Digital Reincarnations

A Study of Visitors to
Echoes of the Past: The Buddhist Cave Temples of Xiangtangshan
At the Sackler Gallery

September 2011

Smithsonian Institution

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Foreword

The utilization of advanced technology in museum exhibitions often prompts the question, "Is it worth it?" This question was particularly pertinent to the Sackler exhibition *Echoes of the Past: The Buddhist Cave Temples of Xiangtangshan,* which offered visitors not only well-established exhibition technology resources such as videos, but also a larger-than-life, immersive, three-dimensional digital installation that recreated the appearance of a sixth-century Chinese Buddhist cave shrine.

This visitor study of *Echoes of the Past* demonstrates that, while opinions about the technologies employed in the exhibition varied, on the whole these technologies succeeded in giving visitors the chance for deeper understanding and a more engaging experience. Interviewees' reactions to the unique digital cave installation were largely positive, and visitors talked about how their interactions with the various technological resources provided them with a better appreciation for the physical and cultural context of the artworks, making these works more accessible and moving.

Conducting this visitor study engaged Office of Policy and Analysis personnel in a variety of intensive data-gathering methods, including qualitative interviews, a survey, and observation of visitors. The project was led by OP&A staff members James Smith, Lance Costello, and Ikuko Uetani, assisted by fellow staff member Maria Raviele and interns Ah-Jin Lee, Rachel Asquith, Andrew Goodhouse, and Jeong-A Noh. Lance was primarily responsible for survey administration; Ikuko led the observation component, analyzed the observation data, and wrote the observational findings section. James analyzed the interviews and survey data and wrote the quantitative findings section. Maria wrote the qualitative findings section.

I am grateful to Freer and Sackler Galleries Director Julian Raby for requesting this study and for his interest in shaping captivating, striking, and transformative visitor experiences. Thanks also go to the exhibition's curator, Keith Wilson, and to Claire Orologas, the Galleries' head of education, for their input and feedback. The Galleries are always searching for creative ways to educate and inspire visitors, and to deepen their experience of and connection to Asian art and culture.

Carole M. P. Neves

Director, Smithsonian Office of Policy and Analysis

Introduction

In spring 2011, curators and educators from the Freer and Sackler Galleries (FSG) asked the Smithsonian Office of Policy and Analysis (OP&A) to undertake a visitor study of the Arthur M. Sackler Gallery exhibition *Echoes of the Past: The Buddhist Cave Temples of Xiangtangshan* (*Echoes*).

Echoes, which was on display from February 26 through July 31, 2011, explored an important group of Buddhist devotional sites dating from early medieval China. In addition to fine examples of original sixth-century Chinese Buddhist sculpture, the exhibition stood out for its innovative use of technology. Most strikingly, it offered an immersive re-creation of one of the stone temples featured in the exhibition, created using 3-D digital imaging technology. It also offered visitors an introductory video presenting the environs of the cave sites, and mounted touch screens and computer terminals that offered more detailed information about the site and the context of the exhibition. In addition to information on demographics, satisfaction, and visitor experiences, FSG personnel were particularly interested in how visitors used and benefited from these technological-instructional features.

Methodology

Quantitative Survey

For the quantitative portion of the study, every visitor[1] exiting the exhibition during eight survey administration sessions[2] conducted on June 15, 16, and 25, 2011 was intercepted and asked to complete a survey. A total of 420 visitors completed self-administered questionnaires, with a response rate of 83%. The questionnaire is provided in Appendix A, and frequencies of responses to the questions on the survey are given in Appendix B.

The survey respondents constituted a census of visitors present in the exhibition at the times it was administered, and with some caveats, may be treated as a representative sample of the larger population of exhibition visitors.[3] Thus, the findings of the survey can, subject to the limits of statistical inference imposed by the sample size, be generalized to the overall population of exhibition visitors.[4]

Qualitative Interviews

For the qualitative part of the study, OP&A staff conducted semi-structured interviews with selected visitors exiting the exhibition on various dates between May 5 and June 14, 2011. Twenty interviews were conducted with a total of 29 people (18 women and 9 men) ranging in age from late-20s to 70s. Interviewees included both residents of the Washington, D.C. metropolitan area and visitors to the region from around the country and the world (including a woman from Brazil, a man from France, and a woman from Australia); the majority were non-local visitors. Interview lengths ranged from about five minutes to over an hour.

