lives. They don’t know how stairs go together, they don’t understand the order that things get built (interview).

For the most part, Howard paints a non-hierarchical picture of the relationship between the two professions. But a critical tone sometimes creeps into her descriptions. “They are

very talented people,” she says about exhibit designers, but “they kind of treat us like we were their blue-collar cousins.”

In more ways than one, then, the holding areas are built in the shadow of the public exhibits. They exist to support the exhibit. They are the “blue-collar brothers” of the richer, larger, and publicly-oriented naturalistic exhibit areas. Mostly a result of their different levels of exposure to the public eye, these two spaces also embody very different animal/human dynamics.

To what extent are holding areas indeed invisible to the public eye? Buffalo Zoo Director Donna Fernandes clarifies that, except for the rainforests’ holding area, “We don’t allow members of the public or press into holding areas to take photographs” (interview). “This is particularly true of primate holding areas,” she adds, “due to the risk of contamination of our primate collection with human borne illnesses and vice versa.” Other North American zoos have similar restrictions. According to Jimmy Breheny, Director of Bronx Zoo: “For a number of reasons – including safety, security and creating a low stress environment for our animals when they are off exhibit – we do not permit visitors to these areas” (interview). Similarly, Bill Rapley, Executive Director of Conservation, Education & Research at the Toronto Zoo explains that “We generally do not take people into the holdings to reduce stress to animals from strangers etc. In some cases such as primates we have disease restrictions in place. This is to prevent colds, flu, etc. from getting into our collections” (interview).

Despite the restrictions, zoo personnel occasionally allow public access to certain holding areas. For example, every semester Buffalo Zoo Director Donna Fernandes kindly shows my students around the rainforest and the lion holding areas. Following the

most recent tour, one of my students commented that encountering the lion face-to-face has been the most humbling experience in his life, and that every person should be given a chance to see wild animals from such proximity at least once during their lifetime. Perhaps ironically, this proximity to wild animals – whereby one encounters the animal’s wildness with no separation but cage bars – is rarely achieved in the naturalistic public exhibit, despite all the tricks. In this sense, the older, less naturalistic, exhibit ends up being closer to visitors’ perceptions of wild nature.

Consequently, the one zoo is at least two: the visible zoo and its invisible other. At the zoo exhibit, the wild is mostly *seen* – sight considered the cleanest, safest, and most powerful of the senses – and much less so experienced through other senses. An image of a wild that is effectively and calculatively distant is thus produced. By contrast, at the holding area animals are visibly cared for by humans rather than kept at bay.

Conclusion

Situated at the heart of the modern North American city, contemporary North American zoos are a place where the general public is exposed to and educated about the definition and identity of nature and, moreover, about the proper human relationship to this nature. The article has shown that the zoo’s nature is harmonious and sanitized, devoid of human presence, and juxtaposed to modern urban life. This interpretation of nature, the article has argued, assumes that nature is a pre-existing entity and reinforces the notion of humans and nature as separate and remote.

Mostly, the zoo’s image of nature relies upon the visual display of animals at zoo exhibits. At the same time, as they stroll along the zoo, zoogoers are also exposed to various other animal images: sponsorship ads, signage that informs them about the zoo’s

involvement in conservation, and other signs that instruct them about how to consume to become part of the zoo's conservation efforts. Stuffed animals at the zoo's gift shop are also part of the zoo's marketing of animal imagery to sell its wider conservation message. Indeed, at the gift shop and along zoo paths, zoo animals are not only displayed and seen, in varying degrees, but are also visibly and explicitly commodified. Unlike shopping at the mall, however, the aim of consumption at the zoo is conservation. "Buy a (zoo) panda bear, save a (wild) panda bear," is the implicit message advanced there.

Yet while the zoo is the quintessential – and probably the most affordable – site for seeing nature and animals in the postindustrial urban world, it is, no less importantly, also a place of obscured vision. The article has considered those areas that zoogoers are not meant to see – or are made not to see. Indeed, to create its own vision of nature, the zoo has left out many aspects of nature, as commonly perceived, such as the fragility and aggressiveness of the animal world. Additionally, the article has explored the understudied (in the cultural literature at least) domains of the zoo's unseen geographies: holding areas. Similar to the theatre, the zoo is founded upon a spatial split between front and back stages. At the theatre as in zoos, the public rarely has access to these behind-the-scene spaces, where the major preparations for the show happen.

