Museum "Fatigue" Early Studies

Summary of studies from The Behavior of the Museum Visitor by Edward S. Robinson, from AAM Monograph New Series No. 5, Washington, DC: American Association of Museums, 1928.

Part of this excellent monograph was devoted to the problem of museum "fatigue." Robinson suggested that what is usually thought of as "fatigue" includes more than one phenomena and that there is more than one explanatory principle underlying these phenomena. For example, physical fatigue (from walking and standing on your feet) and object satiation (loss of interest as you see similar objects) are two of the possible phenomena involved.

Study #1

In the first study reported by Robinson, he examined the behavior of visitors in four different art museums of varying size and location. Museum Lg. contained about 1000 pictures in a total of 40 rooms. Museum Sm. 1 had 150 pictures in 6 rooms; Museum Sm. 2 had 140 pictures in 6 rooms; and Museum X had varying numbers of pictures displayed (from 154 to 256) during the course of the study. Visitors averaged over 25 minutes in Museum Lg, about 17 minutes in Museum Sm. 1 and Sm 2, and almost 15 minutes in Museum X. In Museum Lg. visitors looked at an average of over 56 pictures of the 1000 total; close to 48 pictures in Museum Sm. 1; 30 pictures in Museum Sm. 2; and about 27 pictures in Museum X.

In addition to the observations in the four museums, Robinson conducted a laboratory study with students who were given 100 pictures to examine while they were seated at a table. The students controlled how long they looked at each picture, but since they were seated, should not have experienced the physical fatigue of visitors who walked through the museums.

Since the number of pictures viewed by visitors in the four museums varied considerably both within each museum and among the four museums, Robinson divided the total number of pictures that each visitor looked at into successive tenths. Thus, if a visitor only viewed 10 pictures, each picture counted one tenth. If a visitor observed 100 pictures, then 10 pictures were included in each tenth. Using this method, Robinson was able to compare visitor behavior across different portions of their museum visit even though visitors viewed a different number of pictures.

There was a tendency for visitors to spend fewer seconds per picture over successive tenths of viewing (with the exception of a warm-up effect for the first couple of tenths). However, the largest decrement in viewing time across successive tenths occurred in the laboratory group who were seated throughout the study. These individuals also had the longest viewing time per picture. The laboratory subjects reached an average of 28 seconds of viewing per picture by the third tenth and systematically decreased to 19 seconds per picture by the last tenth. Visitors in the other museums reached a high of from 9 to 18 seconds and decreased to a low of from 7 to 11. Visitors who viewed a larger number of pictures did not show any difference in the rate of decline when compared with visitors who viewed a smaller number. Apparently the rate of decline was not a function of the total number of pictures viewed. Finally, he reported that there was also a trend toward a decrease in the number of stops as the visit progressed. Thus, not only did visitors tend to spend less time per pictrue, they also stopped at fewer pictures as they progressed through the museum.

While Robinson recognized that there was no one easy explanation of these results, and that comparing the museum visitors and laboratory subjects is fraught with methodological difficulties, it is reasonable to conclude that decrements in viewing time across visitation cannot all be attributed to physical "fatigue."

Study #2

Robinson's next study was an experimental examination of how density (or "isolation") of presenting the pictures influences "fatigue" effects. In a laboratory setting Robinson presented either a single picture, two at a time, or ten at a time to subjects seated at a table. (The one-at-a-time condition was the one described above in the first study). All subjects viewed a total of 100 pictures; the difference was in terms of how many were presented at a time. He found that the average viewing time per picture was longer when one picture was presented at a time than two or ten. The rate of decrement of viewing time across successive tenths was about the same no matter how many pictures were presented each time. Finally, a warm-up effect was observed for all groups; the longest viewing time occurred on the third or fourth tenth.

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[continued from page 4]

Study #3: Experiment on Variety of Picture Types

Robinson's next study addressed the possibility that the variety of the picture content was important in predicting viewing time and "fatigue." In this study he presented a total of 25 pictures, 5 at a time. The pictures included 5 pictures of each of the following types: landscapes, Madonnas, portraits, marines, and animals.

Five conditions were studied:

Condition I. On the first card were 5 pictures of the first type, then on the next card were 5 pictures of the second type, etc. until all 25 had been presented.
Condition II. Two types of pictures were presented on each card.
Condition III. Three types of pictures were presented on each card.
Condition IV. Four types of pictures were presented on each card.
Condition V. Five types of pictures were presented on each card.

The average viewing time per picture increased from 15 to 20 seconds from Conditions I through IV, but Condition V resulted in an average of about 15 seconds. There appeared to be a consistent increase in time per picture as the variety of pictures increased from Condition I to IV, but the benefits of variety seemed to have limits since Condition V showed a drop compared with Condition IV.

Study #4: Use of Pamphlets to Reduce "Fatigue"

Robinson used a pamphlet as a visitor guide to pictures in the museum. After an initial problem in Museum Lg. where orientation problems prevented effective use of the pamphlet, Robinson reported a more successful use of pamphlets in Museum Sm. 2. The pamphlet focused on 20 of the pictures on display. The location, the title, and a brief describiton of these pictures were provided.

The pamphlet was handed to 86 visitors, of which 55 (over 60%) used it effectively. Of those who did not use it, 24 carried it but did not look at it, 4 looked at it as they left the museum, and 2 initially looked at it but did not use it.

Those who used the pamphlet spent more time in the museum (28 vs. 17 minutes); viewed a larger number of pictures (46 vs. 30); and viewed a larger percentage of pictures (25 vs. 17 %). Those who did not use the pamphlet showed the usual decrement in viewing time across successive tenths of their visit. Remarkably, those who used the pamphlet showed an increase in average viewing time across successive tenths of the visit.

The pamphlet appeared to counteract the "fatigue" effect usually observed in visitors. Visitors who used the pamphlet showed considerably more interest in the museum since they stayed longer, looked at more pictures, and examined a larger percentage of those they passed. □

Relative Importance of Size, Position, and Density of Exhibit Objects

From Robinson (1928), The Behavior of the Museum Visitor. AAM Monograph New Series No. 5.

Robinson reported that size of the object or picture, position on the wall, and density of exhibit objects or pictures (Robinson called this factor "isolation") were all important factors in determining visitor attention in art museums. He described the following order of these factors in terms of effectiveness:

1. Combination of large size and a central position on the wall.
2. Large size alone or the end position on the wall alone.
3. Combination of large size and end position on the wall.
4. Combination of large size and low density.
5. Low density by itself.
6. Central position on the wall alone. □

Special Issue on Evaluation in Art Museums coming soon!

Ross Loomis, Guest Editor

If you have any relevant material, submit it to Visitor Behavior.