

Exploring Satisfying Experiences in Museums

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ABSTRACT This article presents results from an ongoing research project that investigates the experiences visitors find satisfying in museums. Using a list constructed from interviews with visitors and surveys, data were obtained from visitors in nine Smithsonian museums. Analysis of the results showed that experiences can be classified into four categories: Object experiences, Cognitive experiences, Introspective experiences, and Social experiences. The article points out that the type of most satisfying experience differs according to the characteristics of museums, exhibitions, and visitors. It also proposes an interpretation for these data, and suggests some possible applications.

INTRODUCTION

Several years ago the Institutional Studies Office of the Smithsonian Institution began a new line of research on museums and their visitors. We wanted to understand, from the visitors' point of view, what experiences they value in museums. The first goal was to develop a set of survey questions that would indicate what visitors look forward to and find satisfying. This article introduces the survey questions in their current form and presents the results of studies that used these questions.

By reporting on this research in progress and considering some of its implications, we would like to encourage other researchers to pursue similar lines of inquiry. At the very least, we hope that this presentation of our method and results will introduce a point of view and a vocabulary that can accelerate the discussion of visitor experiences in museums.

DEFINING "EXPERIENCE"

The first problem in constructing a survey instrument to describe valued experiences in museums is to clarify what is meant by "experiences in museums." In the literature on museums we could not find either a comprehensive theoretical framework of experiences in museums or adequate empirical data that could guide our work.

There are, however, some provocative articles on experiences in museums. One of the most ambitious of these is Annis (1974), which introduced three levels

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of symbolic engagement in the museum.¹ He called them the *dream space* (“a field of interaction between suggesting/affecting objects and the viewer’s subrational consciousness”), *pragmatic space* (“the field of activity in which physical presence rather than objects have meaning”), and *cognitive space* (“the field that corresponds to rational thought and the designed order of museums”).

This tripartite division of experience in the museum was modified by Graburn (1977), who wrote of basic human needs that museums can fill. These are the *reverential experience* (akin to Annis’s dream space), *associational space* (paralleling Annis’s pragmatic space) and *education* (similar to Annis’s cognitive space, although not restricted to rational thought). In his oft-quoted article, Graburn contends that the reverential experience is antithetical to the other two.

Although, as Korn (1992) notes, Graburn’s ideas were embraced by the Commission on Museums for a New Century (1984), museum practitioners tended to focus on the *education* experience. Korn persuasively argued for broader perspectives on the visitor experience in museums. In partial response, Kaplan et al. (1993) encouraged consideration of the museum as a *restorative environment* for its visitors.

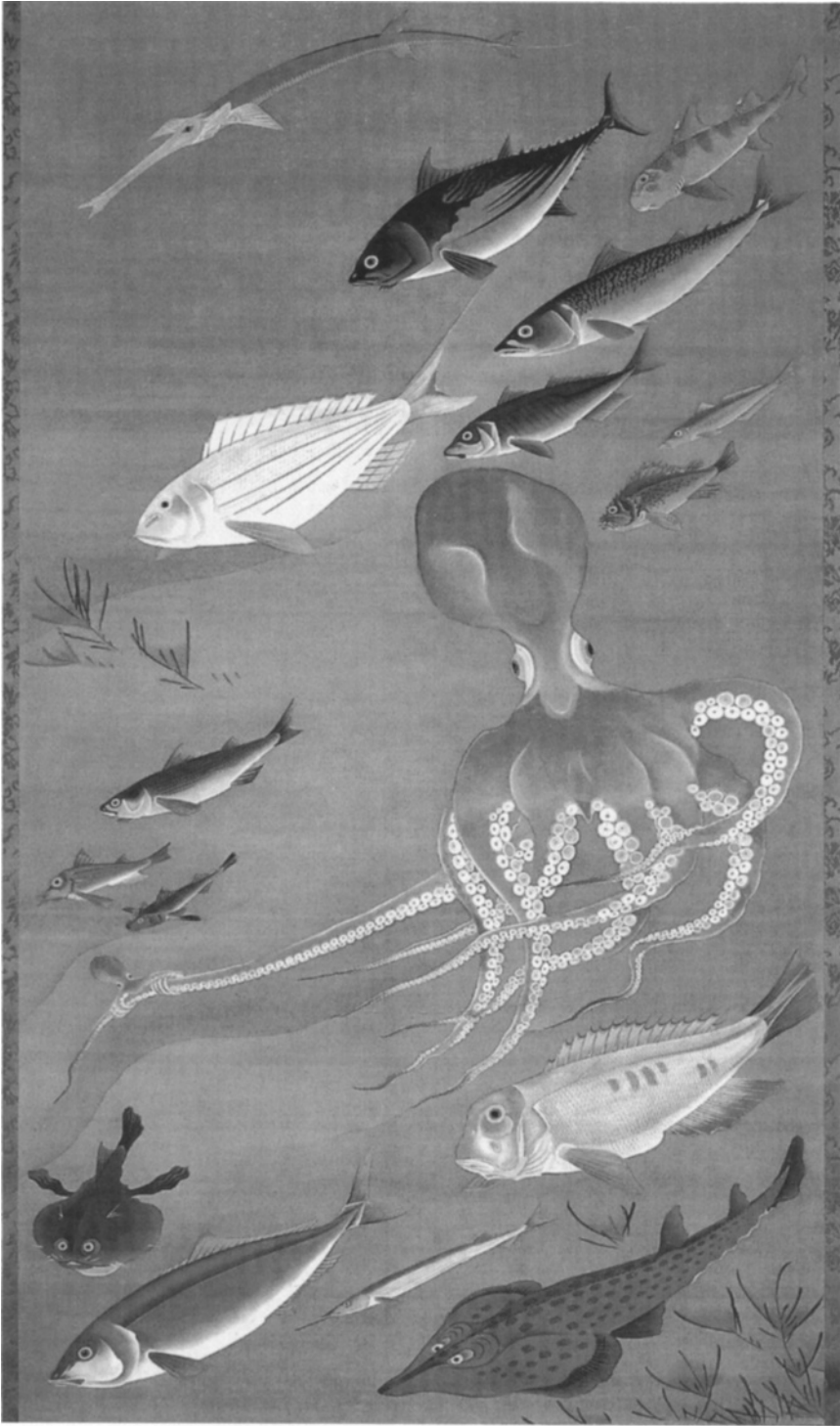
At about the same time, Falk and Dierking (1992) presented a view of three intersecting and overlapping sectors within which visitors experience museums. These are, according to them, the *personal context* (visitor’s interests, motivations, and concerns), the *social context* (visitor’s companions), and the *physical context* (the museum). For Falk and Dierking, “The visitor’s experience can be thought of as a continually shifting interaction among personal, social and physical contexts” (p. 6).

