



*II_1. The Lion-Trainers,
1985, by José García y
Más (Baratay 2002).*

CHAPTER II

Background of Zoological Gardens: a metaphor



Nature in captivity

NATURE IN CAPTIVATION PROVIDES BACKGROUND OF ZOOLOGICAL GARDENS AS A METAPHOR OF MAN'S DOMINION OVER NATURE. CHAPTER II SERVES AS AN IN-DEPTH UNDERSTANDING OF THE CHARACTER OF ZOOS AND PROVIDES BASELINE KNOWLEDGE OF THE STUDY AREA.



2.1 *Introduction*

As defined by Sauer (1963:315), cultural landscapes are the cause and effect of cultural values, cultural institutions and human behaviours which interact with the natural environment. Chapter II defines zoological gardens as a cultural landscape. Through the development and history of the National Zoological Gardens, man's paradigm becomes parallel and connected to the manner in which animals are exhibited. Whatmore (2002) describes the zoological gardens as “hybrid spaces” of the cultural and the natural world. The National Zoological Gardens of South Africa serve as an investigation to the above research statement.

2.1.1 *“A ‘Natural’ Landscape on Human Terms”*

According to Mullan and Marvin (1999), “the zoological garden typology has changed to reflect progressive cultural values”. Zoological gardens have always been and remain to be cultural landscapes. A landscape “culturally contrived by and for humans, inserted as representations of ‘the natural’ into the built landscape”. This representation of the natural engenders a particular way of looking at animals, both literally and figuratively (*ibid.*:24). Zoological gardens are dual spaces of cultural and natural construct. Man constructed this platform in an attempt to satisfy his yearning for nature.

The historical development of zoological gardens has undergone three distinct realms:

“Pre-modern, i.e. from ancient times to 1750 AD;

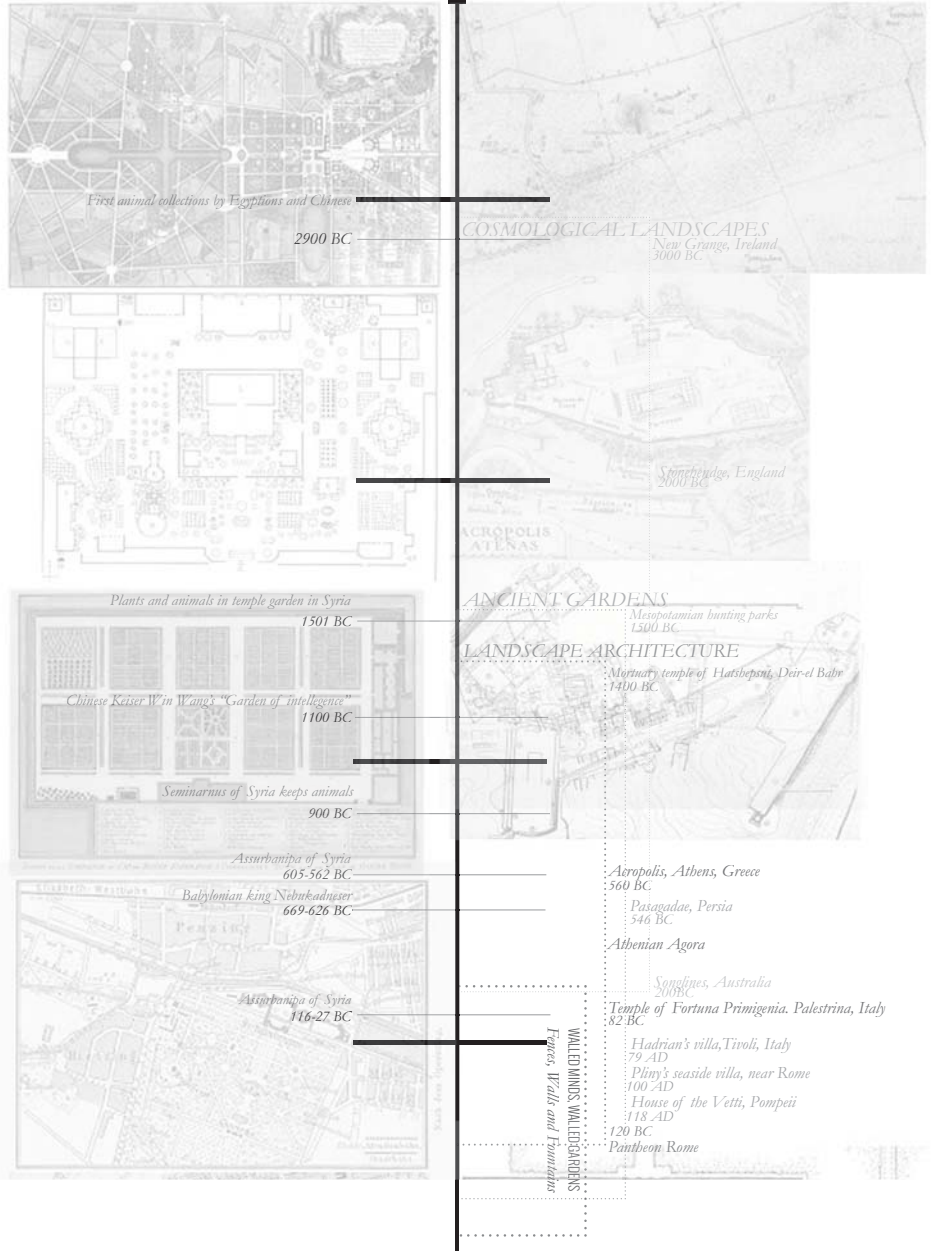
Modern, i.e. from 1750 to 1950; and

Post-modern, i.e. 1950 until the present period” (*ibid.*).

These distinct realms initiate a world-view understanding of humans toward animals and run parallel to the paradigm of the society of the era.

The chapter will focus on the relationship between man, animal and the landscape over time. In addition to this, the flux in paradigm and typological consequence within an international and local context will be investigated.