In conducting the interviews, staff used an interview guide developed in consultation with FSG curatorial and education staff, reproduced in Appendix C. While this guide served as an initial basis for interview questions, visitors were encouraged to talk freely about any topic relevant to the exhibition. The qualitative interviewees do not in any sense constitute a representative sample from which quantitative inferences about the overall visitor

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[1] Excluding visitors under 12 and organized groups. At busy moments, some exiting visitors were missed. Missed visitors were counted and weighted in the data analysis.

[2] Each session lasted one-and-a-half hours, and was comprised of three 30-minute segments. These were administered on Wednesday, June 15 (three sessions), Thursday, June 16 (two sessions), and Saturday, June 25 (three sessions).

[3] The chief caveat is the assumption that the visitor population at the times of the survey's administration did not systematically differ from the visitor population over the course of the exhibition's run.

[4] For the sample size of 420, the 95 percent confidence interval for survey figures is ±4.8% or less, depending on the figure in question. (The ±4.8% applies to a survey figure of 50%; the confidence interval grows smaller as the figure in question approaches 0% or 100%.)

population can be drawn. Thus, no mention is made of percentage figures when reporting the interview findings.

Observation

The study also included an observational component. OP&A staff conducted unobtrusive observation of visitors in and around the exhibitions at various times between May 6 and July 27, 2011. Initial observation sessions, intended to identify issues for more focused attention, concentrated on general use of selected exhibition elements and visitor flow. Subsequent sessions focused on the average time of use for the introductory video, computer terminals, and digital cave; the use of the wall panel text on the expatriation of cultural patrimony located outside the main exit of the exhibit; visitor flow between the digital cave and the other rooms; and visitor flow into and out of the exhibition. In observations of the use of the introductory video, digital cave, and computer terminals, only visitors who used the element at issue were timed and recorded. Qualitative guidelines for observers are reproduced in Appendix D.

The groups chosen for the observational part of this study were randomly selected; they consisted of those who engaged in a behavior of interest (such as watching the video or entering the exhibition) during an arbitrarily-chosen observational time period. However, quantitative generalizations to the overall population should be treated with some caution, as observational group sample sizes were too small to allow precise quantitative inferences about the overall visitor population. These relatively small sample sizes were dictated by the limits of time and resources available for this study. The observational methodology was, however, sufficient to allow broad generalizations about overall visitor behavior. Figures offered in this section of the report findings should be interpreted in this light.

Quantitative Findings

Demographics

Age

Both the mean and median age of visitors to *Echoes of the Past* was 40. These figures were slightly lower than those for other FSG exhibitions studied by OP&A over the past several years (45 and 47, respectively).[5]

Divided by generation, 7% of visitors were from the "Silent" (World War II) Generation (born 1925-1945); 17% were Leading Edge Baby Boomers (born 1946-1955); 15% were Trailing Edge Baby Boomers (born 1956-1964); 25% were from Generation X (born 1965-1981); 30% were from Generation Y (born 1982-1995); and 7% were from Generation Z ("Digital Natives," born after 1995). (Figure 1)