In her summary of research dealing with the “visitor experience,” Roberts (1997) sees the beginning of a taxonomy that includes social interaction, reminiscence, fantasy, personal involvement, and restoration in addition to information and intellectual curiosity. A six-part typology was suggested in Kotler and Kotler (1998) and Kotler (1999): recreation, sociability, learning, aesthetic, celebrative and enchanting experiences. Most recently, McLaughlin (1999) has argued for the primacy of introspective experiences.

Although they differ in their details, these reflections on experiences in museums all agree that a museum visit can be very complex, involving different dimensions of a visitor’s life, including the physical, the intellectual, the social, and the emotional.

METHOD

Developing a List of Satisfying Experiences—We began our research from an empirical base rather than a theoretical one. We asked visitors to tell us about different satisfying visits to a particular kind of museum. As the stories from an individual respondent accumulated during the interview, we discussed with the visitor the possibility of underlying patterns. Often there was a common thread, a single type of experience, that surfaced repeatedly in these stories. Some visitors articulated this unifying theme on their own; they were very clear about what they



"Fish and Octopus" from "The Colorful Realm of Living Beings" by Ito Jakuchu, *Twelve Centuries of Japanese Art from the Imperial Collections* exhibited at the Arthur M. Sackler Gallery. (Photo courtesy of the Smithsonian Institution.)

were looking for in the museum. For example, a visitor in the Arthur M. Sackler Gallery, a Smithsonian museum of Asian art, said

People come into exhibitions with different frames of reference. I come in to learn because I don't know anything. They [my friends visiting with me] are much more advanced about this type of art, so they come to confirm or re-confirm or question. That's the next level. We're all getting something out of it at a different level.

We also found visitors who are very clear on what kind of experience is *not* acceptable to them in a museum. Another Sackler visitor who likes to learn in museums said,

I've gone to exhibits before where they [i.e., the texts] just made no sense whatsoever. I couldn't figure out what was going on, and I ended up getting frustrated and leaving. We went to that Potlach exhibit a few years ago. They had beautiful masks and beautiful everything, but I couldn't understand—they never explained what a potlach was. . . . They never explained. So everything made no sense. So I thought, this is pretty but I just don't understand.

We also encountered visitors who had not consciously considered whether their museum visiting follows a pattern. They were genuinely surprised when the interviewer pointed out the possibility of a link between the different stories they have of satisfying museum visits.

Out of these conversations with visitors, we have progressively developed a list of the types of experiences that people have told us are satisfying to them in museums. We arrived at the wording for these experiences through an extended process of listening to visitors and testing alternative phrasings.

This list of satisfying experiences currently includes 14 items. We categorized these experiences into four clusters on the basis of several different multidimensional analyses.² Obviously the list does not cover every possible activity in the museum and we do not consider the list as finished.³

Object Experiences

Seeing "the real thing"
 Seeing rare/uncommon/valuable things
 Being moved by beauty
 Thinking what it would be like to own such things
 Continuing my professional development

Cognitive Experiences

Gaining information or knowledge
 Enriching my understanding

Introspective Experiences

Imagining other times or places
 Reflecting on the meaning of what I was looking at
 Recalling my travels/childhood experiences/other memories
 Feeling a spiritual connection
 Feeling a sense of belonging or connectedness

Social Experiences

Spending time with friends/family/other people
Seeing my children learning new things

Using the List of Satisfying Experiences in Visitor Surveys—From the beginning of this research we have found the list of experiences to be an effective tool for identifying visitor experiences. Whether visitors have strong preferences or not, and whether or not they are even aware of patterns of past experiences, they have little difficulty choosing from the list the experiences they anticipate or the ones they have found satisfying in an exhibition or museum.

We have applied some variation of this list and survey questions in eight studies at nine different Smithsonian museums.⁴ Our total sample includes responses from 2,828 visitors.

In these various settings, depending on the particular study, we have asked visitors to select from the list the experiences that they

- are looking forward to in a museum or exhibition,
- had with this subject matter in the past,
- had on this visit to a museum or exhibition,
- had elsewhere in the museum today, or
- had in this museum in the past.

The list is shown to respondents without category headings and in a mixed order. At least two orders are used in each study to reduce the possibility that choices could be influenced by the presentation order. The two most recent uses of the list were in studies conducted in the National Air and Space Museum (NASM) and the National Museum of American History (NMAH) during the spring and summer of 1999. We selected representative samples of visitors at three locations: at the entrance to NASM, at the entrance to the exhibition *Where Next Columbus* (about Mars exploration), and at the exhibition exit.⁵ The NMAH study, specifically conducted for this research program, included a representative sample of visitors entering the museum and a separate, representative sample of visitors leaving the museum.⁶ Here are the questions used in these two studies.

For the *entrance* samples in these two studies we asked:

- On this card are some experiences that people have told us were satisfying to them in exhibitions. [SHOW CARD] Which of these are you looking forward to having in this museum/exhibition [NAME]? Choose all that apply. Anything else?
- Which one of those are you MOST looking forward to in this museum/exhibition [NAME]? [REPEAT SELECTED ITEMS IF NECESSARY]
- How strongly are you looking forward to it? Not so strongly, strongly, or very strongly?

EXAMPLES OF SATISFYING EXPERIENCES

Object experiences

In object experiences the focus is on something outside the visitor, in this case the material culture object or “the real thing.”

