



Viewing Gorillas

Analysis of Visitor Use
and Learning

Visitor Studies
Summer 2009/2010

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Overview

- Introduction to Project
 - Emotional Response
 - Learning
- Strategy/Methods
- What I learned about
 - The People Who Visit
 - Their Behavior
- What were visitor's
 - Gorilla Behavior
 - how it influenced visitors
 - Takeaways

Background

- About me:
 - Anthropology grad student interested in play and learning, particularly informal environments
- About the gorillas:
 - The gorilla exhibit is one of the most popular exhibits at Woodland Park Zoo.
 - No recent thorough visitor's study on gorillas exhibit.

Goal

- I performed this research in the summers of 2009 and 2010 in order to determine:
 - how visitors interact with the gorillas and their exhibit
 - the amount and type of knowledge gained during their visit to the gorilla exhibit
 - what can be done to enhance the experience for visitors

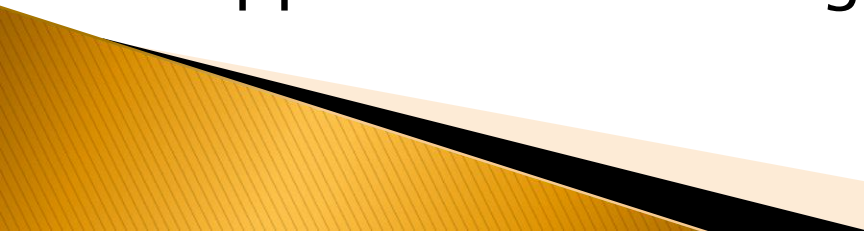
Methods



2009: Observational

- ▶ time spent by visitors in the exhibit overall
- ▶ time spent in different areas of the exhibit
- ▶ comments made by the visitors
- ▶ use of signs, videos or a presentation
- ▶ visitor characteristics
 - Group type
 - adults only, family, etc.
 - Estimated age of children
- ▶ Visibility of the gorillas
- ▶ Gorilla's behavior during the visitor's stay in the exhibit.