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The Passion for 'Collecting'
(1500s to 1700s)

animals are a display of imperial power and princely sovereignty
landscapes, pavilions and enclosures were designed to stage the narrative of nature as a
controlled, theatricalised reality

PREHISTORY TO 6TH CENTURY

6TH TO 15TH C
MIDDLE AGES

2.1.1.1 *Victorian savagery and nobility*

Pre-modern: ancient times – 1750 AD

Animal collections from the ancient times are typically described as menageries. The term *menagerie* can be defined as any small collection of exotic animals. The main purpose of these animal collections was to provide private amusement to the elites.

According to Graetz (1995), “the menageries tended to follow the proclivities of the rulers who established them, whether it be sport or spectacle”.

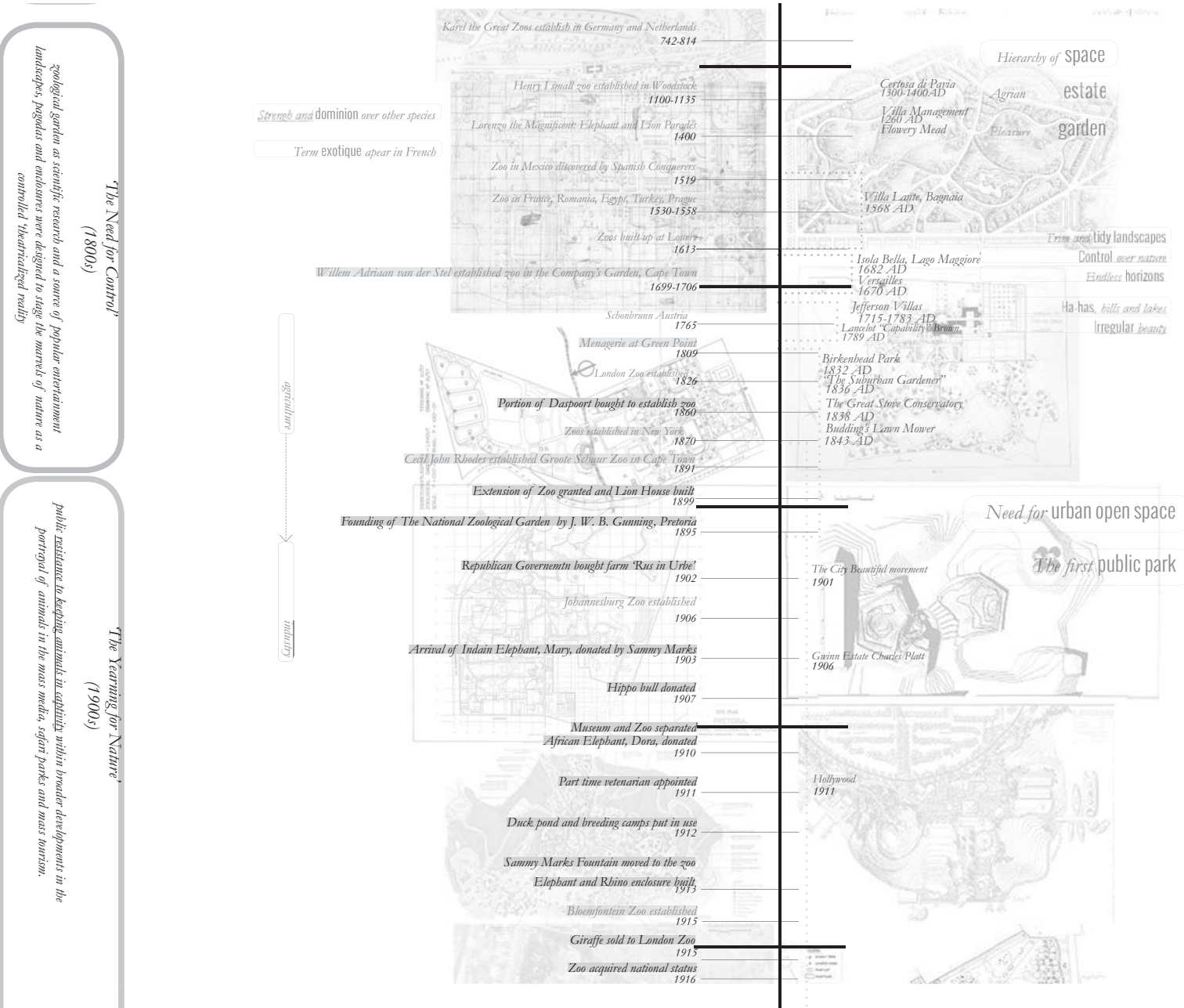
Hancocks (2001:57) explains that enclosures were designed in such a manner that the animals were far below the visitor, which implied enhanced “notions of human dominance over these now controlled and conquered representatives of nature”.

Human control and manipulation was therefore evident, where animals were lured to areas of plain sight by means of food. This setting provided the user with an entertaining experience. Information on species, habitat or behaviour was seldom provided.

The physical construction of fences ensured that the wild would be controlled and successfully put under man’s reign. The barrier became a metaphor for the distinction between “us” and “them” and, more importantly, a “‘mini-triumph of human mastery’ over both beast and nature (Wirtz 1997:74)”.

Zoos of this era followed a parallel trend of the display of the mastery over nature: ethical exhibits intended to instruct and inspire. According to Coe (1995), both these attitudes converged in the Victorian era. Expressions of power among the elites and animals as entertainment among the bourgeois grew parallel to the interest in the natural world. These stances led to the development of the “Age of Reason”. The collection of animals evolved into specimens for study rather than amusement, leading to the first scientific establishment of zoos in the modern world.

After the French Revolution of 1789, the naturalist Cuvier reorganised the collection on scientific principles and it was transferred to the *Jardin des Plantes*. France’s legacy was led by Rousseau’s call to spiritual refreshment through a return to nature (Graetz 1995).