Seeing “the real thing”:

I liked having things there like the Kodiak bear. I always thought that the Polar bear was larger than the Kodiak bear, which, I guess, is wrong. [laughs] (National Museum of Natural History)

Seeing rare/uncommon/valuable things:

Well, I would say the special and the valuable things. The special, that had some kind of meaning in history, that's something special. Just like that drag racer there. There's something special about it. It's the first one built [to go] 275 miles an hour. There's special things about every little thing that's here. (National Museum of American History)

Being moved by beauty:

If it's a piece that has that kind of impact on me, it will do more than click. It will almost take your breath away. [In the National Gallery] I would turn the corner and Boom, there would be some really famous painting. Usually an impressionist. I like impressionists. It would cause me to stop in my tracks and I would sit there and study that painting for 10/15 minutes. And those certainly register in my mind. (National Museum of American Art)

Thinking what it would be like to own such things:

I'm very pleased you chose Barbie to show the strides women have made in flight—stewardess to astronaut! Way to go, Barbie. I love the exhibit. Now I want to find the Shimmerons in the doll shows to bring my Barbie-in-aviation collection up to date. (National Air and Space Museum)

Continuing my professional development:

I was hoping to draw mammals and birds . . . mostly hobby. Some of it I do for work. . . . If I know that there's a project that I have coming up. . . . I'm a biologist. . . . I work with endangered species. (National Museum of Natural History)

Cognitive experiences

Individuals whose experience is clearly enhanced by contextual presentations tend to describe cognitive experiences as most satisfying. While the objects might still be important, these visitors find their primary satisfaction in the interpretive or intellectual aspects of the experience.

Gaining information or knowledge:

I find this [National Portrait Gallery] more satisfying than the American History Museum, which I feel in some way is much more low-brow. I don't think it's trying to dig deeper than people already want to know. In other words the history is things they all know about really well, and it's just a lot of things to look at. Whereas I feel this is things you're not going to know about, people you're not going to know. You might have heard their name, you might have seen their name at some point. I mean I've studied this, and

am very interested in it, and I don't know half the people in the room, so I feel like most people are going to come here, and they're going to learn a lot if they want to look at it. (National Portrait Gallery)

Enriching my understanding:

Well, that old boat up there on the third floor. I guess it was before they even broke off from the English. The fact that that's how crude of a boat they were trying to fight out of. Compared to just modern day technology of warfare. There you have it. A big shell, that big around, I don't know what they call it, that actually sunk the boat. I mean, that would be really primitive for nowadays. You can't quite comprehend people going out to fight a war on something like that. (National Museum of American History)

Introspective experiences

Introspective experiences are those in which the individual turns inward, to feelings and experiences that are essentially private, usually triggered by an object or a setting in the museum. Gurian (1995), for example, describes visitors to the United States Holocaust Memorial Museum as preparing themselves "to take on the visit as a journey of personal introspection."

Imagining other times or places:

Down in the African American section where you had the sharecroppers, cabins and things, I was imagining what it must have been like there. And different exhibits where you see the houses set up with the Japanese-American too, is another one, where you saw where they lived. . . . So I think just about what it must have been like for other people to be in these actual settings . . . I think you understand what people have gone through to get you to where you are today. I mean, you know, there was sacrifice on all, and commitment. (National Museum of American History)

Reflecting on the meaning of what I was looking at:

Well, I just find that you can learn about the people by the possessions they bought or they designed. For instance the plates that Mrs. Johnson, Lady-Bird Johnson designed—you can tell that she's walking a fine line between what she felt was important, the flowers, and her husband's political career, which was the eagle, and trying to put a very masculine, kind of hunting-looking eagle with the flowers, and how she did a pretty good job of it. (National Museum of American History)

Recalling my travels/childhood experiences/other memories:

There's a display case with dollhouse furniture. And there's a bathtub and a sink and a toilet exactly like I had when I was a little girl and I played with dolls. That was really interesting to see. I had that! I wonder what happened to it. (National Museum of American History)

Feeling a spiritual connection:

Well, for us, [the Mammals exhibition] is a spiritual thing, also. Because through this, we see God's creation. These are things that we didn't have as we grew up, okay? We only heard about them, or saw them on television, but this is a way of us looking back at what God created way back, way back, before the existence of man in time. You know, it started with all of this, with the animals. (National Museum of Natural History)

Feeling a sense of belonging or connectedness:

This is my favorite museum. I like it because it has American artists. I like it because they have Californian artists represented. It's where I'm from. (National Museum of American Art)

Social experiences

Some visitors select an interaction with someone else as their most satisfying experience in the museum. This includes both "spending time" with family or friends or the satisfaction of watching one's children learn.

Spending time with friends/family/other people:

And when I tell my friends about this museum it's not just about the art because it's—in the middle of the old building there's kind of an indoor garden with a cafeteria where you can buy a cappuccino and sit and talk. . . . In Copenhagen it costs money to get into any museum but that one has free admission on Wednesday mornings and Sundays. So it's quite popular to take your friends or family, see art, have a cup of coffee, talk, buy a postcard or two. (National Museum of American Art)

Seeing my children learning new things:

Well I love when my children, when I've seen that they've learned things, that they're learning things. I know that's he's absorbing things. I feel like I've achieved something when my children—because I guess they say you live through your children—when I feel that my children have learned things and are absorbing things, because that's how you know you've made a good person. You're making a good person, right? They'll know things. (National Museum of American History)

For the *exit* samples we asked:

- On this card are some experiences that people have told us were satisfying to them in exhibitions. [SHOW CARD] Which of these were satisfying to you in this particular museum/exhibition [NAME]? Choose all that apply. Anything else?
- Which one of those was MOST satisfying for you in this museum/exhibition [NAME]? [REPEAT SELECTED ITEMS IF NECESSARY]
- How strong was your sense of satisfaction with that? Not so strong, strong, or very strong?

The key responses to these questions can be grouped as follows:

For entering visitors:

- all anticipated experiences (AAE),
- the most anticipated experience (MAE), and
- the strength of the most anticipated experience.

For exiting visitors:

- all satisfying experiences (ASE),
- the most satisfying experience (MSE), and
- the strength of the most satisfying experience.

We recognize the dangers of using fixed lists in survey research. There is always the possibility that an important alternative has been omitted. We have tried



Dressing Images of Worship in *Puja: Expressions of Hindu Devotion*. (Photo courtesy of Neil Greentree, Arthur M. Sackler Gallery, Smithsonian Institution.)

to guard against that error during the pretest phases of each study. When we came across something that seemed to be missing for a particular type of museum, we added that item to the list.