Despite their visible differences, the zoo's exhibits, promenades, gift shops, and holding areas all promote a single message that ties the modern zoo's scopic regime and its particular presentation of nature with conservation through small acts of consumption.

Acknowledgments

I am grateful to my almost-4-year old daughter, Ariel, for repeatedly dragging me to the Buffalo Zoo. I am also deeply indebted to Dr. Donna Fernandes, Buffalo Zoo Director, for initially showing me into the intricacies of the zoo world. As always, I would also like to thank Guyora Binder and Errol Meidinger for their thoughtful input and continuous

support throughout this project. Finally, many thanks are due to the anonymous reviewers for their excellent comments.

Interviews

1. Dr. Donna Fernandes, Director, Buffalo Zoo, May 8, 2009; September 30, 2010; and four tours of the zoo between May 2009 and November 2010, Buffalo Zoo (on-site).
2. Jerry Aquilina, General Curator, June 13, 2009, Buffalo Zoo (on-site).
3. Jean Miller, Registrar, June 13 & 15, 2009, Buffalo Zoo (on-site).
4. Dr. William Rapley, Executive Director, Conservation, Education & Research, Toronto Zoo, June 16, 2009 (interview and tour), Toronto Zoo (on-site).
5. Eldon Smith, Manager, Administration, Conservation, Education & Research, June 16, 2009, Toronto Zoo (on-site).
6. Andrea Drost, Curatorial Assistant, June 16, 2009, Toronto Zoo (on-site).
7. Debby Martin, Registrar, Toronto Zoo, June 16, 2009 (on-site).
8. Dr. Paul Harpley, Manager, Interpretation, Culture & Design, June 17, 2009, Toronto Zoo (on-site).
9. Jaap Wensvoort, Supervisor, Animal Nutrition, June 16, 2009, Toronto Zoo (on-site).
10. Cindy Lee, Curator of Fishes, June 17, 2009, Toronto Zoo (on-site).
11. Tom Mason, Curator of Birds and Invertebrates, June 17, 2009, Toronto Zoo (on-site).
12. Dave Ireland, Curator of Conservation, June 17, 2009, Toronto Zoo (on-site).
13. Dr. Gabriela Mastromonaco, Curator of Reproductive Programs, July 6, 2009 (telephone interview).
14. Dr. Pat Thomas, General Curator, July 14, 2009, Bronx Zoo, NYC (on-site).
15. Dr. William Conway, Bronx Zoo Director (1969-1993), July 14, 2009, Bronx Zoo, NYC (on-site).
16. Dr. Jim Breheny, SVP Living Institutions & current Director of Bronx Zoo, July 15, Bronx Zoo, NYC (interview and tour; on-site).
17. Nilda Ferrer, Curator of Registrar (Animal Management Services), July 15, 2009, Bronx Zoo, NYC (on-site).
18. Susan Chin, Vice President of Planning and Design & Chief Architect Exhibition and Graphic Arts Department, July 17, 2009, Bronx Zoo, NYC (on-site).
19. Lee Ehmke, Director, Minnesota Zoo and former director of design at the Bronx Zoo, July 21 & 22, 2009 (telephone interview).
20. Dr. Kevin Bell, Director, Lincoln Park Zoo, Chicago & incoming AZA President, July 23, 2009 (telephone interview).
21. William McKeown and Evelyn Junge, Lawyers, General Counsel dept., Bronx Zoo, July 28, 2009 (telephone interview).
22. Gwen Howard, Architect for Buffalo Zoo, Foit Albert Architects, July 24, 2009, Buffalo NY (at interviewee's residence).
23. Gwen Howard, tour of Buffalo Zoo, July 31, 2009, Buffalo NY (on-site).
24. Rachél Watkins Rogers, Zoo Registrar, Metrozoo Miami, August 6, 2009 (at the Florida Keys).
25. Mike Carpenter, Senior Biologist, Permit Division, Fish and Wildlife Service, phone interview, August 20, 2009 (telephone interview).