Figure 1: Age by Generation

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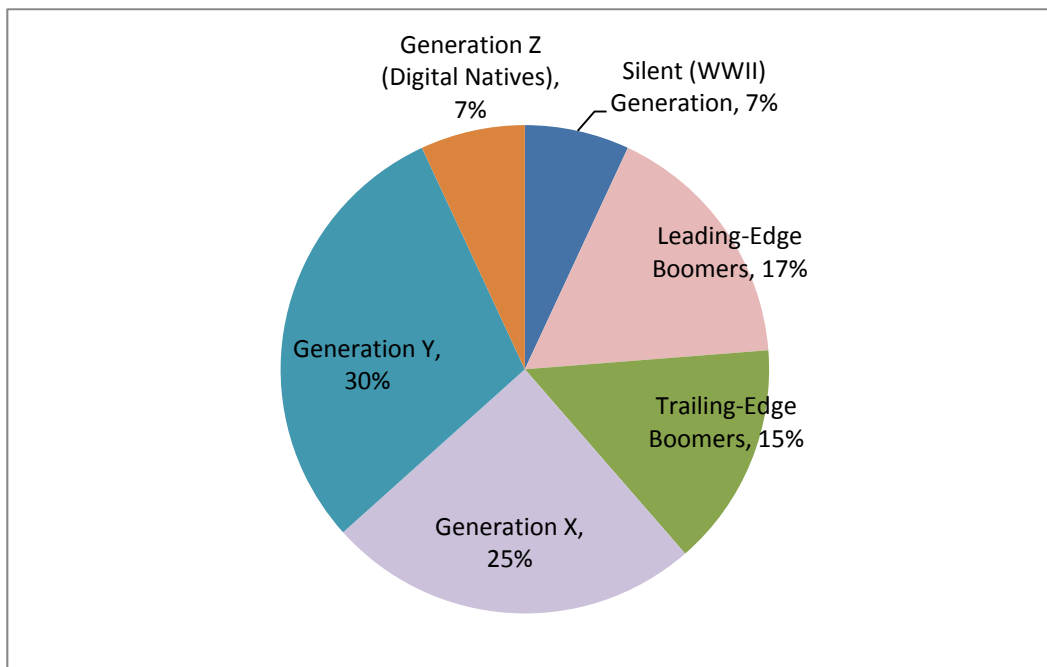
[5] The reason for this difference may be that the Saturday, June 25, survey sessions coincided with a well-attended ImagineAsia family program at the Sackler Gallery. This may have led to higher representation of younger adults (i.e., those with young children) in the survey sample than would have otherwise been the case.

Sex

There were more female (56%) than male (44%) respondents—a typical finding in art museums.

Residence

The majority of survey respondents were residents of the United States (89%), with 11% visiting from another country. Just under a quarter of respondents were from the Washington, D.C. metropolitan area (22%); these will be referred to as "local visitors."

Visitor Characteristics

Visit History

Nearly two thirds of respondents (64%) were first-time visitors to FSG; the rest had been to FSG at least once before (36%). Among local visitors, two thirds (67%) were making a repeat visit to FSG, and one-third (33%) were first-time visitors.

Groups and Individuals

Four in five respondents were accompanied by at least one other person (79%), and one in five was visiting alone (21%). Repeat visitors were more likely to be visiting alone (29%) than first-time visitors (17%).

Exhibition-Specific Visitors

About one quarter of respondents (24%) said they came to FSG specifically to see *Echoes*.[6] These visitors will be referred to as "exhibition-specific visitors." (The other 76% of respondents, who did not come to the Galleries with the specific intention of seeing *Echoes,* will be referred to as "general visitors.") Several visitor characteristics were associated with a higher likelihood of being an exhibition-specific visitor:

- Older visitors were more likely to be exhibition-specific visitors (35% of visitors over the age of 50, compared to 22% of visitors aged 30–50 and 18% of visitors under the age of 30).

- Repeat visitors were more likely than first-time visitors to be exhibition-specific visitors. About one third of repeat visitors were exhibition-specific visitors (32%), compared to about one sixth of first-time visitors (16%)*.*

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[6] This figure is slightly low in comparison with similar Sackler exhibitions studied in the past. Again, the circumstances of the June 25 weekend survey sessions may explain some of this, as visitors bringing their children to the ImagineAsia program, and incidentally visiting *Echoes of the Past,* would generally not be exhibition-specific visitors.

- Local visitors were more likely to be exhibition-specific visitors than non-locals (39% vs. 20%).