2.1.1.2 *The return to nature*

Modern times: 1750 – 1950

During this era, the term “zoo” was established. Zoological gardens were perceived as living natural museums that focused on educating the public by exhibiting ecological relationships between habitat and species (Mullan 1999:15-25).

A philosophical lineage of contemporary zoo design can be identified from the “return to nature” philosophy through to the Romantic Movement in literature and art. This is evident in the words of Wordsworth, Thoreau and Emerson, along with the wilderness ethic expressed in conservation and the establishment of national parks (Graetz 1995). The former gave rise to the animal welfare philosophy and respect for nature.

The Romantic Movement also contributed to the modern development of zoos. This contribution was executed through the informal park design of Olmstead and Brown.

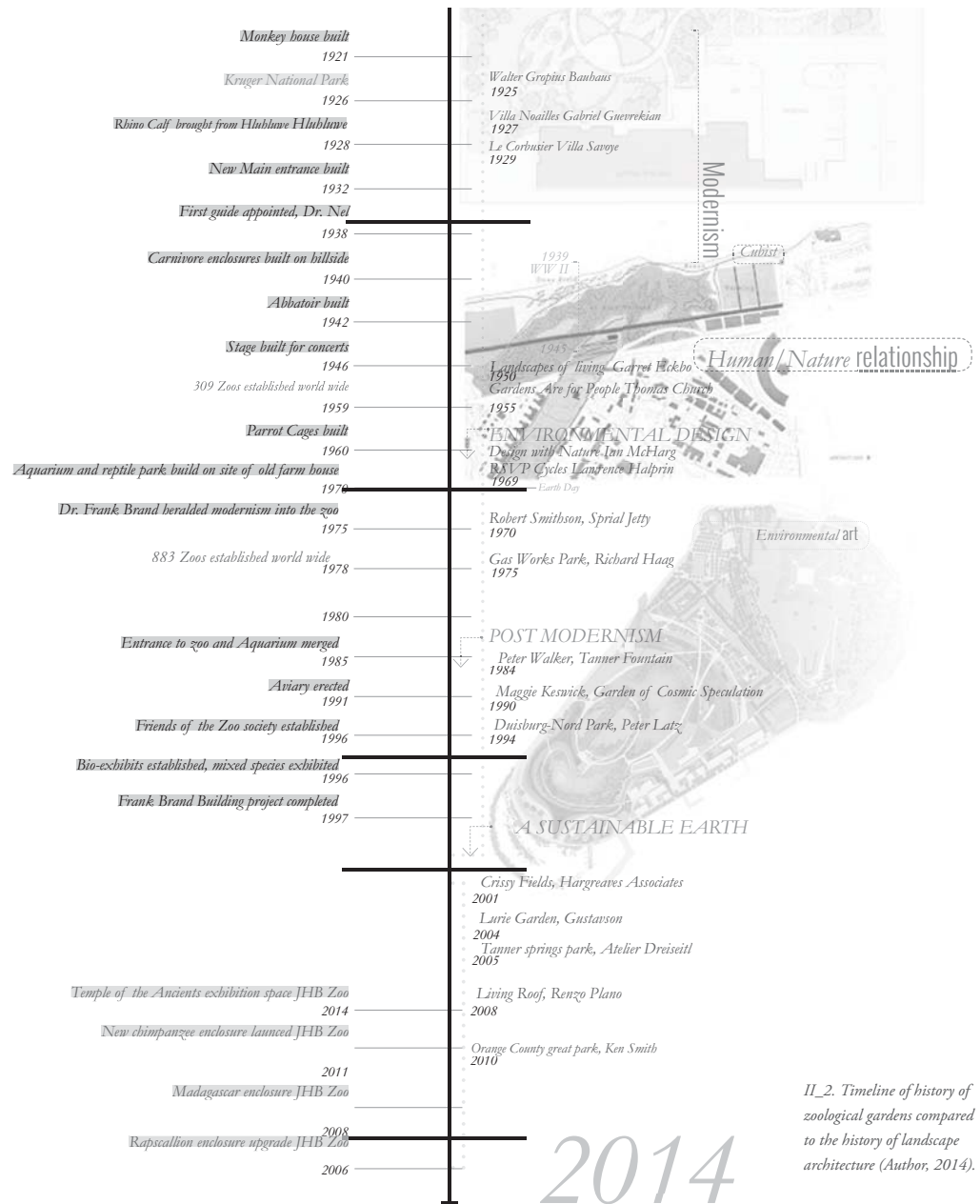
The next great development is contradictory to the above and falls back to the element of man’s control over nature rather than the stewardship. This development was coined in the establishment of the London Zoological Society’s Zoo in Regent’s Park and the Hagenbeck Zoo in Hamburg. Man’s power over nature was seen as knowledge, and expressed by the Victorian philosophy, “Knowledge is Power”.

The social nature of zoos became evident in the London Zoo, as a need for many simultaneous views by a large populace emerged.

Pregill and Volkman explain in *Landscapes in History: Design and Planning in the Western Tradition* (1993) that “the public no longer found relaxing naturalistic environments sufficient for recreation. They demanded entertainment, organised activity and variety. As the nineteenth century progressed, park administrators increasingly dealt with demands for new amenities. Favoured features included conservatories, bandshells and, most disruptive of all to landscape parks, menageries that usually grew into full-scale zoos .”

According to Graetz (1995), the “progress in planning of zoos lagged behind that of parks”. Landscape design provided a model for zoo planning until zoo design took on its own conceptual framework.

Carl Hagenbeck, however, did not follow the model of landscape design and became a unique innovator in the development of zoo design. Hagenbeck updated animal husbandry and display methods and presented them to the Hamburg Zoo. The holding of animals “allowed Hagenbeck to formulate his ideas about animals, including the testing of jumping distances for his moat barrier designs” (Graetz 1995).