OVERALL RESULTS

Four Types of Experiences—One of the most important results was the categorization of experiences into four types. We first became aware of the possibility of experience categories in our study of visitors to the exhibition *Puja: Expressions of Hindu Devotion* (Pekarik et al., 1998). We were struck that visitors who seemed especially eager for information generally enjoyed the exhibition while art collectors and connoisseurs tended to dislike it. This led us to suspect that an attraction to information on one hand, and to objects on the other, might represent a fundamental division within the set of experiences.

Once we had gathered a substantial body of data from different museums we applied several different analytic methods to visitors' choices of satisfying experiences.⁷ In this way we determined that there were, in fact, four experience clusters, which, based on their contents, we named Object, Cognitive, Introspective, and Social.

The intuitive impression of mutual exclusivity between a preference for Object experiences and a preference for Cognitive experiences was confirmed by factor analysis.⁸ It is also directly suggested in the data (Table 1). If we compare, for example, the types of most satisfying experiences at two exhibitions in the Arthur M. Sackler Gallery, *Twelve Centuries of Japanese Art from the Imperial Collection*

and *Puja: Expressions of Hindu Devotion*, we see that Cognitive experiences are relatively high when Object experiences are relatively low, and vice versa. The same is true, though less dramatically, for the most satisfying experiences in two exhibitions in the National Museum of Natural History, *Geology, Gems and Minerals* and *Mammals* (see Table 1).

TABLE 1. MOST SATISFYING EXPERIENCES IN EIGHT SMITHSONIAN MUSEUMS (IN PERCENT)

MOST SATISFYING EXPERIENCES SURVEY LOCATION	OBJECT	COGNITIVE	INTROSPECTIVE	SOCIAL	TOTAL	N
Smithsonian Museums						
Renwick Gallery (American Crafts)	63	23	7	7	100%	280
National Zoological Park (NZN)	48	9	15	29	101%	150
National Museum of Natural History (NMNH)	41	30	15	14	100%	637
National Museum of American History (NMAH)	35	22	30	13	100%	399
National Museum of American Art (NMAA)/ National Portrait Gallery (NPG)*	36	28	25	11	100%	562
Exhibitions in Smithsonian Museums						
<i>Twelve Centuries of Japanese Art from the Imperial Collection</i>						
(Arthur M. Sackler Gallery) (AMSG)	54	19	17	10	100%	179
<i>Puja: Expressions of Hindu Devotion</i> (AMSG)	23	51	23	4	101%	68
<i>Geology, Gems and Minerals</i> (NMNH)	40	27	9	24	100%	168
<i>Mammals</i> (NMNH)	28	34	18	20	100%	120
<i>Amazonia Habitat & Science Gallery</i> (NZN)	45	11	30	15	101%	87
<i>Where Next, Columbus?</i> (National Air and Space Museum) (NASM)	30	42	19	8	99%	231

*Since these museums are physically connected, and most visitors went to both museums before being interviewed results are combined.

We believe that, in general, there is an inherent conflict between the presentation of an object and the presentation of information. In other words, the more a design emphasizes the object, the less it can emphasize the text, and vice versa. Although designers and exhibition planners generally do their best to balance these two aspects of the visitor experience, there are many occasions when one aspect is favored.

Similarly we recognize the possibility that Introspective and Social experiences work against one another. Introspective experiences are enhanced by a quiet environment and "inner space," while Social experiences are enhanced by activity and engagement with others. The oppositional nature of Introspective and Social experiences was also supported by factor and regression analyses. The clustering of these experiences into four types has some difficulties, however. A price must be paid to construct an instrument that will be useful in many different kinds of museums. We recognize, for example, that some experiences are very common in one type of museum or exhibition, but rare in another. Moreover, the same activity might not have exactly the same meaning in one museum that it has in another. "Being moved by beauty" is an Object experience in an art museum, but it may feel more like an Introspective experience in a history museum. Conversely, "Reflect-

ing on meaning” is an Introspective experience in a history museum, but may be a Cognitive experience in an art museum. Fortunately, the clustering gains stability from the fact that these “wandering” items are much less likely to be selected as most satisfying in settings where they are outside their assigned “homes” in our clustered list. Future research will clarify the underlying structure of these clusters more fully, and some experiences might need to be repositioned among the four categories.

Consistency—We know from yearlong studies at the major Smithsonian museums that the demographic and background characteristics of audiences change over the year, especially as tourist audiences ebb and flow in Washington. We do not yet know if the distribution of the types of most satisfying experiences shifts along with them.

Although we do not know how seasonal audience changes affect most satisfying experiences, we do have data suggesting that the profile of most satisfying experiences in a particular museum is relatively stable. In a study of visitors to the National Museum of American Art (NMAA), the National Portrait Gallery (NPG), and the Renwick Gallery, we asked repeat visitors as they entered to tell us which experience on the list they had tended to find most satisfying on previous visits. At NMAA and NPG, there were no statistically significant differences between the type of most satisfying experience remembered by entering repeat visitors and the type of most satisfying experience reported by exiting visitors.⁹ At the Renwick Gallery, which displays only changing exhibitions, the difference was greater, but still not statistically significant at the .05 level.¹⁰

This result seems to imply that audiences of a particular museum consistently find the same types of experiences most satisfying at that place. But since each exhibition in the museum can have its own distinctive profile of most satisfying experiences, the overall distribution for a museum might change if its exhibitions change.

Differences by Museum—The distribution of the types of most satisfying experiences differs according to the museum in question (see Table 1). In the Renwick Gallery, a museum of American crafts, Object experiences were found most satisfying by nearly two out of three visitors. Object experiences were also the dominant type of most satisfying experience in the National Zoo and the National Museum of Natural History.

Cognitive experiences were not prominent types of most satisfying experiences at any museums. In fact, only about one in ten zoo visitors whom we interviewed cited Cognitive experiences as most satisfying.

Introspective experiences were most satisfying to a higher proportion of the audience in the National Museum of American History than in any of the other locations, and Social experiences were most satisfying to zoo visitors, compared to the other museums.

These results are in line with what we would expect from the nature of these museums and the differences in their audiences. For example, only about one in twenty zoo visitors came alone, but nearly half (48%) of the Renwick visitors were

alone. We would expect Social experiences to be more important at the zoo than at the Renwick.