Overall Satisfaction

When asked to rate their experience in *Echoes* on a five-point satisfaction scale (poor, fair, good, excellent, and superior), 23% of respondents rated it superior, 56% excellent, 21% good, 1% fair, and 0% poor. (Figure 2)

Figure 2: Visitor Satisfaction Ratings for *Echoes of the Past*
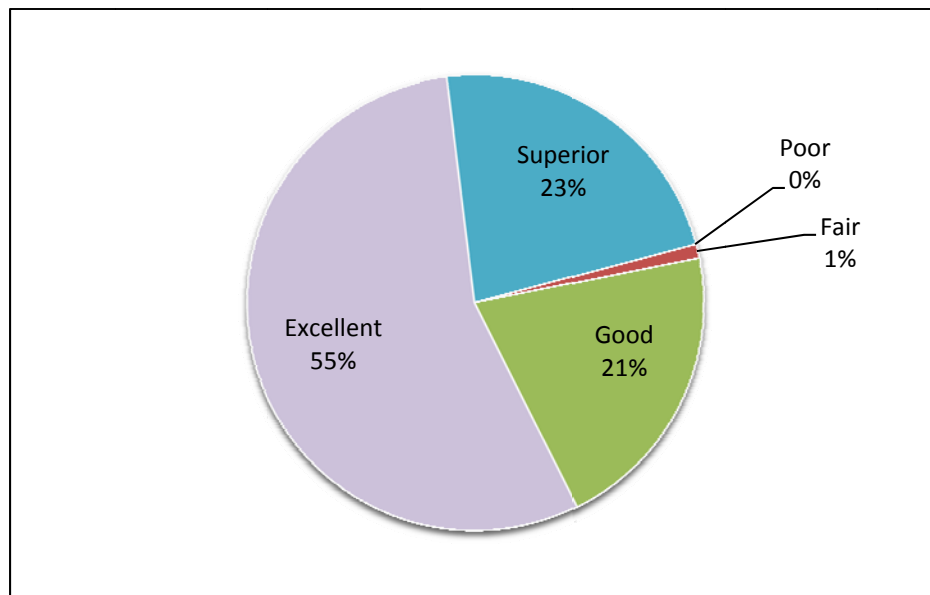
Superior ratings

The 23% superior rating for *Echoes* was statistically indistinguishable from the average (21%) for all Smithsonian exhibitions studied by OP&A. In comparison with superior ratings for other Sackler exhibitions studied by OP&A, *Echoes of the Past:*

- Did better than *Asia in America* (10%), the *Situ Panchen* section of *In the Realm of the Buddha* (15%), and *Facing East* (16%);

- Was comparable to *Caravan Kingdoms* (20%), *Encompassing the Globe* (21%), *Tsars and the East* (22%), *Return of the Buddha* (23%), *Wine, Worship and Sacrifice* (23%), *Patterned Feathers, Piercing Eyes* (24%); and the *Tibetan Shrine* section of *In the Realm of the Buddha* (27%); and

- Did less well than *Style and Status* (35%), *In the Beginning* (40%), and *Hokusai* (52%). (Figure 3)