II_2. Timeline of history of zoological gardens compared to the history of landscape architecture (Author, 2014).

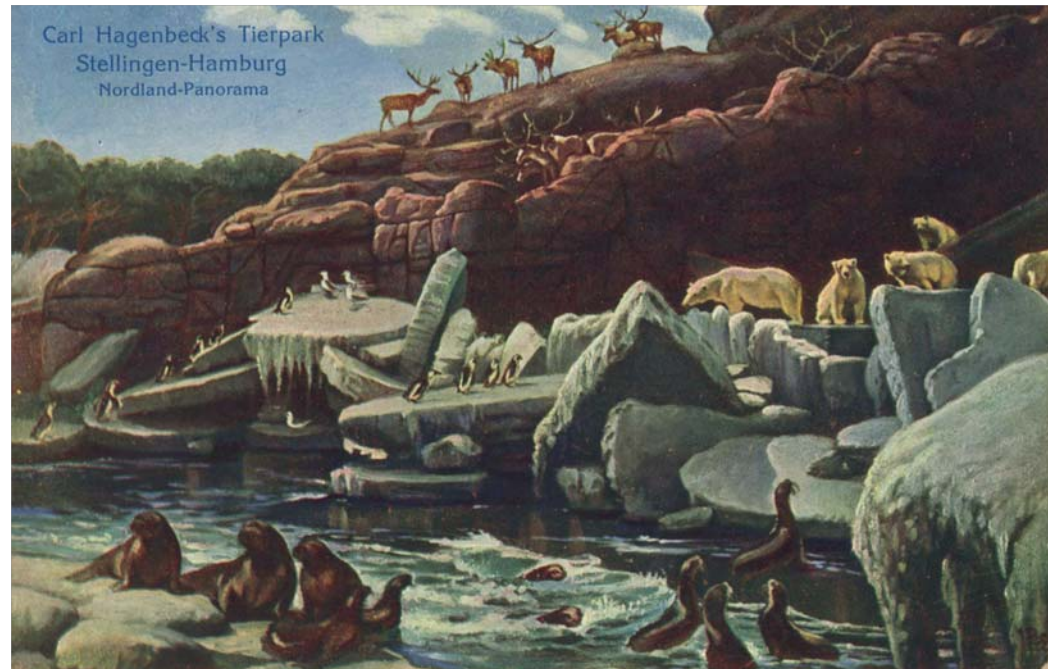
2014

“While some favoured the well-ordered symmetry of the Beaux Artes [sic] classic revival period, . . . others . . . favoured the informal, romantic park style initiated by Capability Brown and later popularised and modified for America by Frederic Law Olmsted” (Coe 1994:33).



Hagenbeck introduced the naturalistic exhibition in which artificial landscape elements were constructed as concealed barriers and simulations of natural landscapes. This principle was followed by mixed species exhibitions, predator-prey illusions and the zoogeographic order, opposed to the previous taxonomical order. Hagenbeck’s exhibitions were, however, focused on what the public wanted, based on the picturesque landscape, rather than actual natural habitats. Coe (1995:97) comments that “the ‘naturalistic’ exhibitions originated by the Hagenbecks usually placed the viewer on the outside of the romantic panorama. While the animals may be portrayed in the picturesque grottos as a make-believe stage set, the public looked over pruned hedges and flower borders of a traditional park. People were separate from and in control of nature (*ibid.*)”

Graetz (1995) explains that the role of zoos emerged from a “bourgeois intellectual toy to a social amenity for the masses for much the same reasons that gladiatorial battles between men and beasts were put on by the Romans (though with much less disastrous consequences for the animals).”



II_3. Hamburg Zoological Garden; Carl Hagenbeck Zoo; Nordland Panorama (Zeno 1911).



*II_4. Zoo as conservation centre
(National Geographic, 2000).*

2.1.1.3 *Candidates for conservation*

Post-modern: 1950 – modern times

The final realm in the development of the zoological garden reflects the new and contesting thoughts of the role of zoological gardens within the urban environment. The notion of zoological gardens acting as environmental resource centres became prominent and this realm is still enduring in present times.

The notion of conservation rose as society became increasingly concerned about the welfare of animals, particularly in zoos. Conservation became a social concern during the sixties, influenced by the earlier generation of thinkers and the above-mentioned wilderness ethic. The combinations of factors led to renovations and the implementation of new exhibitions all over the world.

During the seventies, zoos reacted to the concerns about the “squalid conditions of animals by creating ever-more sterile exhibitions” that permitted a “high degree of disease and vector control”, as described by Greatz (1995). Designers were “exploiting glass and ceramic technology for the first time, influenced by Modernist architecture” (*ibid.*).

A Seattle-based landscape and architectural firm, Jones & Jones, followed this notion by the design of the ‘Long-Range Plan’, representing the zoo as a single biome. Jones & Jones established a tendency for zoos to be “enlarged and redesigned to emphasise an ‘ecological’ approach to the display and management of animals” (Pregill & Volkman 1993:714).



*II_5. Orang-utangs
imitating children
(Gruetz, 1997).*

2.1.1.4 *Animal as client*

Present day

The co-evolution among zoos, nature sanctuaries and museums has been prevailing since the conservation realm. Game reserves started putting wildlife in separate camps for the public to see and zoological gardens developed more naturalistic animal enclosures influenced by the typical natural history museums diorama.

According to Benbow (2000:13) “the enclosures and exhibitions within zoos today are arranged according to a number of rationales, based upon zoological, environmental, regional, and climatological characteristics”. This rationale leads to an increased emphasis on environmental aspects within zoo design. Enclosures are therefore grouped according to aspects relating to conservation and habitat creation.

Benbow’s argument is supported by Hosey *et al.* (2009) in the book *Zoo Animals*, stating that “promoting animal welfare is one of the main goals contemporary zoological parks assume as a priority”. Broom & Johnson (1993) further claims that “this task goes beyond nutrition and veterinary care. It involves housing the species in suitable environments to satisfy their biological needs”. Enclosures are designed with the animals as the main concern at heart, the species’ original environments, its ecology and behaviour.