26. Robert Belterman, Animal Data & Transport Manager, Rotterdam Zoo, The Netherlands, September 3, 2009 (telephone interview).
27. Judith Block, retired registrar for the National Zoo, Washington DC. Two interviews: September 4, 2009, September 11, 2009 (telephone interviews)
28. Laura Morse, current registrar, National Zoo, Washington DC. September 29, 2009 (telephone interview).
29. Nancy Butler, registrar, Detroit Zoo, October 2, 2009 (telephone interview).
30. Pam Krentz, registrar, Cleveland Metroparks Zoo, December 7, 2009 (telephone interview).
31. Corinne Roberts, registrar and front gate manager, Zoo Boise, December 11, 2009 (telephone interview).
32. Anonymous, Vice President, Accreditation Programs, AZA, January 25, 2010 (telephone interview)
33. Kris Vehrs, AZA Executive Director, November 9, 2009 (telephone interview).
34. Dr. Robert Wiese, Chair, AZA Task Force on Sustainability. November 9 2010 (telephone interview).
35. Dr. Paul Boyle, Senior Vice President, AZA & Director, AZA Animal Programs. November 24 2010 (telephone interview).

References

- Acampora R, 2005, "Zoos and eyes: Contesting captivity and seeking successor practices" *Society & Animals*, 13(1), 69 – 88
- Anderson K, 1995, "Culture and nature at the Adelaide Zoo: At the frontiers of 'human' geography. *Transactions of the Institute of British Geographers*, 20(3), 275 – 294
- Baratay E, Hardouin-Fugier E, 2002 *A History of Zoological Gardens in the West* (Reaktion Books)
- Bennett T, 1988, "The exhibitory complex" *New Formations*, 4 73 – 83
- Berger J, 2008 *Ways of Seeing* (Penguin Classics)
- Berger J, 1980, "Why look at animals?" in *About Looking* J Berger (Vintage, New York)
- Bergman J, 2000, "Ota bengal: The pigmy put on display in a zoo" *Journal of Creation* 14(1) 81 – 90
- Birch T, 1990 "The incarceration of wildness: wilderness areas as prisons" *Environmental Ethics*, 12, 3 – 26
- Boal, A 1979 *Theatre of the Oppressed* (London, Pluto Press)
- Bradford P, Blume H, 1992 *Ota Benga: The Pygmy in the Zoo* (St. Martin's Press, New York)
- Braverman I, forthcoming 2011a Zooveillance: Controlling to Conserve, *Social Studies of Science* (under review)
- , forthcoming 2011b Zoo Registrars: A Bewildering Bureaucracy. *Duke Environmental Law & Policy Forum*
- , forthcoming 2011c Zootopia, in A Giesecke and N Jacobs, Eds. *EARTH PERFECT? Nature, Utopia, and the Garden* (under negotiation with Black Dog Publishing)
- , 2010 "Hidden in plain view: legal geography from a visual perspective" *Journal of Law, Culture, and the Humanities*

