

Stuffed Birds on Sticks: Plans to Re-do the Animal Halls at Field Museum

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This paper is an excerpt from a 22-page paper prepared for the Field Museum of Natural History. The paper summarizes the front-end evaluation studies related to the Animal Kingdom Project's plans to renovate the animal halls.

The title comes from comments made by a visitor during a focus group discussion about what visitors think of the halls now and what they think the museum should do to make the animal halls more appealing and interesting to visitors.

This excerpt deals with just one section of the paper about the amount of time visitors spend in the halls.

The Issue of Time: How Do Visitors Spend It In The Animal Halls?

We had often heard and believed it when museum people described three different visitors' "typical" behaviors and motivations (viewing styles) in exhibit halls:

- Style #1. Some people spend a long time and study everything;
- Style #2. Other people browse through, spending less time and looking at less; and
- Style #3. Others rush through, uninterested, and hardly look at or read anything.

The inference is that time is positively related to the portion of exhibits viewed. Also inherent in these descriptions is that Style #1 people have a higher level of interest in and knowledge about the exhibit subject(s) than Style #3s.

These assumptions, although often untested, have been used to design exhibits that have "levels" of involvement – for the scholar, the casual browser, and highlights for the people in a hurry. How valid are these assumptions, particularly about visitors to the animal halls at Field Museum?

We mapped the movements of a random sample of visitors from the moment they entered a hall until they left, noting where and how long they stopped at the different cases. There were 65 cases in *Birds*, 53 in *Herps* and

Skeletons, and 20 *Asian Mammal Dioramas*. Observations were made on different days of the week and at different times of the day. From these data, we have a profile of the trends of time spent and number of stops made in the halls. Patterns emerged, but they were not quite what we had expected.

We found that all visitors were spending far less time in the halls than we would have liked. Out of 104 visitors observed, the longest time spent in *Herps and Skeletons* was 22 minutes; the longest time in the *Bird Hall* and in *Asian Mammals* was 24 minutes each. The *average* time in each hall was less than 10 minutes.

The longest time spent viewing an individual case in *Birds* was about five minutes. In *Herps and Skeletons*, the longest time was about four minutes; in *Asian Mammals*, approximately one minute. The *average* time spent stopping at a case in each hall was under 12 seconds.

We also found that visitors were looking at far less of the exhibits than we would have expected. Combining data for all three halls, we found that roughly three quarters of the visitors stopped at less than 40% of the cases.

How do these data fit the assumptions about the three viewing styles mentioned earlier? We can assess this by creating a graph with total time spent in the hall (vertical axis) and the number of cases stopped at (horizontal axis) (See Figure 1).

First, we plotted three points (+) representing the three styles. The point in the upper right represents our assumption about the #1 viewing style of the scholarly person who "takes lots of time and looks at everything." (This was based on a visitor who spent 60 minutes in the *Bird Hall* and systematically looked at one side of the hall – 24 cases – and was on his way back down the other side when the data collector had to leave. If we projected his viewing pattern to the rest of the hall, he would have taken approximately 120 minutes and looked at about 60 cases. For the purposes of this discussion, we are putting his data at 60 minutes/60 cases, because otherwise the graph would have to be twice as tall to fit it on!)

Then we plotted the actual data for our sample of 73 visitors. Comparing the hypothetical points with the real data, we see that both Styles #1 and #2 are not at the end of a continuum of behavior, but are isolated oddities far from most of the other points. The *majority* of points form a tight cluster in the lower left corner – visitors who spent little time and looked at only a few cases – viewing Style #3.

Apparently there was something much different about visitor behavior in these halls than the three viewing styles assumption told us. Also, this type of graphing method seems to have some inherent values about "good" in the upper right and "poor" in the lower left.

As we reviewed our data again, there were clues that there was not a simple relationship between time spent and number of cases visited. For one thing, we noticed that while there were people who spent a relatively longer time in the halls and people who looked at lots of cases, they weren't necessarily the same people. And, case layout in each hall seemed to have

some impact on behavior. In the *Asian Mammals Hall*, for example, most of the visitors sampled spent little time but looked at lots of cases.

Time-budgeting Model

While struggling to find a better way to assess the reality of visitor behavior in the animal halls, we arrived at a graphing method that we feel isolates a new kind of descriptive factor, which we call **time-budgeting**. This is a way of describing viewing styles that is not judgmental nor assumptive about how long the person spent in the exhibit, about how many cases they looked at while there, and most of all about how much interest they have in the exhibit subjects. It simply describes how they spent their time – the ways in which people use the time they budgeted for themselves in the halls.

In Figure 2, we have plotted the average time each subject spent per case (their total time in the hall divided by the number of cases viewed), against the percentage of cases they viewed in the whole hall. Using percentage enables us to equilibrate the data from halls with different numbers of cases. The more scattered pattern of points resulting from this method can be described like this:

- Style #1. These people spent more time per case at relatively few cases.
- Style #2. These people spent a shorter time per case viewing relatively few cases.
- Style #3. These people looked at a higher proportion of cases, but viewed each case for a relatively short period of time.