Differences by Exhibition—Different exhibitions within a museum can also have distinctive profiles of most satisfying experience types. At the Arthur M. Sackler Gallery, for example, visitors found Object experiences most satisfying in *Twelve Centuries of Japanese Art from the Imperial Collection* and Cognitive experiences most satisfying in *Puja: Expressions of Hindu Devotion*.¹¹ (See Figure 1.) We expected this result, since *Twelve Centuries* focused on rarely seen items from an important collection, while *Puja* was presented as a didactic exhibition, emphasizing culture more than art.

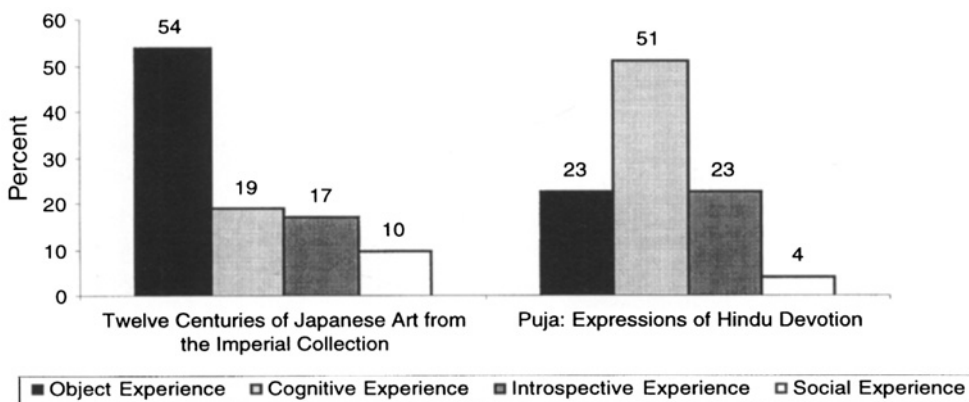


Figure 1. Distributions of the types of most satisfying experiences among exiting visitors at two exhibitions at the Arthur M. Sackler Gallery (in percent) (see Table 1).

Similarly, at the National Museum of National History, we expected that the recently reopened *Geology, Gems and Minerals Hall*, with its famous Hope diamond and National Gem Collection, would be appreciated most of all for its objects. We were not surprised that 40% of the visitors found Object experiences to be most satisfying. We did not have any expectations for the Mammals Hall. Although we calculated that approximately half of its displays were graphic presentations of information, we did not see it as particularly didactic. Although visitors selected more Cognitive experiences as most satisfying, the profile of most satisfying experience types was more even across the four categories than in any other study we have conducted (see Figure 2).

Differences by Visitor Characteristics—In reviewing these results we need to be alert to a complication: as with any measure of human activity in a particular place, this instrument simultaneously reflects both the characteristics of the museum and the characteristics of its visitors. Were Object experiences so dominant at the Renwick because the museum displays crafts, or because the people who chose to visit the Renwick were those who are more interested in objects? This

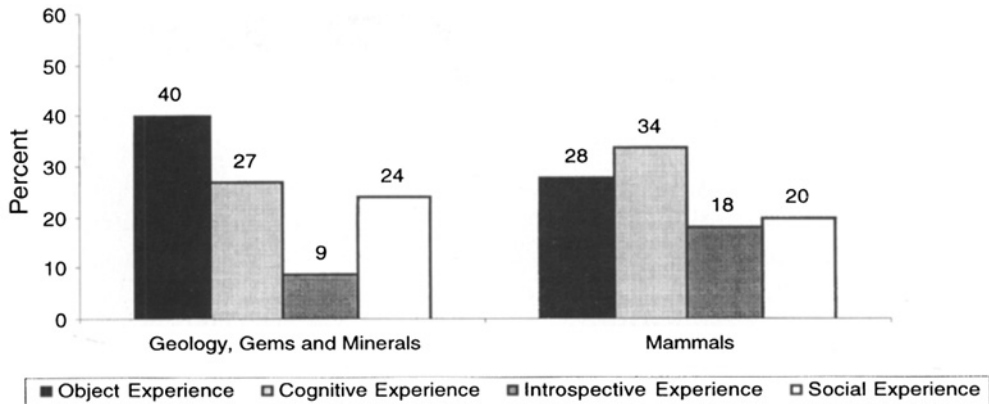


Figure 2. Distributions of the types of most satisfying experiences among exiting visitors at two exhibitions at the National Museum of Natural History (in percent) (see Table 1).

question is hard to answer, because the audience and the museum are in a dynamic, mutually defining relationship.

Regardless of the museum or exhibition, however, some visitor characteristics are significantly associated with these most satisfying experiences when we examine the entire dataset using logistic regressions.¹² Age is the most important. In this dataset as a whole, all else being equal, visitors between the ages of 25 and 44 were more likely to select Social experiences as most satisfying and less likely to select Object experiences, compared to all other visitors; and visitors under age 25 were more likely to select Introspective experiences and less likely to select Cognitive experiences as most satisfying, compared to visitors ages 25 and over.

Gender is also significant. All else being equal, male visitors were more likely to choose Cognitive experiences and less likely to choose Introspective experiences as most satisfying, compared to females.

Familiarity with the museum matters. All else being equal, new visitors were more likely to choose Object experiences and less likely to choose Social experiences as most satisfying, compared to other visitors.

INTERPRETIVE RESULTS

From these results we conclude that a visitor's selection of a satisfying experience and a most satisfying experience represents a combination of

- the availability of a particular experience or type of experience,
- the quality or intensity of that experience, and
- individual preference.

Availability of Experiences—We can estimate the availability of experiences from the visitors' viewpoint by considering how visitors respond when asked to choose *all* the experiences in an exhibition or museum that were satisfying. In ad-



Mars rover in *Where Next, Columbus?* at the National Air and Space Museum. (Photo courtesy of the Smithsonian Institution.)

ministering this question we have observed that visitors generally go down the list item by item and each time seem to ask themselves whether they had a positive experience like that or not.

The results for a given experience can be examined in two ways, either as a percent of all visitors, or as a percent of all experiences chosen. Table 2 uses both of these calculations to show the satisfying experiences that visitors found in the National Museum of American History and the exhibition *Where Next, Columbus?* at the National Air and Space Museum.