- Brown J, Lomolino M, 1998 *Biogeography* 2nd ed. (Sinauer Associates, Sunderland, Massachusetts)
- Coe J & Lee, G 1996 "One hundred years of evolution in great ape facilities in American zoos: 1896-1996" *Proceedings of The AZA 1995 Western Regional Conference*, Bethesda, MD, American Zoo and Aquarium Association, 8403 Colesville Rd., Suite 710, Silver Spring, Maryland
- Crawford M, 1992 "The world in a shopping mall", in *Variations on a Theme Park: The New American City and the End of Public Space* Ed. M Sorkin (Hill and Wang, New York)
- Croke, V 1997 *The Modern Ark: The Story of Zoos Past, Present, and Future* (Scribner publishers)
- Davis, S 1997 *Spectacular Nature: Corporate Culture and the Sea World Experience* (University of California Press, Berkeley)
- Debord G, 1983 *The Society of the Spectacle* (Black and Red)
- Donahue J, 2006 *Politics of Zoos: Exotic Animals and Their Protectors* (Northern Illinois University Press, Dekalb, Illinois)
- Foucault M, 1977 *Discipline and Punish: The Birth of the Prison*, 1st American Edition (Pantheon Books, New York)
- Friese C, 2010 'Classification Conundrums: Categorizing Chimeras and Enacting Species Preservation,' *Theory and Society* 39: 145-172
- Fuery P, Fuery K, 2003 *Visual Cultures and Critical Theory* (Oxford University Press)
- Hanson, E 2002 *Animal Attractions: Nature on Display at Zoos* (Princeton University Press, Princeton and Oxford).
- Haraway D, 1989 *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (Routledge, New York)
- Jay M, 1993 *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought* (University of California Press, Berkeley, California)
- 1988, "Scopic regimes of modernity" in *Vision and Visuality* Ed. H. Foster (Bay Press, Seattle, Washington) pp 3 – 23
- Kisling V N, 2000 *Zoo and Aquarium History: Ancient Animal Collections to Zoological Gardens* (CRC Press. Boca Raton, Florida)
- Lefebvre H, 1991 *The Production of Space* (Blackwell, Oxford)
- Ley D, Olds K. 1992 "World's fairs and the culture of consumption in the contemporary city" in *Inventing Places: Studies in Cultural Geography* Eds K Anderson, F Gale (Longman Cheshire, Melbourne) pp 178 – 193
- Locke J, 1690, 2003 *Two Treatises of Government and A Letter Concerning Toleration* Ed I Shapiro (Yale University Press, New Haven, Connecticut)
- Ludwig E G, 1981, "People at zoos: A sociological approach" *International Journal for the Study of Animal Problems* 2(6): 310 – 316
- Malamud R 1998 *Reading Zoos: Representations of Animals and Captivity* (New York University Press: NY).
- Martin B, 2003 *Panda Bear, Panda Bear, What Do You See?* (Holt and Co.)
- Marx L 1964 *The Machine in the Garden* (Oxford University Press, NY)
- Mitman G 1999 *Reel Nature: American Romance with Wildlife on Film* (Harvard University Press: Cambridge)
- Montgomery S L, 1995 "The zoo: Theatre of the animals" *Science as Culture* 21 565 –

- Morris D, 1969 *The Human Zoo: A Zoologist's Study of the Urban Animal* (McGraw-Hill, New York)
- Mullan R, Marvin G, 1987, 1999 *Zoo Culture*. (University of Illinois Press, Illinois).
- Philo C, 1995 "Animals, geography, and the city: Note on inclusions and exclusions" *Environment and Planning D: Society and Space* 13(6), 655 – 681
- Price, J 1996. "Looking for Nature at the Mall: A Field Guide to the Nature Company." In *Uncommon Ground: Rethinking the Human Place in Nature*, Cronon, W ed. (New York: W.W. Norton & Company)
- Rothfels N, 2002 *Savages and Beasts: The Birth of the Modern Zoo* (John Hopkins University Press, Baltimore, Maryland)
- Shepard P, 1978 *Thinking Animals: Animals and the Development of Human Intelligence* (University of Georgia Press, Athens, Georgia)
- Smith N, 1984. *Uneven Development: Nature, Capital and the Production of Space* (Blackwell, Oxford)
- Soper K, 1995 *What is Nature? Culture, Politics and the Non-Human* (Blackwell, Oxford)
- Tafuri M, 1976 *Architecture and Utopia: Design and Capitalist Development* (MIT Press, Cambridge, Massachusetts)
- Thompson C, 1999 'Confessions of a Bioterrorist: Subject Position and Reproductive Technologies. In E. Ann Kaplan and Susan Squier (ed.), *Playing Dolly: Technocultural Formations, Fantasies, and Fictions of Assisted Reproduction* (Rutgers University Press, NJ)
- Williams R, 1973 *The Country and the City* (Oxford University Press, Oxford)
- Willis S, 1999 "Looking at the Zoo" *The South Atlantic Quarterly* 98(4): 669-687.
- Wilson A, 1992 *The Culture of Nature: North American Landscape from Disney to the Exxon Valdez* (Between the Lines, Toronto)