

Visitors to the Smithsonian Institution: Some Observations

Zahava D. Doering and Andrew J. Pekarik
Institutional Studies Office
Smithsonian Institution
Washington, DC

Introduction

Museum visiting is a popular leisure-time activity. Each year, two out of three American adults visit at least one museum, zoo, aquarium, or historical site, and two out of five visit two or more of these cultural institutions.¹ In a population of 185 million adults, 44 million (23.9%) visited only *one* type of institution: natural history museums (0.5 million), science and technology centers (3.1 million), art museums (4.5 million), history museums and historical sites (12.6 million), or zoos and aquaria (23.3 million).

About 72 million people (39.3%) attended two, three, or four of these five types. Another six million (3.3%) visited *every* type of institution at least once. The crossover among different types of museums is so great, in fact, that we can say that cultural institutions share a single audience.

The Smithsonian Institution operates the largest complex of museums in the world. Its 16 museums, 12 of which are located on or near the National Mall in the heart of Washington, DC, include such well-known institutions as the National Air and Space Museum, the National Museum of Natural History, the National Museum of American History, and the National Zoological Park.

Over the last ten years, the combined visit counts for all Smithsonian museums has averaged 26 million per year. The visit counts for individual museums vary from about 150,000 visits to more than eight million visits a year, and reflect their diversity of subject matter, size, architecture and location.

The number of *unique* individual visitors, of course, is much smaller. Visitors who come to the Smithsonian from outside the local area are likely to attend several museums on the Mall during their stay in

Washington, and many of those who live in the local area will return one or more times within the same year (Doering and Bickford, 1994). We estimate that between nine and ten million individuals visit Smithsonian museums each year.

Overall, approximately 79 percent of Smithsonian audiences consist of people who are visiting Washington from elsewhere. This proportion has been remarkably constant over the past 20 years. Three out of five of these out-of-town visitors are coming for the first time (60%). From a study recently commissioned by the Smithsonian, we learned that a visit to the Mall occupies an important place in the memories of these visitors (McCready and Shapiro, 1995). We also learned from that study that more than four out of five adults in the United States have heard of the Smithsonian Institution (82.5%) and that approximately 30 percent have visited it at some point in their lives. Half of those who said they had visited the Smithsonian came before they were 21 years old. One-fourth came for the first time as teenagers (i.e., when they were between 14 and 20 years old).

In general, people share the same basic memories of their first visit to the Smithsonian, no matter how old they were at the time and no matter how much time has passed since then. Their first images are dominated by the Smithsonian's immensity and scope, particular buildings and, most strongly, a specific exhibit (40%). Overall, Americans — whether they have visited it or not — associate the Smithsonian with their own history and collective identity.

The importance of the Smithsonian Institution in the American cultural landscape implies a special responsibility to strengthen its public offerings continuously. Part of the improvement relies on systematic assessments conducted by our office, the Institutional Studies Office. This paper is an overview of our work.

Smithsonian Visitors

The three largest museums on the Mall -- Air and Space, Natural History, and American History -- dominate the Smithsonian audience. Together these three museums account for about 80 percent of all Smithsonian visits.² In the minds of many visitors, these three museums are the Smithsonian.

We have just completed a series of one-year studies at these three large museums, as well as the Freer Gallery of Art and the Arthur M.

Sackler Gallery (see Ziebarth, Smith, Doering, and Pekarik, 1995; Bielick, Pekarik, and Doering, 1995; Kindlon, Pekarik, and Doering, 1996; and Bielick, Pekarik, and Doering, 1996). Together, these four studies describe the basic characteristics of Smithsonian visitors. On average, we have found that over the course of an entire year somewhat more men than women visited the Smithsonian (55% men, 45% women). In general, visitors who were in Washington, DC on business and individuals visiting by themselves were considerably more likely to be men (66% of those in DC on business and 68% of solo visitors were men). Twenty-one percent of visitors live in the Washington DC metropolitan area and 14 percent are foreign residents.

Excluding school groups, one in seven visitors (14%) is under the age of 12. The average age for all visitors is 37 ($SD = 18$). The middle 50 percent are between the ages of 25 and 54. Because there are so many young people at the Smithsonian, about one-third of visitors reported a high school education or less. Adult visitors, however, have very high levels of educational attainment. On average, 8 out of 10 visitors over age 25 (who are typically considered to have completed their formal education) had taken at least some college courses, and about one-third had graduate degrees.

In analyzing the background and behavior of these visitors we have found it most useful to segment audiences using three key variables: time of year, extent of previous visits to the museum, and composition of the visit group.