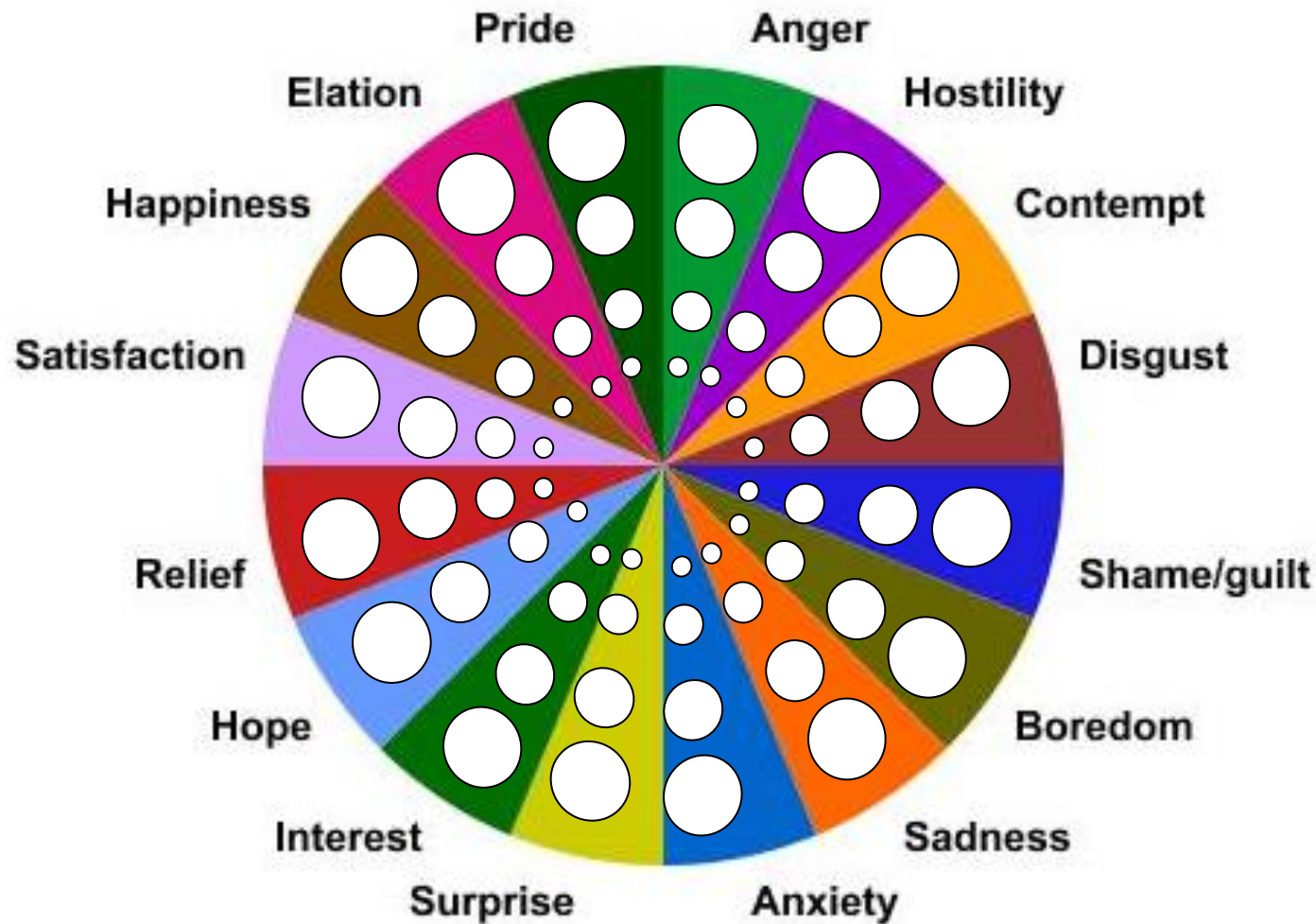
About the Exhibit

- ▶ The exhibit was broken up into four zones or viewpoints:
 - ▶ Zone 1: The bronze sculpture of the gorilla family
 - ▶ Zone 2: The viewing window for Troop Two. Signage is located mostly to the right of the viewing window.
 - ▶ Zone 3: The overlook into Troop One's enclosure. This viewpoint provides limited visibility, and one main sign.
 - ▶ Zone 4: The main viewing window for Troop One. Signage is located predominantly against the wall opposite the viewing window.
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2010: Interviews

- ▶ Conducted interviews with visitors as they were exiting the gorilla exhibit.
- ▶ Asked a series of questions
 - Members
 - enjoyment
 - observations of gorillas behavior
- ▶ Part of the interview included the use of an emotions wheel
 - Participants were asked to identify any feelings they felt in response to seeing the gorillas

Emotions Wheel





Visitors

About the Visitors

- 200 visitor groups
 - ▣ 102 in 2009
 - ▣ 103 in 2010
- A self-selected audience
 - ▣ people who come to zoos usually already have some interest in animals

Groups

2009 Group Types and Frequencies

Visitor Group Categories	Frequency
Family with kids under 18	71%
Adult only group	22%
teen group	7%
Total	100%

No field trips, one art class group

- The 2010 group types were very similar to those identified in 2009.
 - ▣ Family: 67%
 - ▣ Adult group or couple: 31%

Visiting Frequency

Almost a third of people (29%) who answered the survey were members of Woodland Park Zoo.

- Almost a third (27%) said this was their very first visit to Woodland Park Zoo.
- For those who had visited the zoo previously, about half came once a year or less.
- About 1/5 came between 1 and 4 times a year, and very few came more than four visits a year, although some of the more frequent visitors came as often as twice a week or more.

Frequency of visits	Frequency (%)
Less than one visit a year	46
1 – 4 visits a year	23
More than 4 visits a year	4

Foot Traffic

- The amount of visitors or overall “Busy-ness” was measured in 2009 and 2010

Business at the Exhibit

Score	Description	Examples	Frequency
1	slow	only one or a few visitors at window, quiet	15%
2	moderate	the window is half-full, some noise	35%
3	busy	viewing window is full, noisy	53%
		Average	2.3
		Median	3

Time spent in exhibit

- Visitors spent an average of nine minutes in the gorilla exhibit.
- 72% of groups viewed both troops during their visit.

	Zone 1	Zone 2	Zone 3	Zone 4
<i>Number of visitors</i>	35	88	58	87
<i>Mean (in sec)</i>	124.31	199.13	62.79	234.85
<i>Mean (in min)</i>	2.07	3.32	1.05	3.92
<i>Median (in sec)</i>	106	167.5	36.5	175

Emotional Response

Visitors were asked a series of questions about their reaction to gorillas.

Visitors were asked if they had an emotional reaction to seeing the gorillas, and if they could identify it on the wheel, and strength of emotion on a scale of 1 – 4.

Allowed to choose as many as they wanted.