We would expect that these 14 experiences would be less available in an exhibition than in a museum, and we do find that in *Where Next, Columbus?* fewer visitors found each of the 14 experiences than in the American History museum, with one exception—"Seeing my children learning." When we look at the results as a percent of all experiences chosen, it is easier to compare the available experiences between NMAH and *Where Next Columbus?* and to see how close they are. In fact, the correlation between the percentages of visitors selecting each of the 14 experiences in the two studies is almost a perfect match ($r = +0.9$).

The availability of experiences can also be examined more broadly by using the experience clusters. For example, among exiting visitors at NMAH, 75% of visitors chose at least one Object experience as satisfying, 81% chose at least one Cognitive experience, 66% chose at least one Introspective experience, and 40% chose at least one Social experience.

TABLE 2. ALL SATISFYING EXPERIENCES IN NATIONAL MUSEUM OF AMERICAN HISTORY (NMAH) AND *WHERE NEXT, COLUMBUS?* PERCENT OF VISITORS MENTIONING EXPERIENCE AND PERCENT OF TOTAL NUMBER OF EXPERIENCES MENTIONED.

SATISFYING EXPERIENCE	PERCENT OF VISITORS MENTIONING EXPERIENCE		PERCENT OF ALL EXPERIENCES MENTIONED*	
	NMAH	<i>WHERE NEXT, COLUMBUS?</i>	NMAH	<i>WHERE NEXT, COLUMBUS?</i>
	Gaining information or knowledge	62	55	13
Seeing the real thing	58	35	13	11
Enriching my understanding	57	50	12	16
Imagining other times or places	47	35	10	11
Seeing rare things	47	29	10	9
Spending time with friends/family	34	19	7	6
Reflecting on meaning	31	19	7	6
Recalling travels/other memories	28	10	6	3
Feeling a spiritual connection	19	9	4	3
Continuing professional development	18	6	4	2
Being moved by beauty	17	14	4	4
Feeling a sense of connectedness	17	8	4	3
Thinking about owning such things	17	10	4	3
Seeing my children learning	12	13	3	4
			101	99
N	399	231	1600	400

* $\chi^2 = 36.183$, $DF = 13$, $p = .001$

Quality/Intensity of Experiences—We can begin to estimate the relative quality of experiences by examining the list of most satisfying experiences (Table 3) and noting their strength. Overall, half of NMAH visitors said that their sense of satisfaction with their most satisfying experience was “very strong.” For the history museum’s audience, “Seeing ‘the real thing’” and “Gaining information” were the two satisfying experiences with the strongest ratings. One or the other of these two was cited by about one quarter of all visitors (26%) as very strongly satisfying.

In *Where Next, Columbus?* one in three visitors reported their satisfying experiences as being very strong. “Gaining information” and “Seeing ‘the real thing’” again stood out as very strongly satisfying, compared to other experiences, but that very strong satisfaction was felt by a smaller percentage of visitors (16%).

Greater intensity of satisfaction was expressed by visitors leaving NMAH, compared to *Where Next, Columbus?* Unfortunately, we do not have data for visitors leaving the National Air and Space Museum to allow for a better comparison. Further exploration is also needed to understand the relationship between the strength of satisfying experiences and visitors’ overall satisfaction with the exhibition or museum.

Individual Preference—Our initial conversations with visitors led us to believe that some people have very clear preferences for certain types of experiences in a

TABLE 3. MOST SATISFYING EXPERIENCE (MSE) AND STRENGTH OF EXPERIENCE: NATIONAL MUSEUM OF AMERICAN HISTORY (NMAH) AND *WHERE NEXT, COLUMBUS?* (IN PERCENT)

SATISFYING EXPERIENCE	NATIONAL MUSEUM OF AMERICAN HISTORY			<i>WHERE NEXT, COLUMBUS?</i>		
	MOST SATISFYING EXPERIENCE	NOT VERY STRONG	VERY STRONG	MOST SATISFYING EXPERIENCE	NOT VERY STRONG	VERY STRONG
OBJECT EXPERIENCES						
Seeing the real thing	25	10	15	17	9	7
Seeing rare things	8	4	3	8	4	4
Being moved by beauty	0	0	0	3	3	0
Thinking about owning such things	1	0	0	1	1	0
Continuing professional development	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>0</u>
Total	35	16	19	31	20	11
COGNITIVE EXPERIENCES						
Gaining information or knowledge	15	4	11	28	19	9
Enriching my understanding	<u>7</u>	<u>5</u>	<u>2</u>	<u>14</u>	<u>10</u>	<u>4</u>
Total	22	9	13	42	29	13
INTROSPECTIVE EXPERIENCES						
Imagining other times/places	10	6	4	9	7	2
Reflecting on meaning	10	6	4	4	3	1
Recalling travels/ other memories	8	6	2	2	2	1
Feeling a sense of connectedness	2	1	1	1	1	0
Feeling a spiritual connection	<u>1</u>	<u>1</u>	<u>0</u>	<u>4</u>	<u>2</u>	<u>1</u>
Total	30	20	11	19	14	4
SOCIAL EXPERIENCES						
Spending time with friends/ family	8	6	3	3	1	2
Seeing my children learning	<u>4</u>	<u>3</u>	<u>2</u>	<u>5</u>	<u>3</u>	<u>2</u>
Total	13	8	4	8	4	5
Total MAE	100	53	47	100	67	33
N	391	206	186	227	152	76

particular kind of museum. We attempted to obtain a profile of these preferences by asking first-time visitors to the Arthur M. Sackler Gallery, the Freer Gallery of Art, and the National Museum of American History to tell us which experience they generally found most satisfying when viewing Asian art (in the case of the Sackler Gallery and the Freer Gallery) or when visiting history museums (in the

case of NMAH).¹³ Since these questions were independent of a specific location, we presume that they are reasonable guides to the experience preferences of these visitors with respect to subject matter.

Interestingly, the answers did not differ among the three museums.¹⁴ Their agreement implies that these preferences might be at least partly independent of subject matter. Further research is needed to determine the degree to which visitors in other kinds of museums share these preferences.

Object experiences:	36%
Cognitive experiences:	36%
Introspective experiences:	20%
Social experiences:	8%
Total	100%

POSSIBLE APPLICATIONS

Comparing Exhibitions or Exhibition Elements—In several studies we also asked visitors *where* their most satisfying experience had taken place in the museum (or exhibition). Most of the respondents cited a specific exhibition within the museum or a particular element or section within an exhibition. By tabulating these results we were able to identify the exhibitions or elements that were having the most impact on visitors' satisfying experiences.