Figure 3: Superior Ratings for FSG Exhibitions (in percent)
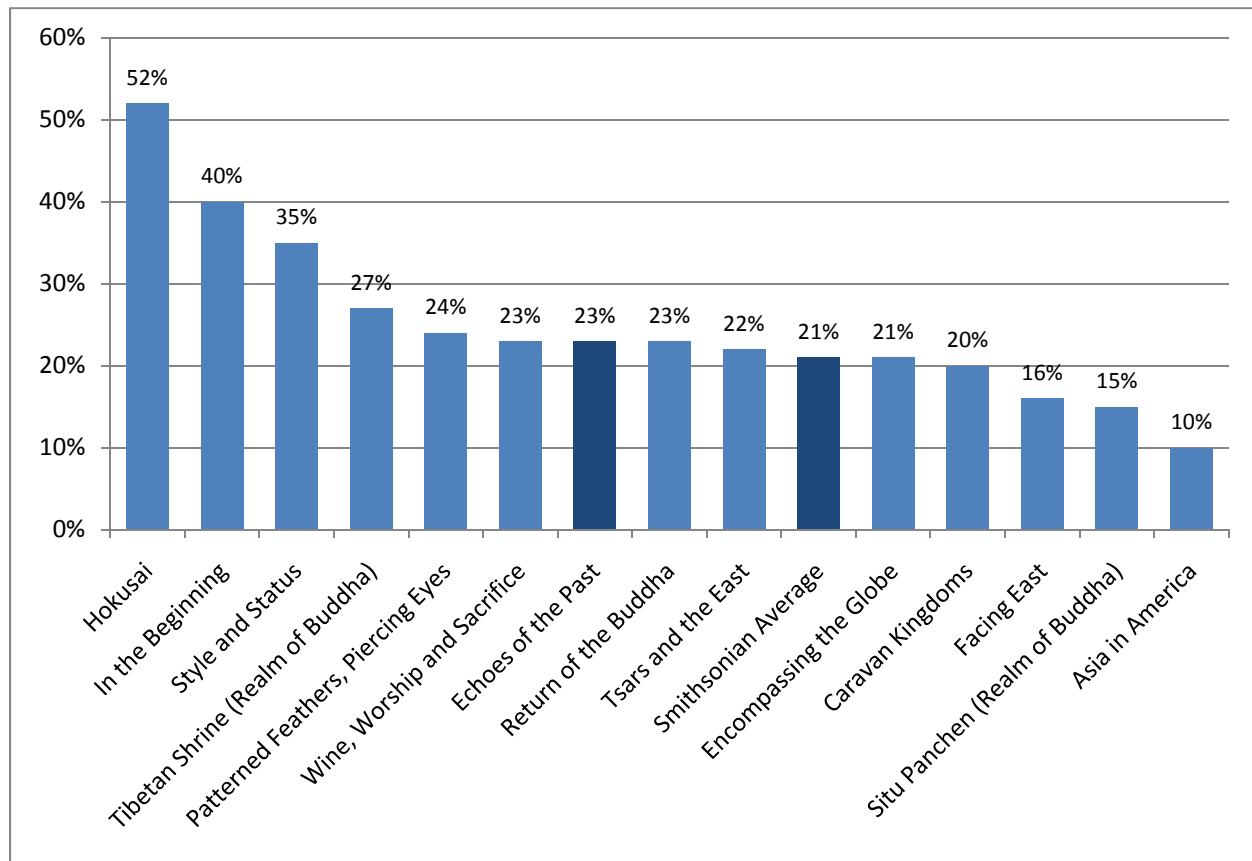
Several visitor characteristics were associated with a higher likelihood of rating *Echoes* superior. These included:

- Being an exhibition-specific visitor (39% superior, vs. 17% for general visitors);[7]

- Being a repeat visitor to FSG (32% superior, vs. 17% for first-time visitors); and

- Being older in age (30% superior among respondents over the age of 50, compared to 24% of those aged 30–50, and 16% of those under the age of 30).

Lower ratings

Combining all respondents who rated the exhibition in the lower three categories of poor, fair, and good, 22% of visitors rated *Echoes of the Past* less than excellent. This is:

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[7] Exhibition-specific visitors typically rate the exhibition they have come to see more highly than general visitors do.

- Better than the figures for the *Situ Panchen* and *Tibetan Shrine* sections of *In the Realm of the Buddha* (40% and 29%, respectively), *Asia in America* (38%), *Facing East* (37%), and the Smithsonian average (31%);

- Comparable to the figures for *Tsars and the East* (24%), *Caravan Kingdoms* (24%), *Return of the Buddha* (23%), *Encompassing the Globe* (22%), *Wine, Worship and Sacrifice* (19%), and *In the Beginning* (19%).