Emotion	Frequency (%)	Average Strength
<i>Happy</i>	54.3	3.2
<i>Interest</i>	43.6	3.2
<i>Sad</i>	16.5	2.7
<i>Satisfied</i>	7	3
<i>Elated</i>	6	3.5
<i>Guilt</i>	6	3
<i>Surprise</i>	5	3.4
<i>Bored</i>	4	2.75
<i>Awe/Amazement</i>	4	X

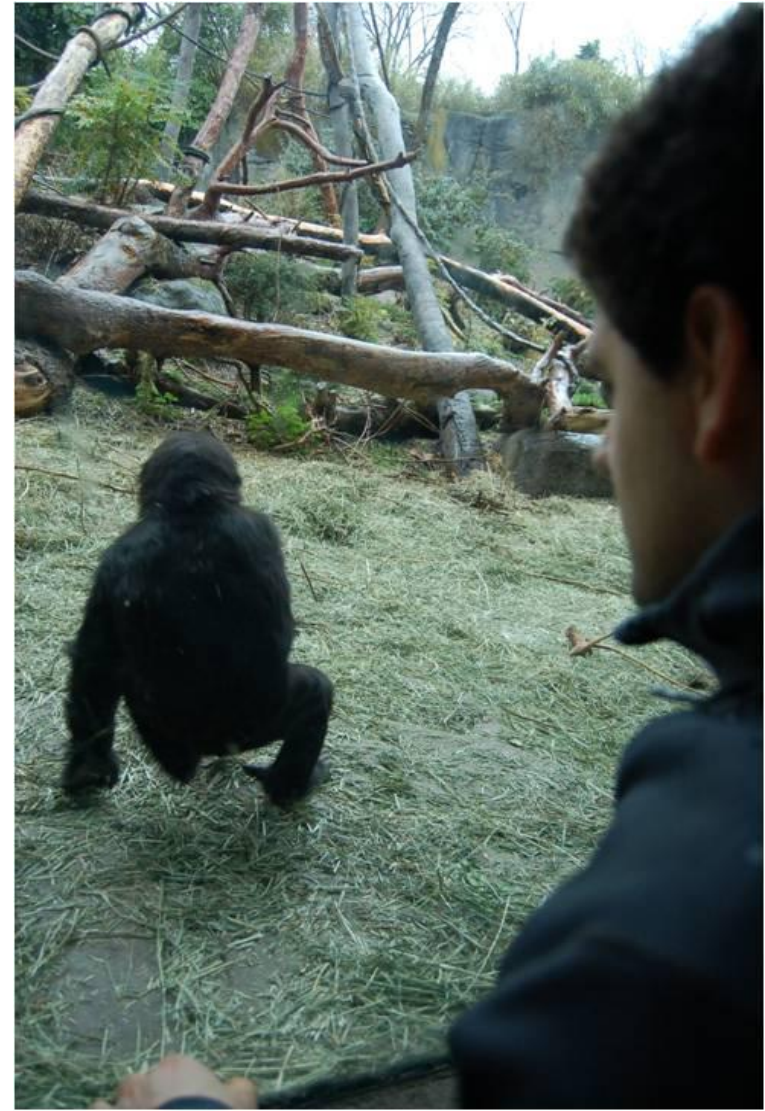
Awe/amazement was a “write-in” response.

Other emotions mentioned at 3% or lower: funny, fear, hope, disgust.

Reasoning behind emotions

When asked “what made you feel that emotion?”...

Emotion	Reasoning	Examples
<i>Happy</i>	Behaviors	"Just lying around, eating, playing"
<i>Interest</i>	Curiosity to learn more	"They're just so interesting" "They're my favorite animals!"
<i>Sad/Guilt</i>	Sympathy	"I just feel bad they don't get to be out in the wild." "They're endangered"



Observed Emotional Responses

- ▶ The opportunity to connect with an individual animal or group of animals inspired visitors to learn and care about the gorillas.
 - After learning that a gorilla was the same age as oneself, visitors changed their tone and comments to reflect a bond with that particular gorilla.
 - Toddlers who saw Uzumma up close expressed wonder, and sometimes fear, as the animal stared back at them from the other side of the glass.
 - Kids were also surprised when they saw the gorillas eating foods they recognized.
- ▶ Comments like, "Yes, gorillas eat carrots like you," indicated learning and connection.