In this descriptive system, we are saying that the amount of interest, learning ability or motivation of a visitor is not necessarily related either to the amount of time spent or to the number of cases viewed. The time-budgeting model is inherently more democratic in that equal value can be attributed to all viewing styles. The people who zoom through the halls looking at lots of things quickly are the ones who bring the average viewing time per case way down, but their style of using Field Museum's animal exhibits is a common, legitimate one. We clearly see the need to create exhibits of diversity and clarity that contain rapidly comprehensible, highly redundant themes and messages that will speak to these visitors.

The time-budgeting model discourages us from designing "layered" exhibits, supposedly to appeal to all "learning styles," yet really designed to pacify the experts (our peers), appease our guilt about the supposedly uneducated, and perpetuate the fantasy of scholar-type audiences.

In the introduction to this paper in its complete form we ask the question, "Is there evidence of learning?", and we assume that two of the pre-requisites for – and behaviors indicative of – learning are paying attention and spending time attending. These data don't show much of a

trend for these two elements of time on task. The majority of people are budgeting less than 10 minutes to view halls with 20 to 65 exhibits, spending 10 seconds or less at each stop, and stopping at only 40% of what is available.

Discussion

This front-end evaluation information has helped us raise, clarify and answer two other specific, ticklish questions about planning renovations: How much time *should* visitors spend looking at a case? and, What percent of the cases *should* visitors look at? The answers: It doesn't matter, because we assume that visitors can and will and should look at whatever appeals to them in the manner they wish. We are not attempting to control their patterns of looking, which are highly influenced by such difficult-to-quantify factors as fatigue, number and mood of children, personal experience, prior knowledge, weather, parking meters and time since last meal, etc., etc.

So, what do we hope that visitors to the *new* halls will do? First and foremost, we hope that visitors will spend more time. If they do, the points on the new graph will cluster in a similar way but overall higher than on Figure 2. Style #1 visitors will still be spending most of their time at relatively few cases, but they will be spending more time on the average than before. Style #2 visitors will still spread their time out over more cases, but they will spend more time on the average at each. There might well be fewer visitors in the Style #3 group, because they will be better able to make a decision about whether to visit the hall at all through improved orientation designs.

These predictions behoove us, then, to create ways to entice visitors to stay longer, to get them to say: "Yes, this exhibit was designed with me and my interests in mind, and I want to come back again and look at more of these cases." Spending more time at exhibits will be a result of looking at more of the specimens (stuffed birds on attractive, naturalistic mounting devices), looking more closely, making more comparisons and contrasts, reading more of the interesting, clear, brief messages and spending time manipulating the new, elegantly simple, formatively evaluated interactive devices. This variety of learning modes will be appealing to a broad range of preferences. We are very encouraged by the success of "enhanced" and renovated exhibits such as those reported by George Hein in Boston and Doug Worts in Toronto.

When the new exhibits are open, we will do additional evaluation studies similar to the ones done in the old halls – tracking, timing, observations of interactive behaviors, interviews and focus groups – to see what evidence there is for learning and to what extent we are accomplishing our goals compared to the old halls.

Given the constraints of Field Museum's non-directional case layouts, multiple entry and exit points, and large numbers of specimens, we do not

expect or predict that many visitors to the animals will want to or be able to “see it all.” Rather, the quality of their experiences, however and wherever they choose to spend their time, will be improved.

Note

For a copy of the complete “Stuffed Birds on Sticks” report, contact the Animal Kingdom Project at Field Museum. The complete paper contains discussions of the other questions – Who are our visitors? and What do they say? – and a long introduction. A separate report (to come) will contain the results of our prototype and mock-up testing.

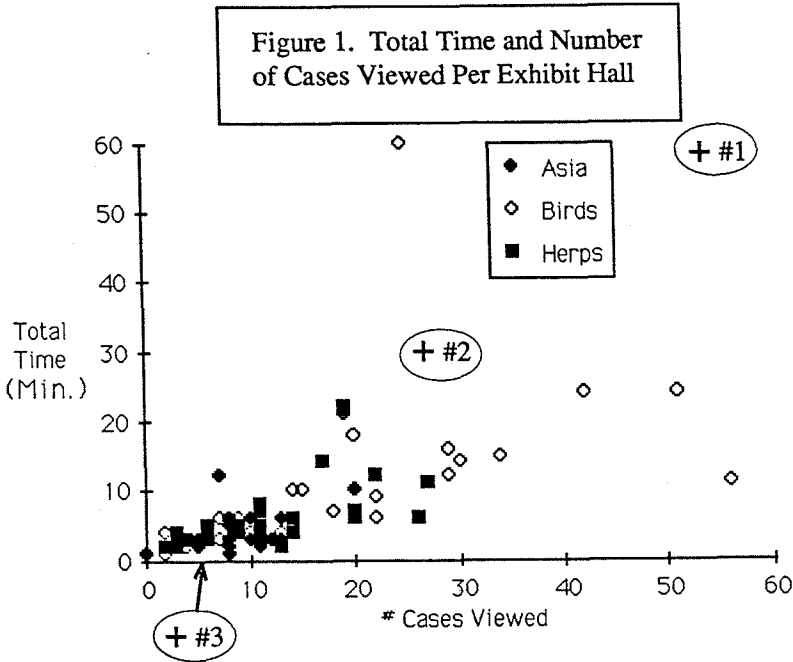


Figure 2. Mean Time Per Case and Percent of Cases Viewed