The intention is therefore to raise the public’s perception of the biodiversity preservation by replicating the habitat of the enclosed animals. According to Coe (2012), this practice has changed the viewer’s attitudes toward animals in captivity.



*II_6. Historical map of
NZG (NZG, 1920).*



Polakowski (1987:82) summarises, “the continuing debate over how accurately habitat needs to be portrayed, thus some designers believe that . . . in many instances a setting with simulated rock outcroppings is inappropriate to the animal’s native habitat . . . Many exhibitions representing this design approach are unsuccessful because the essence of the native habitat was never realised and/or the physical abstraction of the essence was poorly conceived and executed. The lack of sufficient space for animal exhibitions on the zoo grounds has helped perpetuate the need to abstract, in size and atmosphere, the natural habitat.”

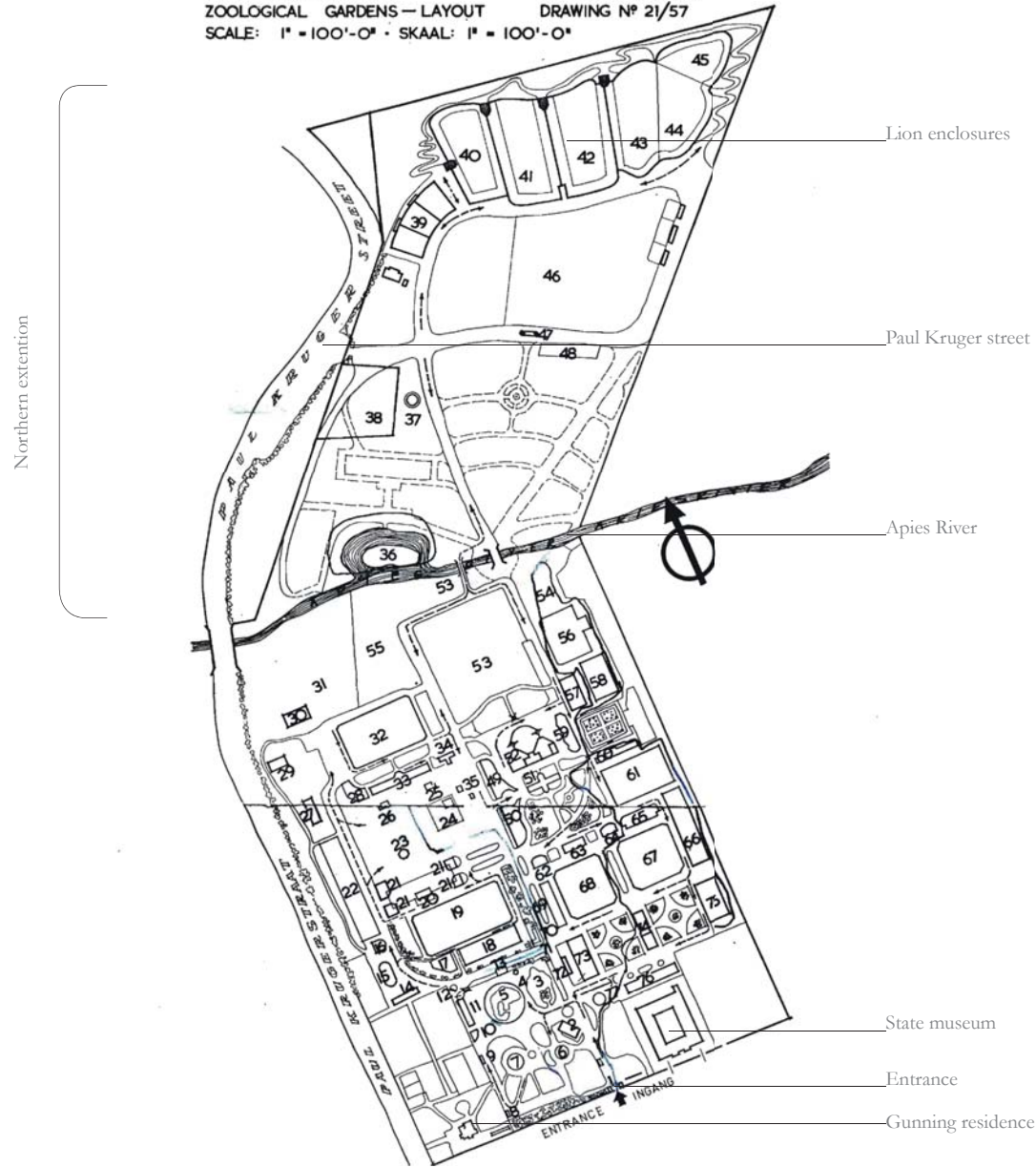
The future of zoo design appears to be seeking ways to convey a greater meaning and message in exhibitions, while sacrificing neither the accuracy of portrayal of habitat nor returning to the expression of man’s dominance over beasts. As Coe (1995:39) puts it, “the coming challenge is to use behavioural knowledge to entice animals into ideal viewing positions. The trick is to provide as many positive incentives as possible to keep the animal in view rather than providing negative stimuli if the animal chooses to be seen.”

Zoos are therefore called do stretch the boundaries beyond the mere display of animals. “Animals are the difference between zoos and museums and the experience of these must be maximised to make a deeper but correct impression on visitors (Graetz 1995).”

In summary, the historical and contemporary background of zoo design becomes the *Tamed Platform* from which various elements of zoo enclosures, the implications of the animal exhibition and the threshold it creates relative to man can be explored.