Observed Emotional Responses

- ▶ Adults tended to identify and connect with gorillas' facial features and body structure as well as their actions.
- ▶ Adults' comments focused on
 - how human the gorillas looked
 - how the gorillas stood or sat or appeared to exhibit specific emotions
 - how they worried about the gorillas being on display.
- ▶ This empathy indicated a high level of compassion and concern for the gorillas

Overall Enjoyment

- ▶ Overall Enjoyment ranked on 1 – 7 scale
 - Average score: 5.76
 - Median score: 6
- ▶ Business did not seem to influence visitor's response to seeing the gorillas.
- ▶ During the busiest times, visitors actually scored the exhibit as overall more enjoyable than the study's average overall enjoyment score.
 - Average 5.83



Learning



Overview

- 54% of all visitor groups demonstrated behavior correlated with learning.
- Learning was facilitated by
 - Conversations
 - Signs

Learning Through Conversations

- The most common learning behavior visitors engaged in while visiting the gorillas was to make a comment about the gorilla's body or its behavior.
- Parents encouraged their younger children to identify with the gorillas:

"Look, the gorilla's eating fruit. Do you eat your fruit?"

"His hands are huge!"

"Say bye-bye to the gorillas."

Learning Through Conversations

- Children also made comments or asked questions to adults in their group:

"Which one's the mommy? Which one's the daddy?"

"Can the gorilla get out?"

"The gorilla is sleeping because it's nap time."

Indications of Learning

<i>Family Learning Behaviors</i>	<i># of occurrences</i>	<i>Frequency (%) n=54</i>
comments about animal	24	44.4
asks a knowledge question	8	14.8
answers a question	7	13.0
reads exhibit text silently	5	9.3
synthesizes material	4	7.4
asks question that focuses attention	3	5.6
repeats material	3	5.6

These comments showed that visitors were engaged with the gorillas and were curious about them, and that they connected the gorillas' lives to their own everyday lives (empathy).

Signs and type of interactions

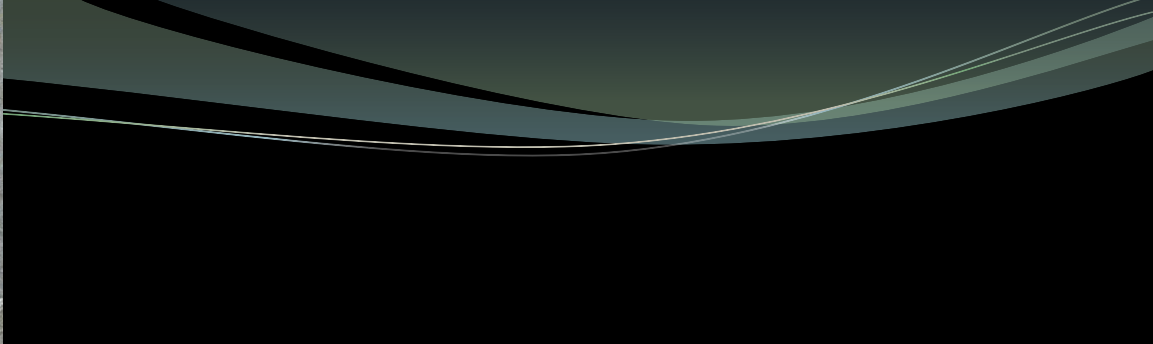
Sign	<i>Glance/ Read for less than 10s</i>	<i>Glance/ Read for less than 10s</i>	<i>Read for 10-to 30s</i>	<i>Read for 31 to 60s</i>	<i>Read out loud/discussed with group</i>
Troop Two Bios (zone 2) n=19	4	2	3	7	3
Video (zone 2) n=13	6	4	0	2	1
Endangered (zone 2) n=9	1	4	3	1	0
Quiet, sensitive animals (zone 2) n=6	2	0	0	0	4
Donor sign (zone 2) n=4	4	0	0	0	0
Eat Meat? (zone 3) n=23	12	5	3	1	2
Troop One Bios (zone 4) n=26	8	2	7	7	2
Gorilla News (zone 4) n=14	8	1	3	1	1
Meet the gorillas (zone 4) n=13	5	3	3	0	2
Endangered 2 (zone 4) n=9	5	1	2	1	0
Donation box (zone 4) n=4	4	0	0	0	0
Wall sculpture (zone 4) n=2	2	0	0	0	0

Number of interactions with each sign

<i>Sign</i>	<i>Frequency (%)</i> <i>N=142</i>
Troop One Bios (zone 4) n=26	18.3
Eat Meat? (zone 3) n=23	16.2
Troop Two Bios (zone 2) n=19	13.3
Gorilla News (zone 4) n=14	9.8
Meet the gorillas (zone 4) n=13	9.2
Video (zone 2) n=13	9.2
Endagered 2 (zone 4) n=9	6.3
Endangered (zone 2) n=9	6.3
Quiet, animals sensitive to noise (zone 2) n=6	4.2
Donor sign (zone 2) n=4	2.8
Donation box (zone 4) n=4	2.8
Wall sculpture (zone 4) n=2	1.4