Smithsonian museums on the National Mall simultaneously serve two populations of visitors. On the one hand, they are major destinations for vacationers, most of whom are families. On the other hand, they are also local museums for those who live in the area and who are interested in a particular museum's subject matter. Because vacation travel rises in spring and summer, the tourism audience dominates the large Smithsonian museums from March through August. In the fall and winter, as the number of travelers decreases, the local visitor becomes much more prominent. In some of the smaller and more specialized museums, such as the Freer Gallery of Art and the Arthur M. Sackler Gallery, both of which display Asian art, the impact of tourist visitors is much less extreme throughout the year.

We describe the extent of previous involvement with a given museum by dividing visitors into three groups: New Visitors, who are coming to the Smithsonian museums for the first time; Returning Visitors,

who have visited the museum from one to three times in the past; and Frequent Visitors, who have visited four or more times in the past. These three visitor types do not represent rigidly separate categories. An individual who returns to the museum only once would shift from New Visitor to Returning Visitor, whether those two visits were one day or 50 years apart. The exact boundary between Returning Visitor and Frequent Visitor, i.e., between three previous visits and four previous visits, is dependent on the precision of visitors' memories. In most cases the meaningful distinctions are between New Visitors and Frequent Visitors.

Visitors from outside the local area tend to be New Visitors (60%) while local visitors tend to be Frequent Visitors (53%). This dichotomy between the new, tourist visitor and the frequent, local visitor parallels a difference of interests. The tourist visitor comes to the museum to experience its central icons or the museum itself in much the way that a pilgrim attends a shrine. The subject of the shrine is, in this case, some aspect of the national heritage. The local visitor who returns repeatedly, on the other hand, has passed beyond the pilgrim phase of his or her relationship with the museum, and is looking for another kind of satisfaction in the visit.

The third dimension, the composition of the visit group, adds another level of complexity. For many people, museum visiting is a social activity that involves family and friends. New, tourist visitors, in particular, tend to visit in groups that include adults and children. Those who come to the museum alone are often local, frequent visitors.

Tourist visitors and local visitors tend to view their visits very differently. The tourist visitors, pressed by a limited stay in Washington, are eager to visit all the things they came to the Smithsonian to see. They are more easily frustrated by inadequate physical facilities and wayfinding problems. Local, frequent visitors, on the other hand, are choosing the museum visit from a range of convenient leisure-time alternatives. They are already fairly familiar with the permanent exhibits and are more interested in seeing the temporary, special exhibitions and whatever else is new. They tend to be critical of exhibit content and to desire more changes and improvements.

These two visitor groups do not describe the entire audience. For example, travelers to Washington also include business visitors, many of whom take time to visit the Smithsonian. We find that 12 percent of Frequent Visitors are people from out-of-town who repeatedly come to

Washington on business. They visit the museums alone or with one or two other adults (70%).

Methodology

Most of our data comes from personal interviews using survey instruments. Studies are designed so that the intercepted visitors represent the overall population during the period of the study. Questionnaires typically include a mix of closed-ended and open-ended questions and take between five and seven minutes to administer. Most exhibition studies include a sample of entering visitors and a different, but equally representative sample of exiting visitors (see Doering, Kindlon, and Bickford, 1993, pp. 42-53). In a few cases we have also intercepted a control group, a third sample that was unaware of the exhibition. Response rates typically range between 70 and 80 percent and we check all data sets for response bias. Some exhibition studies have also included samples of visitors who were tracked through the exhibition.

Appropriate significance tests enable us to identify results that are both statistically and practically significant. During analysis we evaluate these results within the context of the study's aims, seek patterns that will enhance our understanding of the particular situation, and suggest underlying principles of behavior and response.

Some Conclusions about Visitor Experiences

In reviewing our reports and the work of colleagues, we feel that the similarities in results far outweigh the differences. Here we have selected some general findings that address communication in exhibitions.

Self-selection and the Influence of Prior Knowledge

Because visitors choose to attend an exhibition, they tend to agree with its point of view as they enter, especially when they are able to anticipate it. In the *Mechanical Brides* exhibition study, for example, we found that visitors who had come to the museum intentionally to see the exhibition were 50 percent more likely to leave with the viewpoint of the curator than those who came upon the exhibition unintentionally (Doering, Pekarik, and Kindlon, 1995).

Hearing or reading about an exhibition may also influence an individual's ideas about the topic. In *The Power of Maps* exhibition study, for example, on a scale measuring agreement with the unconventional viewpoint of the exhibition, those who had read or heard about the exhibition but had not yet seen it scored midway between those who had not heard of the exhibition and those who saw it (Doering, et al., 1993).

Exposure to media opinions on an issue can outweigh the influence of the exhibition that addresses the same issue, even when the exhibition position conforms to the general media opinion. In the *Tropical Rainforests* study, for example, we found that the exhibition was less effective than the media in conveying the political dimensions of deforestation. Visitors who had not been exposed to media opinions came away with a heightened sense of the beauty of rainforests, while visitors who had been exposed to media opinions came out of the same exhibition with a strong sense of the complex political problems involved in the issue (Fronville and Doering, 1989).

