

Visitor Circulation in Zoos

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1. Introduction

To have a successful visitor experience it is not enough to work at the level of each individual exhibit, but it is mandatory to organize visitor circulation for the whole zoo.

2. Definitions

Spatial Hierarchy (an ascending or descending order of significance): Major space vs. the minor; public space vs. the non-public; primary pedestrian path vs. secondary or auxiliary pedestrian paths; etc.

Distribution Space: A major plaza; minor plazas; nodes; etc.

Zone: Each zoo can be organized into zones, each one with a theme.

Themes: Historically, zoos have been organized by taxonomy and geography and, recently, by climate zones. But themes can be otherwise defined: e.g. animal colours and coat patterns, animal sounds, habitat strata, etc., as long as the selected theme is consistent.

3. Assumptions

For the purpose of our analysis, we will consider zoo schemes with only one entrance/exit and one distribution space/plaza. This concept can then be extrapolated directly to more complex projects wherein more elements are needed or already exist.

4. Development

There are infinite circulation configurations because each zoo has its own development history, mostly over a long period of time, with many small improvements, and without much planning. However, there are some basic schemes that tend to be repeated: those without hierarchy and those with some degree of hierarchy.

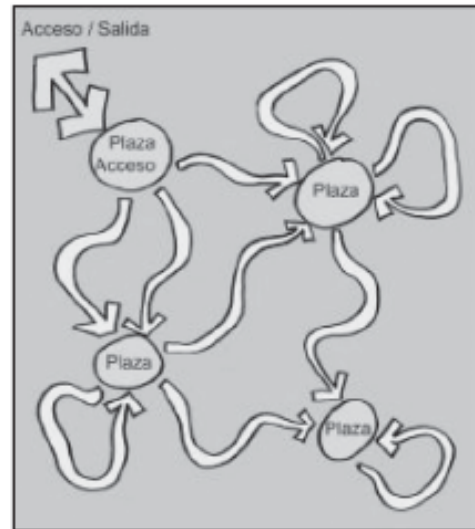
To analyze these schemes, we will consider three basic elements that will organize the visitor circulation: Access, Distribution Areas and Animal Exhibit Areas. Visitor services (toilets, restaurants, education facilities, etc.) are located around the Distribution Spaces/Plazas, leaving the Animal Exhibit Zones free from urban functions and resulting urban structures. One way pedestrian circulation is encouraged through appropriate planning and design.

a. Without Hierarchy

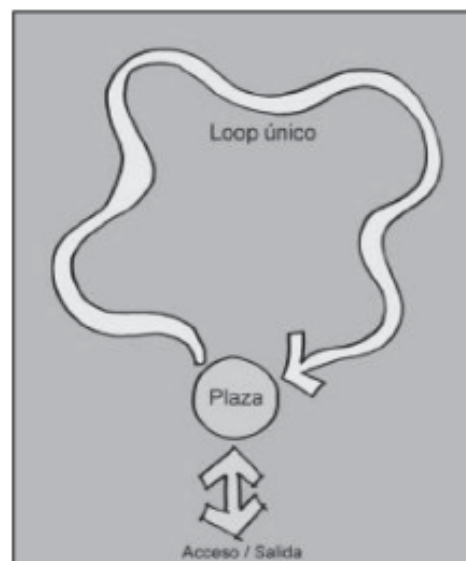
This is the most common configuration of zoos that have been incrementally developed without appropriate planning. This presents multiple circulation options from a multitude of disparate distribution spaces. From the visitor point of view, a visit to a zoo like this is not efficient and quite often is an unpleasant experience. It is easy to be disoriented, one can become lost, and one can, as a result, miss many worthwhile animal exhibits. From the educational, interpretive point of view, it is consequently difficult to develop an appropriate story line that makes sense and is rational.

b. With Hierarchy, unique loop

If we are to analyze circulation patterns that emphasize



hierarchy, the simplest example is that which has one access, one distribution space and one loop through a complex of animal exhibits. It works well for small zoos that have one a single theme; for example: endemic, native fauna. For larger zoos with many parallel themes, a single, unique loop system is not practical since the animal exhibits along the loop become excessively and exhaustively long.

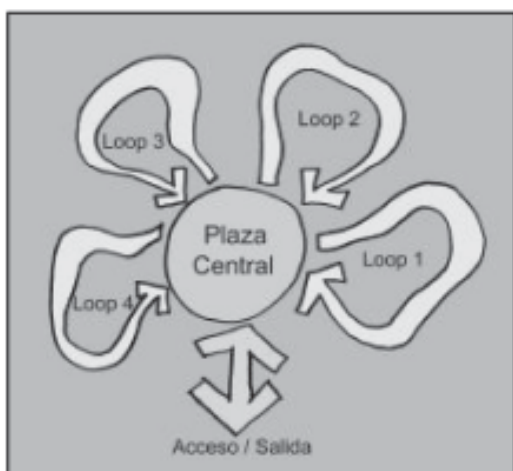


c. With Hierarchy, multiple loops

For the largest and most complex of zoos, the hierarchy can be extended to have several exhibit loops that begin and end at one distribution space.