DIERETUINUITLEGPLAN
ZOOLOGICAL GARDENS — LAYOUT
SCALE: 1" = 100'-0" · SKAAL: 1" = 100'-0"

TEKENING N^o 21/57
DRAWING N^o 21/57

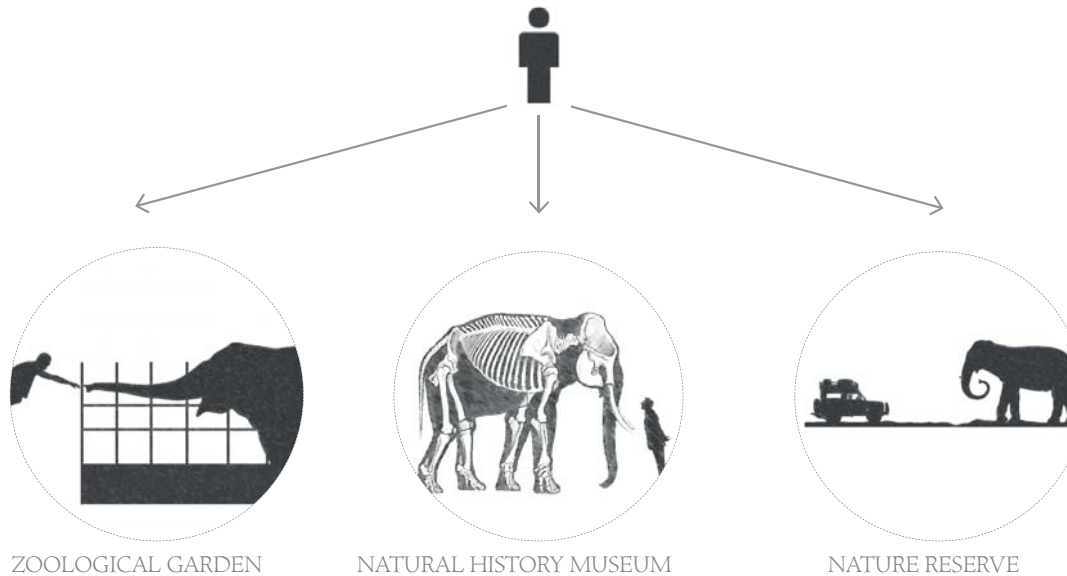


II_7. Map Plan of Developed Zoological Gardens, north and south of the Apies river (department of public works 1967)

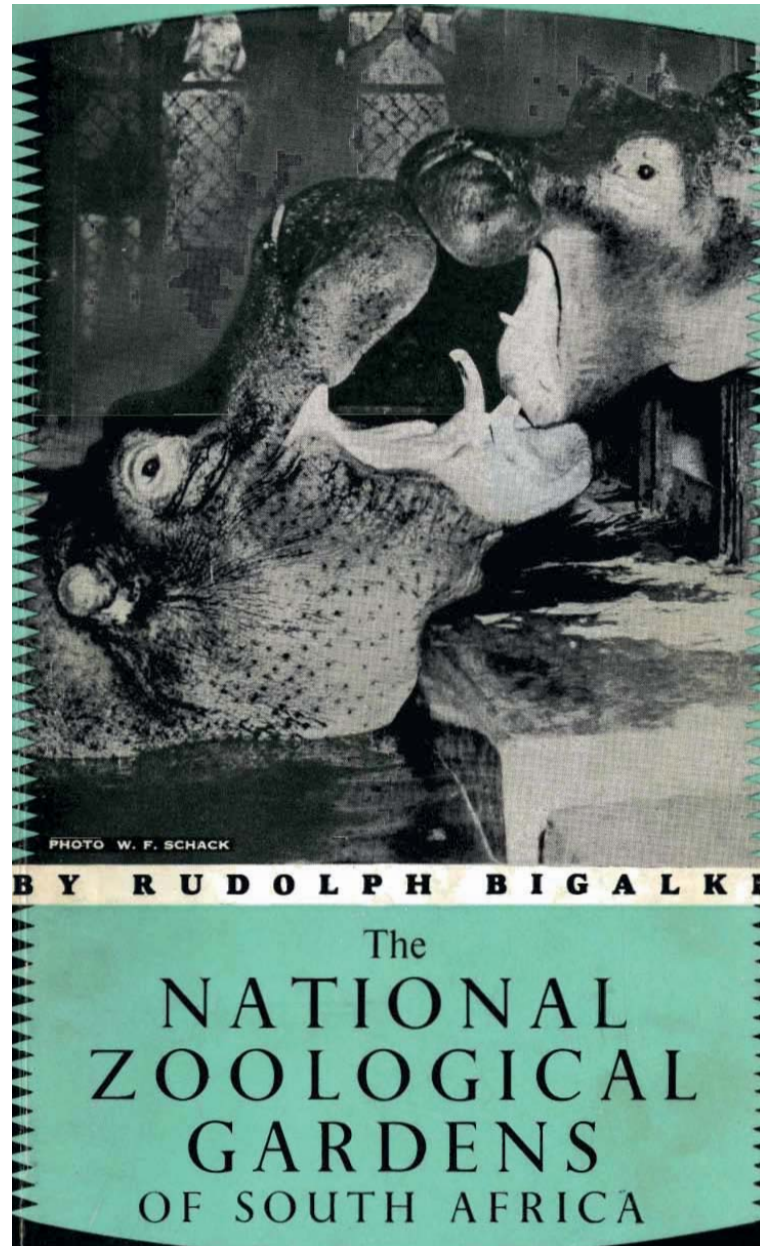
2.2 *The tamed platform*

The need for interaction with animals has spatially manifested itself in three ways within the urban context of South Africa as illustrated in figure II_8 on page 61. According to Joffe (1969), we either accord legal protection to certain species, confine the species and its environment in some sort of enclosure or, finally, we take the species out of its natural environment and continue breeding under controlled conditions. Contemporary zoos, natural history museums and nature reserves all over the world represent these three practical methods.

As noted throughout the development of zoos, the evolution and design of the zoological garden's intellectual and spatial constructs of wilderness and ecology can all be prescribed to one common factor, that of which man is always the central figure of the experience. This statement is evidently visible within the NZG.