Learning in Exhibitions

In some exhibitions, visitors clearly anticipate a "learning" experience in the galleries. For example, nearly two out of three visitors to *Inside Active Volcanoes* felt that the purpose of the exhibition was to teach visitors (Fronville and Doering, 1990).

Even in art museums that emphasize the unmediated experience of objects, most visitors favor some degree of didactic presentation. In *Comparisons*, for example, we found that virtually all visitors accepted the idea of having at least one didactic gallery in the exhibition, and that the majority wanted two or more such galleries in the art museums they visit (Ziebarth, Doering, and Bickford, 1992).

Most visitors spend relatively little time in an exhibition, and give only fleeting attention to individual displays. In our study of the *Reptile Discovery Centers* at three zoos across the country, for example, we found that visitors spent an average of about 15 to 20 minutes in the exhibition and only 30 to 40 seconds at any particular stop. In *Science and American Life*, an exhibition at the National Museum of American History, visitors also spent an average of about 15 minutes in the exhibition and exactly a minute at each stop (Doering, Smith, Pekarik, Bickford, and Manning, 1994; Pekarik, Doering, and Bickford, 1995).

Drawing Power and Personal Response

All visitors, not just children, are attracted to hands-on displays or interactive components, and will spend more time with them than they will with passive exhibits. The inclusion of interactive components also increases the time that visitors spend viewing other, non-interactive exhibit elements. In the *Reptile Discovery Centers* study we found that age had little effect on the likelihood of stopping at an interactive. At the extremes, children under 12 were only seven percent more likely to stop than visitors ages 55 or older. Overall, interactives held visitors 60 percent longer than the reptiles did. When simple interactives were added to the Reptile Houses, all stops were longer, whether or not they were interactive stops and whether or not a visit group included children (Doering et al., 1994).

Skillful design can draw more visitors to a display and encourage them to linger, but the intellectual and emotional impact of exhibits is not directly related to their drawing power. In *Science and American Life*, for example, a number of components held a significant percentage of visitors for relatively extended periods but were not cited by a comparable percentage of visitors as communicating the message of the exhibition, being most informative, or being most interesting. By contrast, some components that were seen by fewer people and that did not hold visitors as long had significant impacts on visitors (Pekarik et al., 1995).

Although an exhibition may be able to modestly revise the way some people think about a subject, a more attainable goal may be to influence an individual's emotional response to the subject matter. *The Power of Maps* study, for example, demonstrated that visitors who left the exhibition were more in agreement with the curator's unconventional position on maps than those who entered, but the difference, though statistically significant, was relatively small. The *Reptile Discovery Center* study showed that the major result of adding low-tech interactives in the reptile houses was generally an improved attitude towards reptiles (Doering et al., 1993; Doering et al., 1994).

The Entrance Narrative

In attempting to account for these results we have found it useful to use a model that we call "the entrance narrative." The entrance narrative

is the internal storyline that a visitor brings to a particular exhibition (see Doering and Pekarik, in press). The entrance narrative has three distinct components: (i) a basic framework, i.e., the fundamental way that individuals construe and contemplate the world; (ii) information about the given topic, organized according to that basic framework; and (iii) personal experiences, emotions and memories that verify and support this understanding.

This model suggests that the most satisfying exhibitions for visitors will be those that resonate with their experiences and provide information in ways that confirm and enrich their existing view of the world. It also acknowledges that a visit to an exhibition or a museum is but one event in a larger flow of thoughts and experiences.

Although we have not attempted in our research to identify differences in the ways that museum visitors think about the world, we have indirect evidence of its importance. Museums do not draw all segments of the population equally. A key factor in predicting whether or not an individual is likely to visit a museum of any kind is that person's formal education. The higher an individual's level of formal education, the more likely it is that the person will visit museums. We hypothesize that this association reflects the influence of formal education on the way that individuals encounter and think about the world and their place in it.

The effect of the second component of the "entrance narrative," the specific knowledge and opinions visitors bring to the subject, is more easily measured. Depending on the individual, the type of museum, and the exhibition, the level of a visitor's knowledge can range from expert to novice. The priority of particular opinions in the minds of visitors depends upon their personal experiences, their awareness of current events, and the climate of public thinking on related issues, particularly as discussed in the media. Moreover, not all visitors feel secure either in their knowledge or their opinions.

When visitors experience the contents of an exhibition, they necessarily place them within the narrative that they have previously constructed to explain objects and ideas of this type. They may not want to learn much more detail than they already know, and they certainly do not intend to have their narrative radically revised. Instead, they want their narrative to be confirmed.