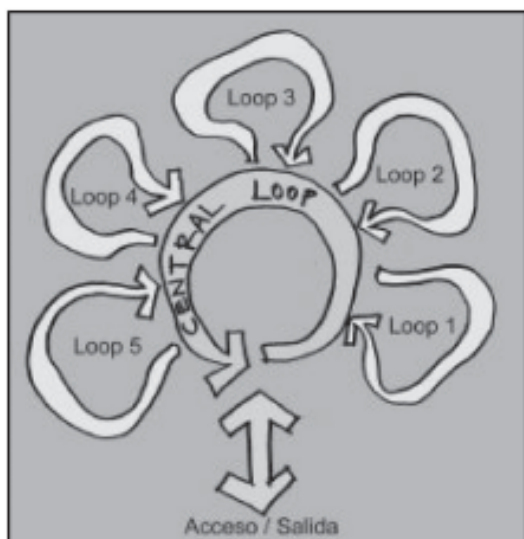
^{1,2}Architect, Principal Pangea Consultants, www.pangea-designconsultants.com; ³Principal Partner, Bernard Harrison&Friends, www.bernardharrisonandfriends.com. Document presented as part of the Design Workshop. "The Principles of Zoo Design and the Planning of a Night Safari", for SEAZA/ARAZPA Joint Conference "The Art and Science of Zoos" at Melbourne, Australia, May 2005, and on the Research section of ZOO LEX www.zoolex.org.

This scheme provides structure to develop a different theme for each loop, with the distribution space as the transition from one theme to the other. The visitors can select the zones they wish to visit and the sequence of visitation depending on the time and energy they have, always encountering the visitor services and the exit in the distribution space. Another positive aspect of this type of organization is that service circulation can be located on the periphery of the zoo, thereby minimizing the conflict of crossings with visitor circulation.



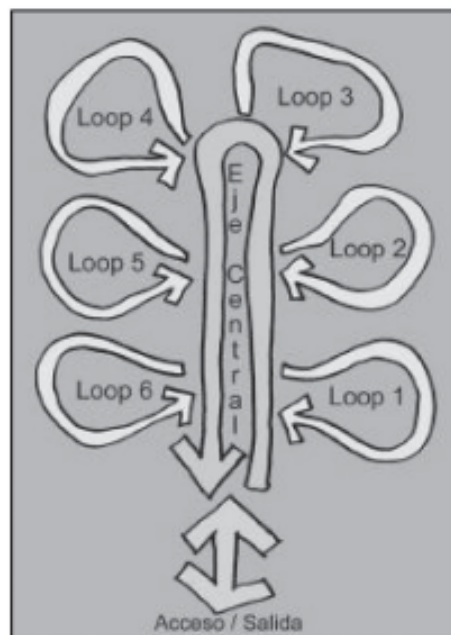
d. With Hierarchy, central main loop

A variation of the multiple loop type described above is a main loop that functions as the distribution space. This is typical for zoos that have an icon in the middle, such as a lake or a heritage structure, or a space that provides a traditional activity.



e. With Hierarchy, central axis

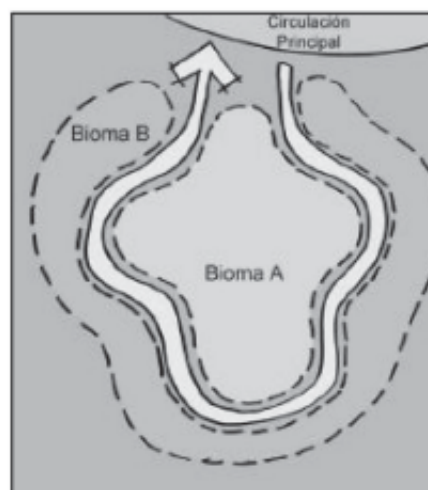
Another variation incorporates a main axis, or corridor, which functions as the distribution space. Its primary benefit is that it allows a long, distribution corridor that provides the opportunity for more loops originating from it and ending in it. This allows greater dispersion of visitors into the various exhibit zones.



5. Sub Theme Zones

If we analyze the exhibit loops, the analysis would reveal sub themes within each theme zone. The principal challenge is to divide a themed loop into two sub theme zones.

One common solution is to place one theme on one side of the visitor path and another theme on the other side. This is most definitely not recommended since attempts to create an immersion experience is lost, since it is impossible to immerse the visitor in two, parallel, often conflicting themes and/or environments. Attempts at interpretation of the parallel story lines are doomed to failure.