II_8. Spatial manifestation of how we look at animals adapted from Joffe (1969) (Author 2014).



*II_9. Cover of NZG guide
book 1961 (NZG, 1961)*

The National Zoological gardens of South Africa – since 1902

The National Zoological Gardens of South Africa came into existence as a branch of the Staatsmuseum der Zuid-Afrikaansche Republiek and their establishment was due entirely to the late Dr J.W.B. Gunning.

Prior to the construction of the Old Museum in Boom Street, animals were housed in the Market Hall on the market square of Pretoria. Live animals were occasionally given to the Staatsmuseum and by the end of January 1898, about a dozen mammals of various sizes, as well as approximately fifty small birds, one owl and two reptiles, were on hand. Gunning was permitted to have a few simple birdcages made, so that the large numbers of small birds offered to the museum from time to time could be kept alive until their plumage had become suitable for mounting. These animals, together with others that were purchased or presented were kept in a small yard at the back of the museum on the market square. As the public came to know about the animals and desired access to them, it resulted in the public paying admission fees. The revenue from this source helped to pay for the maintenance of the animals. According to Van den Berg (2000:32), Gunning went to great extents to create a “recreational heaven for the city’s inhabitants”.

In 1899, Dr Gunning received permission to move his small collection from the market square to the farm Rus in Urbe, the present site of the National Zoological Gardens.

The NZG were beautifully landscaped and complemented with dramatic buildings, such as the Lion House built in 1902. The main entrance was erected in 1903. At this time, the Zoo consisted of a few farmhouses and enclosures housing small animals. Gunning enthusiastically continued to expand with the following: a camp for buffalo and zebras in 1907, elephant and rhino houses in 1910, a bear house in 1911, and the raptor cages in 1912 (Dry & Joubert Argitekte 1991:42). The NZG became a popular place to visit throughout the years, especially on Sunday afternoons when bands would play and entertain the visitors (Bigalke 1958:21).

Gunning was later introduced to Carl Hagenbeck and implemented his ideas and philosophies at the NZG. Gunning developed a principle to display the animals not as captives confined to narrow spaces to be observed between bars, but as free species to wander from place to place within larger boundaries. The bars were replaced by concealed manners of control. As a result, enclosures started to be seen less as cages and more as exhibitions (Dry & Joubert Argitekte 1991:42).



*II_10. Dr. Jan Willem
Boudewyn Gunning
(NZG, 1920)*



This approach recognised the importance of the position of the observer in relation to the observed. The dominance of the constructed cage was greatly reduced to a simple holding structure. This approach required much more space than previous enclosures to allow for adequate landscaping, hence the term “Zoological Park” or “Zoological Garden”.

In the year 1909, additional land was granted for the “Northern Extension” to be added to the Zoo on the northern side of the Apies River. Years later this vision led to the northern lion and tiger enclosures, which are still in use today. In 1935 the NZG extents were increased by the addition of the Prinshof Farm No. 628. See figure II_7 on page 60.

Due to its expansion, the government decided that the Transvaal Museum and Zoological Gardens were to be separated from one another in April 1913 and independent committees and directors were appointed.

In June 1913, Dr Gunning passed away after a long illness, and Dr A.K. Haagner, who served as director from 1914 until 1926, succeeded him. In 1916, the Zoo received national status. At this point of time, the Zoo had limited funds for acquiring additional animals, and served as a stopover for animals travelling from Africa to the rest of the world.

Dr Rudolph Bigalke became the third director of the National Zoological Gardens in 1927. Bigalke managed to acquire additional funding from the Department of Public Works to erect the enclosures on the hillside, as envisioned by Gunning. The tiger and lion enclosures opened in December 1938.

During the 1930s to 1940s, the Zoo had an amusement park atmosphere. Many of the animals were exhibited on poles and performed tricks to the delight of the public. In 1960, the NZG were modernised by the order of Dr Frank Brand, who became the fourth director of the Gardens. At this time the amusement previously provided was eliminated and the focus was shifted towards implementing night facilities into all the enclosures in such a manner that the public could only view the animals from a maximum of three sides, offering the animals a safe retreat. Most enclosures were also upgraded to suit the natural requirements of each animal.

Mr Willie Labuschagne has been director since 1985. Labuschagne has improved the connection between the NZG and the public. He believed that only through this connection could the Zoo reach its full potential as an educational and research entity. Great progress has been made in achieving this goal by the formation of organisations such as Friends of the Zoo and the Adoption Scheme (Dry & Joubert Argitekto 1991).

Max the gorilla 1970-2004



II_11. Max the gorilla sculpture, Johannesburg Zoo (Author 2014)

2.3 Conclusion

Today the Gardens are a major natural gem within the inner city and stands at the forefront of an increased effort towards the awareness of the value and frailty of the environment.