In the National Museum of Natural History, for example, we found that two exhibitions accounted for nearly two thirds of all visitors' most satisfying experiences. *Geology, Gems and Minerals* was the location of the most satisfying experience for 41% of visitors, and the dinosaur halls for 23% of visitors. No other exhibition or location was cited by more than 10% of visitors. Object experiences were most common in the *Geology, Gems and Minerals* exhibition and Introspective experiences were most common in the dinosaur displays.

In *Where Next, Columbus?* two locations similarly accounted for a disproportionate share of most satisfying experiences. About one quarter of the most satisfying experiences took place in the Mars landscape room (a walk-through simulation of the surface of Mars) and another quarter in the stellarium (a fiber-optic model of our galaxy). No other location accounted for more than ten percent of the most satisfying experiences. Cognitive experiences dominated in the Mars landscape room and Object experiences in the stellarium (where visitors saw the stellarium itself as a striking object).

Assessing Exhibitions—In assessing museums and exhibitions we always encounter the problem of how to distinguish between the effect of the museum or exhibition and the effect of visitor characteristics. We usually separate the two by asking the same questions of equally representative samples of entering visitors



A visitor to *Great Cats* compares her hands to the pawspan of a tiger. (Photo credit: Jessie Cohen, National Zoological Park, Smithsonian Institution.)

and exiting visitors. Since the two samples of entering visitors and exiting visitors have the same characteristics, any differences between entrance answers and exit answers can be reliably attributed to the exhibition rather than to the visitors.

We felt that our questions and list of satisfying experiences could be used as an assessment tool by comparing the experiences that entering visitors look forward to and the experiences that exiting visitors report as satisfying. But in this case we cannot ask identical questions at entrance and exit.

Choosing an experience that one is looking forward to is not exactly the same as choosing an experience that one has found satisfying. Anticipation involves imagination and desire, inspired by a mix of past experiences, by conceptualizations of the type of museum, by reports about the specific museum or exhibition, by personal preference, and by the needs of a particular occasion. In a sense, the choice of anticipated experience is hypothetical, and may be susceptible to interviewer effects. Satisfaction, on the other hand, primarily draws on short-term memory and a judgment of value, and is more firmly and directly rooted in experience.

Despite this drawback, we applied an entrance/exit design in our study of *Where Next, Columbus?* The result was inconclusive. We found that there was virtually no difference between the experiences visitors anticipated and the experiences they found satisfying.

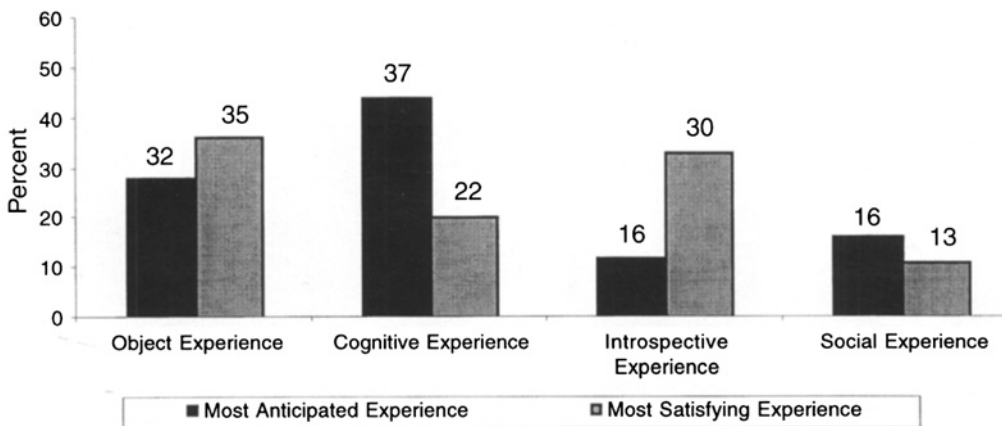


Figure 3. The types of experiences chosen as most anticipated (by entering visitors) and most satisfying (by exiting visitors) at the National Museum of American History (in percent of each sample).

Our research will continue to investigate the potential of this method for museum and exhibition assessment. When we find differences between anticipated and satisfying experiences, we will then have to explore the correlation of these differences with other measures of visitor response, such as overall satisfaction with the exhibition.

Whether or not the comparison of anticipated and satisfying experiences can be used as an assessment tool, it can be relied upon to identify experiences that visitors unexpectedly find satisfying in a museum or exhibition. At NMAH, for example, there was a strong difference between the types of experiences that visitors were most anticipating, and the types they found most satisfying, as shown in Figure 3.¹⁵

The differences in the distributions suggest that a substantial number of visitors who were most looking forward to a Cognitive experience when they entered the museum, found an Introspective or an Object experience more satisfying in the end. In particular, as can be seen by comparing Table 3 with Table 4, more people found Seeing “the real thing,” Reflecting on meaning, Imagining other times and places, and Recalling travels or other memories more satisfying than the audience as a whole anticipated.

Planning What Kind of Exhibitions to Emphasize—The satisfying experience instrument can be used on three different levels—for displays, for exhibitions, and for museums. Our sense of Smithsonian museums is that, from a visitor’s viewpoint, some of them offer a very wide range of satisfying experiences while others do not. We wonder how the degree of variety in the satisfying experiences provided by displays and exhibitions affects the shape of a museum’s audience, the rate of repeat visitation, and the overall satisfaction of visitors. Does it matter if a museum insists on a dominant type of experience in its displays and exhibitions?

We hypothesize that the types of satisfying experiences that museums consistently encourage will ultimately shape their audience. We reason that visitors will

TABLE 4. MOST ANTICIPATED EXPERIENCE (MAE) AND STRENGTH OF ANTICIPATED EXPERIENCE: NATIONAL MUSEUM OF AMERICAN HISTORY (NMAH) AND *WHERE NEXT, COLUMBUS?* (IN PERCENT).