Another solution is to pass through one theme on a unique loop and then enter another theme. This presents an unfavorable problem in the return to the original distribution point, wherein it is necessary to again traverse and retrace the path of the originating theme.

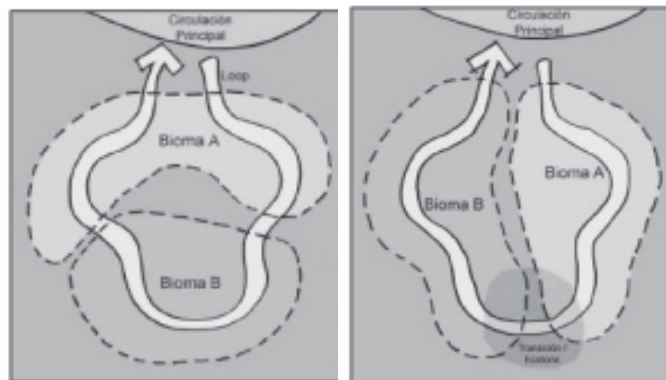
The most practical and useful solution is to position one theme at the beginning of a loop, succeeded by a transition

zone (if we are working with habitats, this transition can be interpreted as the ecotone). The transition zone would allow a succession into a second theme zone. This concept can be repeated so that the visitor can pass through any number of theme zones.

6. Conclusion

Since visitor circulation is a key element that defines the visitor experience, it must be planned and designed to maximize the zoo experience and to provide the structure for a coherent story line. This structure guides the visitor through the Zoo and enables the visitor to absorb the Zoo message subliminally and directly.

Landscape immersion can further add to circulation coherency by providing a landscape surround consistent with each theme. A seemingly natural, often disorienting, meander of the circulation system helps in further convincing the visitor of the reality of the unreal. It is also important for the visitor to have periodic contact with the original spaces to allow re orientation. This re contact provides access to visitor services as the need occurs.



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About ZooLex

The ZooLex Zoo Design Organization is a non-profit organization, registered in Vienna (ZVR-Zahl IV-SD-1193/ VVM/2000), independent from companies and organizations. It relies on the support of subscribers, members, sponsors and well-wishers to fund its activities. Contact: ZooLex Zoo Design Organization: zoolex@zoolex.org

Objectives: The ZooLex Zoo Design Organization was established to help improve holding conditions for wild animals in captivity by publishing and disseminating information related to zoo design, promoting appropriate holding conditions for wild animals in captivity, providing balanced technical information and advice about zoo design, and supporting research and vocational training related to zoo design.

Partnership with WAZA: ZooLex provides a direct link to the WAZA website from its top navigation bar. The World Association of Zoos and Aquariums (WAZA) makes the ZooLex website available through www.waza.org and holds the ZooLex archive. WAZA's mission is to guide, encourage and support the zoos, aquariums, and like-minded organisations of the world in animal care and welfare, environmental education and global conservation. The purpose of this partnership is to mutually support each other organization's goal of promoting best practice in animal exhibit design.

Target Audiences: ZooLex targets different audiences with services for work, leisure and marketing. An analysis can be found in Monika's master thesis. Target groups ZooLex use zoo professionals (directors, curators, keepers, educators etc.) compare standardized descriptions of animal exhibits access a data base on zoo design easily and fast refer to scientific documentations of other exhibits in your proposals find contacts and references for experts get public relations by presenting

new exhibits advertise for your work find results from marketing research get news from zoos learn about new products, technologies and services find lists of plants used in animal exhibits announce and find events related to zoo design find partners for research and *in-situ* projects. Zoo suppliers advertise products, technologies and services announce new products, technologies and services inform about special offers find results from marketing research learn about trends in zoo design. Zoo friends and volunteers find new exhibits see and read about animal exhibits learn about trends in zoo design promote good zoo design. Sponsors address a global audience interested in zoo design. Approach zoo professionals worldwide learn about your customers promote your ideas find results from marketing research. Journalists learn about holding conditions of wild animals in captivity read about research and *insitu* projects get results from marketing research see trends in zoo design

The ZooLex project: The website was developed with input from zoo professionals as part of Monika Fiby's studies in landscape architecture. A pilot project was evaluated in spring 2000. The results of the pilot project are published in her master thesis. The purpose of the ZooLex website is to present animal exhibits worldwide to an international audience, offer information to professionals, provide a platform for exchange of expertise, and publish people's opinions on animal exhibits in discussions and contests. The ZooLex pilot project was made possible by Austrian Ministry of Science and Traffic, sponsoring Monika's research; University of Georgia, advising Monika's research; Rosinak & Partner, making their server available; Hans giving technical support, Members of the American Zoo Association, encouraging the efforts; Woodland Park Zoo, Zoo Zürich and Zoo Schönbrunn, participating in the pilot project; many professionals and friends, giving valuable feedback.