Learning Through Signs

- 64% of visitor groups interacted with interpretive signage of any kind.
 - Consistent with findings from other exhibits
- The most commonly read signs were the Troop One biographies (located in zone 4) and the sign explaining that gorillas don't eat meat (in zone 3).
- The signs visitors interacted with the longest were the two signs with the troop biographies.
- The visitors repeated tidbits of information to each other or skimmed the signs if they had a question about the gorillas.
- The signs that received the most attention were those with biographical information about the gorillas: their names and ages, parental lineage, and other life events.
- The signs about conservation did not receive very much attention.
- In 2010 follow-up study, fewer than half the visitors interviewed remembered seeing conservation information.



Gorillas

Gorilla Visibility

- Gorillas were visible to visitors from at least one viewing area 100% of the time during observations.

	<i>Zone 2</i>	<i>Zone 3</i>	<i>Zone 4</i>
<i>Gorillas were visible</i>	n=87	n=28	n=87
<i>%</i>	86%	27.70%	86%



Gorilla Behavior and Length of Stay

- The gorilla's behavior had an impact on a visitor's length of stay.
- Visitors spent significantly more time at viewpoints 2 and 3 if the gorillas were interacting with each other; at viewpoint 4 the difference was just short of significance.
- Visibility of the gorillas was only a factor for how long visitors stayed at one viewpoint, in Zone 3.
- Visitors spent significantly more time at all of the viewpoints if the animals were eating.
- Behaviors that involved interacting with their environment such as playing or climbing trees did not seem to have a significant impact on length of visitors' stay.
- Surprising since visitors have previously reported that the baby gorilla, Uzumma, was a favorite part of their visit.
 - Uzumma was also a large source of the data from Zone 2 involving interaction with the exhibit such as climbing and playing.

Gorilla Grossness

- Gorillas in Troop 2 have developed the habit of R&R.
 - Behavior was recorded by volunteers eight times.
 - Visitors reacted negatively to this behavior, but there was not a significant change in length of stay from this viewpoint.
- Some members of Troop 1 have a habit of coprophagy.
 - Behavior recorded six times
 - Did not have a significant effect on length of a visitor's stay.
- These findings may be skewed due to the small sample size involving these behaviors.

Summary of Findings:

- ▶ The most common group to visit the exhibit was families with children between 5 and 8 years old.
- ▶ Visitors spent an average of nine minutes in the gorilla exhibit.
- ▶ 72 % of groups viewed both troops during their visit.
- ▶ Gorillas were visible 100% during the time observed.
- ▶ Overall enjoyment of exhibit was high: 5.76. Business did not influence enjoyment
- ▶ Emotional responses were predominantly happy, sympathetic towards gorillas
- ▶ 54% of all visitor groups demonstrated behavior correlated with learning.
- ▶ Conversations dominated by observations about gorilla's body, behavior.
- ▶ The most frequently read signs were the troop biographies.
- ▶ Visitors use signs as references, glancing rather than studying.
- ▶ Visitors' length of stay was influenced by gorillas' interactions with each other and whether they were consuming food, but not by the gorillas' interactions with their environment.



Other Observations

- ▶ **People make easy emotional bond, connection to gorillas**
 - ▶ Compared to snakes, non-mammals
 - ▶ Want to learn more about family, age, life history, biographies
 - ▶ Want to connect on personal level
 - ▶ Many already have built-in empathy
- ▶ **Learning happens!**
 - ▶ Adults, parents are active participants in the learning process
- ▶ **Respond to speakers, info carts, etc.**
 - ▶ Useful for people to be able to ask questions, engaged in an object, “pull them in”
 - ▶ Another possibility might be to use more interactive items on signs



Actions the Zoo Does That Help Learning and Conservation

- ▶ **Emphasize one-on-one connection that the visitors had with the animals**
 - ▶ This bond most aided the visitors to learn and care about the animals.
- ▶ **Foster understanding and sympathy for animals as well as for the people who live next to them by**
 - ▶ Bringing people face to face with an animal
 - ▶ Exposing them to the animals' normal behaviors
 - ▶ Informing visitors about how wild animals can affect peoples' ways of life in other parts of the world.



Thanks

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