Visitors want validation so strongly that if the exhibition story departs in only minor ways from their expectations, they are likely to simply "not notice" the areas of difference. If the museum's narrative

unexpectedly and explicitly differs in major ways from their own views, adult visitors are likely to be upset. They may even act upon their displeasure by writing long, angry comments in the visitor book and letters to the local press, or by canceling their membership to the “misguided” institution. If the museum’s narrative supports and encourages their views, however, they leave the museum delighted and confident, with a renewed sense of empowerment and a heightened respect for the importance of the subject and their appreciation of it.

A Final Word

Attention to visitor studies is growing steadily throughout the Smithsonian and findings are being used increasingly to plan and revise exhibitions and to help museums in their overall strategic planning. In addition to the studies conducted by our office, we encourage Smithsonian museums to conduct their own less formal studies on specific issues and we advise and train them as much as possible. Among our client museums the challenge is to incorporate “what we know” into “what we do” to provide quality experiences for our multiple audiences.

Recently we have begun to focus more attention on in-depth interviews with visitors and other qualitative methods in order to construct better theoretical frameworks that can unify and improve our empirical studies of the visitor experience. The range and size of the Smithsonian audiences offer an unparalleled opportunity to understand the complex nature of museum visiting.

References

- Bielick, S., Pekarik, A. J., & Doering, Z. D. (1995). *Beyond the elephant: A report based on the 1994-1995 National Museum of Natural History visitor survey* (Report No. 95-6B). Washington, DC: Smithsonian Institution.
- Bielick, S., Pekarik, A. J., & Doering, Z. D. (1996). *America meets Asia: A report based on the 1994-1994 Freer Gallery of Art and Arthur M. Sackler Gallery visitor study* (Report No. 96-2B). Washington, DC: Smithsonian Institution.

- Doering, Z. D. (1995). *Who attends our cultural institutions? A progress report based on the Smithsonian Institution marketing study* (Research Note 95-5). Washington, DC: Smithsonian Institution.
- Doering, Z. D., & Bickford, A. (1994). *Visits and visitors to the Smithsonian Institution: A summary of studies* (Report No. 94-1). Washington, DC: Smithsonian Institution.
- Doering, Z. D., Kindlon, A. E., & Bickford, A. (1993). *The Power of maps: A study of an exhibition at the Cooper-Hewitt National Museum of Design* (Report No. 93-4). Washington, DC: Smithsonian Institution.
- Doering, Z. D., & Pekarik, A. J. (in press). Questioning the entrance narrative. *Journal of Museum Education*.
- Doering, Z. D., Pekarik, A. J., & Kindlon, A. E. (1995). *Mechanical brides: Women and machines from home to office: A study of an exhibition at the Cooper-Hewitt National Design Museum* (Report No. 95-3). Washington, DC: Smithsonian Institution.
- Doering, Z. D., Smith, S. J., Pekarik, A. J., Bickford, A., & Manning, R. D. (1994). *From reptile houses to reptile discovery centers. A study of the Reptile Discovery Centers project at the National Zoological Park, Zoo Atlanta and the Dallas Zoo* (Report No. 94-4). Washington, DC: Smithsonian Institution.
- Fronville, C. L., & Doering, Z. D. (1989). *Visitor perspectives on tropical rainforests. A report based on the 1988 tropical rainforests: A disappearing treasure information study* (Report No. 89-5). Washington, DC: Smithsonian Institution
- Fronville, C. L., & Doering, Z. D. (1990). *Inside active volcanoes: Kilauea and Mount Saint Helens* (Report No. 90-2). Washington, DC: Smithsonian Institution.
- Kindlon, A. E., Pekarik, A. J., & Doering, Z. D. (1996). *Visitors to history: A report based on the 1994-95 National Museum of American History visitor study* (Report No. 96-3B). Washington, DC: Smithsonian Institution.
- McCready, W. C., & Shapiro, L. J. (1995). *Smithsonian Institution marketing study: The Smithsonian in the minds of Americans*. Washington, DC: Smithsonian Institution.

Pekarik, A. J., Doering, Z. D., & Bickford, A. (1995). *An assessment of the science in American life exhibition at the National Museum of American History* (Report No. 95-5). Washington, DC: Smithsonian Institution.

Footnotes

¹ This is the voluntary attendance rate for those older than 18 years of age. Data on national attendance at cultural institutions are taken from Doering (1995).

² Average annual visit counts between 1988 and 1994 for these three museums are: 8.3 million to the National Air and Space Museum, 6.4 million to the National Museum of Natural History, and 5.5 million to the National Museum of American History.

Author Note

A complete version of this paper in German, "Besucherforschung in der Smithsonian Institution," appears in proceedings of the conference *Museen und ihre Besucher*, November 22-24, 1996, organized by the Haus der Geschichte der Bundesrepublik Deutschland, Bonn, Germany.