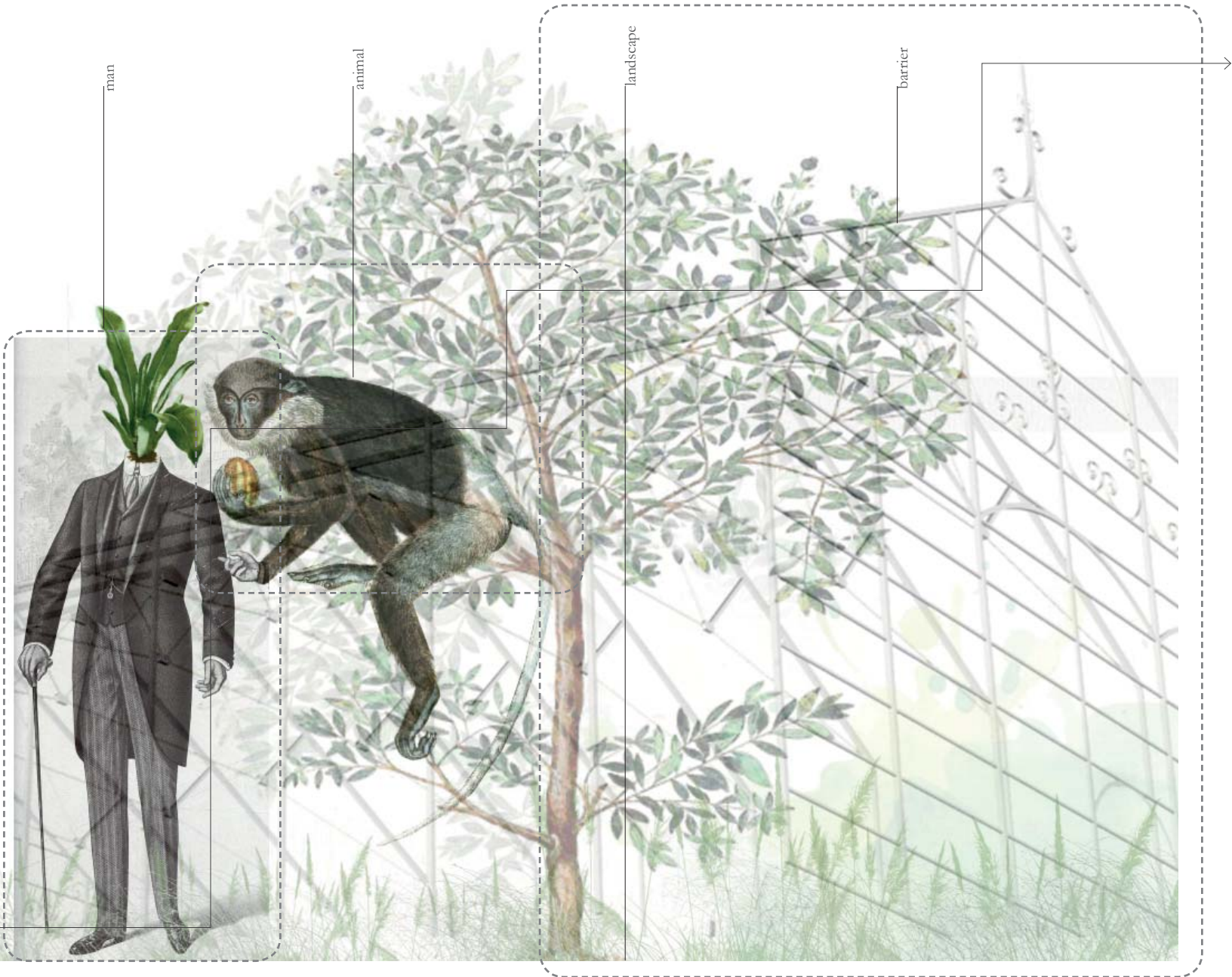
The NZG have evolved from a menagerie-style exhibition to being leaders in conservation and education. The NZG occupy 85 hectares and house over 8000 animals, including reptiles, fish and birds. It is also the largest zoo in the country and the only one with national status. More than 600 000 visitors pass through the Zoo's gates each year. Other facilities include a reptile park, South Africa's largest inland aquarium and an extensive exotic tree collection (www.gauteng.net 2014).

To really understand the lure of the zoo, one should not look at the animals, but at the people. People enter the gates and feelings of respect for animals, concern for and solidarity with animals arise. Contrary to that, people see in them the beast within and somehow believe that having tamed them we simultaneously succeed in taming our inner beasts.

According to Mullan and Marvin (1997) in the book *Zoo Culture*, zoo visitors tend to respond to animals not as creatures with a separate existence and identity from human beings, but as reflections of themselves. The activities of the animals stimulate a response to the user and a desire to understand the behaviour it presents. This behaviour is interpreted through humanlike emotions or needs.

Society uses these anthropomorphic devices to understand animals. For many, it might be the only way to understand, appreciate or emotionally respond to animals. We are colluded into this false world where animals, their environment and behaviour are not viewed zoologically, ecologically or ethologically, but rather with ignorant statements such as, "it is sitting in the corner because it is sad" or "it is splashing around in the water because it is lazy".

The author has conducted an exercise at the NZG and the Johannesburg Zoo to observe the zoo visitors as a cultural study. It was evident in the findings that zoos are about real people who experience in close constructs.



II_12. Collage of the threshold between man and animal influenced by the landscape (Author 2014).



Cherfas (1984:239) argues that “zoos are a panoply of interaction between man and animal providing pleasure and joy. They might act as reservoirs for genetic diversity but so would a fridge full of embryos. They may be sources of information and knowledge, but so are books, films and photographs. Zoos offer something that nothing else can, the simple experience of contact and pleasure. For that alone, zoos are worth it.”

Cherfas support this argument with a story about a girl and an elephant:

One day, on a visit to a zoo, a little girl and her mother were watching the elephants. The mother was bored and tried to persuade the little girl to move on, but the girl held fast by her fascination with them. Eventually, and somewhat exasperatedly, the mother pleaded. “Do come on,” she said, “you’ve seen elephants lots of times on TV.” Her daughter thought for a while and without turning away from the animals, replied, “Yes, but these are so big” (ibid.).

Nevertheless, re-evaluation is called for zoos all over the world, even though they are promoted as wonderful institutions performing miracles. The visitor is limited from an optimal experience with the animal. Restrictions conformed as a barrier physically and psychologically distance our experience with the animal.

Implementing new design principles as introduced by Coe (2012) focuses on the “interconnectedness within natural systems and the interdependence between all living things”. These principles will lead to new design standards and an increased awareness of animals’ needs. By recognising the impossibility to replicate certain eco-systems and satisfy the needs of many traditional zoo species, an alternative option will give new attention to smaller species that do well in captivity, without neglecting the qualities of the social and cultural aspects of the site. This option will surface opportunities to redefine the threshold between man and nature and the experience of the zoo enclosure as a whole.