ANTICIPATED EXPERIENCE	NATIONAL MUSEUM OF AMERICAN HISTORY			<i>WHERE NEXT, COLUMBUS?</i>		
	MOST ANTICIPATED EXPERIENCE	NOT VERY STRONG	VERY STRONG	MOST ANTICIPATED EXPERIENCE	NOT VERY STRONG	VERY STRONG
OBJECT EXPERIENCES						
Seeing the real thing	18	10	8	16	12	4
Seeing rare things	10	7	2	11	7	3
Being moved by beauty	3	2	1	1	0	0
Thinking about owning such things	1	1	0	1	1	0
Continuing professional development	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>
Total	32	21	11	29	21	8
COGNITIVE EXPERIENCES						
Gaining information or knowledge	25	18	7	35	25	9
Enriching my understanding	<u>12</u>	<u>8</u>	<u>4</u>	<u>11</u>	<u>9</u>	<u>1</u>
Total	37	26	11	45	34	11
INTROSPECTIVE EXPERIENCES						
Imagining other times/places	6	4	2	6	5	1
Reflecting on meaning	3	2	0	1	1	0
Recalling travels/ other memories	3	2	0	3	3	0
Feeling a sense of connectedness	3	2	1	1	1	0
Feeling a spiritual connection	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Total	16	11	5	12	10	1
SOCIAL EXPERIENCES						
Spending time with friends/ family	6	4	3	8	3	5
Seeing my children learning	<u>9</u>	<u>5</u>	<u>5</u>	<u>6</u>	<u>4</u>	<u>3</u>
Total	16	8	7	14	7	7
Total MAE	100	66	34	100	72	28
N	444	293	151	185	134	51

not return to a museum unless they can reliably find the kinds of satisfying experiences they seek. The ones who turn up at the door are those who have reason to think that their expectations will be met.

If we are correct, then it might be possible to expand audiences over time by giving more attention to neglected types of experiences in the museum. For ex-

ample, the National Zoo has recently opened several exhibitions, such as the Amazonia Science Gallery, whose range of most satisfying experiences differs from what the zoo generally provides. Visitors leaving the Amazonia Science Gallery reported much higher levels of Introspective experiences among their most satisfying experiences compared to visitors interviewed elsewhere in the zoo (see Table 1). As visitors encounter these relatively unexpected satisfying experiences, their image of the experiences available in a zoo will expand to include them. Depending on the visibility and prominence of the Amazonia Science Gallery and others like it, and the way these new areas are promoted, the zoo audience might begin to include more individuals looking forward to Introspective experiences.

CONCLUSION

The approach that we have taken to measuring experiences in museums from the viewpoint of visitors offers the potential for understanding more fully what visitors want and what they value in their museum activities. We realize that the Smithsonian museums and their visitors are not typical in many respects. The results obtained here may not always be applicable to other situations and settings. As we continue to develop this line of research, we hope that others will join us where possible, either by using this same instrument or by investigating variations and approaches of their own. We invite suggestions and comments on our work. It is in this spirit that we present these results and observations.

ACKNOWLEDGMENTS

We want to thank current and former members of ISO who contributed to this research through interviews with visitors, pretesting of questions, and the successful completion of the eight studies that formed the dataset for this research. In particular, we recognize the contributions of Kerry R. DiGiacomo, Steven J Smith, Stacey L. Bielick, and Jean M. Kalata. The preparation of this article benefited from the critical insights and suggestions of Dr. Samuel M. Taylor, Dr. Jeffrey K. Smith, and Dr. Volker Kirchberg.

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NOTES

1. Annis (1974) first articulated these ideas in his doctoral dissertation. The basic ideas were published later (Annis, 1986).
2. The four-part categorization shown here is an empirical result that is described later in the text. When the list is used in a survey questionnaire, categories are not shown and the items are presented in different orders. The four cluster titles were created after we had a substantial body of data on individual items. As we added new items, the clustering did not always follow our expectations. For example, we originally expected that “continuing my professional development” and “reflecting on the meaning of what I was looking at” would be part of the Cognitive cluster, but multidimensional analyses of the current data yielded the assignments reported here.
3. In reviewing the list we also considered similar efforts made by researchers investigating the experiences of people in parks and recreational settings, especially Wells and Loomis (1999).
4. Arthur M. Sackler Gallery (AMSG), Freer Gallery of Art (Freer), National Air and Space Museum (NASM), National Museum of American Art (NMAA), National Museum of American History (NMAH), National Museum of Natural History (NMNH), National Portrait Gallery (NPG), National Zoological Park (NZP), and Renwick Gallery (Renwick).
5. The NASM study was conducted between April 12 and May 1, 1999; the response rate was 87%. A total of 209 interviews were completed at the NASM entrance, 220 at the exhibition entrance, and 222 at the exhibition exit.
6. The NMAH study was conducted between May 19 and 25, 1999; the response rate was 80%. A total of 475 interviews were completed at the entrance and 280 at the exit. The entrance interviews were more numerous, because we used two different forms of the questionnaire in order to address separate issues.
7. In the initial studies, visitors were asked to make first and second choices from the list. Factor analysis and variable clustering in SAS were applied to these choices. This factor analysis was repeated with the data from NMAH, in which visitors selected multiple experiences using a scale that assigned a value to each experience according to whether it was chosen, chosen as most anticipated or satisfying, or chosen as both most anticipated or satisfying and very strong. The results of the NMAH analysis were consistent with the results from analysis using first and second choices.
8. In the factor analysis, Object and Cognitive experiences had opposite loadings on a factor; as did Introspective and Social experiences.
9. At NMAA, Chi-square = 4.867, DF = 3, $p = .182$. At NPG, Chi-square = 5.071, DF = 3, $p = .167$.
10. At Renwick Gallery, Chi-square = 7.022, DF = 3, $p = .071$.
11. Japanese Art (Object MSE = 54% and Cognitive MSE = 19%). Puja (Object MSE = 23% and Cognitive MSE = 51%). Chi-square = 32.155, DF = 3, $p = .001$ (based on the differences between the two exhibitions in most satisfying experience using all four clusters).
12. The regression model consists of four separate regression equations, each with one MSE as the dependent variable. Independent variables are the museum, age, gender, residence, and first or repeat visit.
13. In the American History study, we used a split sample design when interviewing entering visitors. Half of the visitors were asked about *anticipated* experiences in this museum and half were asked about *satisfying* experiences in history museums, in general.
14. For all three together (AMSG, FGA and NMAH): Chi-square = 5.884, DF = 6, $p = 0.436$.
15. Chi-square = 37.454, DF = 3, $p = .001$.