- Worse than the figures for *Patterned Feathers, Piercing Eyes* (15%), *Style and Status* (11%), and *Hokusai* (7%). (Figure 4)

Figure 4: Poor, Fair, and Good Ratings at FSG (in percent)
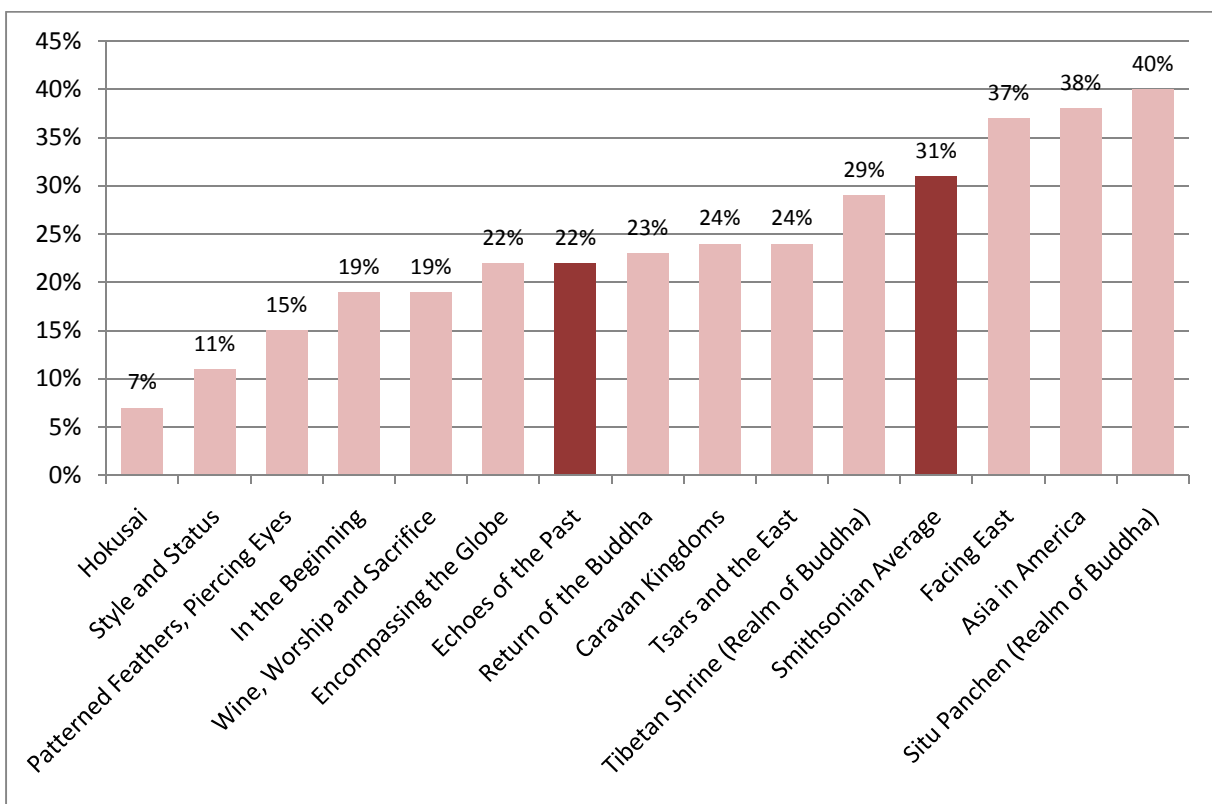
Two visitor characteristics were associated with a higher likelihood of rating *Echoes of the Past* less than excellent.[8] These were:

- Being a general visitor (24%, vs. 13% for exhibition-specific visitors); and

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[8] Note that although first-time visitors were less likely to give the exhibition a superior rating, they were not significantly more likely to give it less-than-excellent ratings. The difference in superior ratings for first-time and repeat visitors was almost entirely mirrored by an increase in excellent ratings among the former.

- Being younger in age (29% among respondents under the age of 30, compared to 19% of those aged 30–50, and 14% of those over the age of 50).

Visitor Experiences

When asked to select which experiences they found especially satisfying in *Echoes of the Past* from a list of seven possibilities, two were marked by a majority of respondents: "Seeing rare, valuable, or uncommon things" (59%) and "Being moved by beauty" (53%). These are experiences that OP&A classifies as **object/aesthetic** experiences.

The two **learning/understanding** experiences were both marked by a bit under half of respondents: "Gaining information" (44%) and "Enriching my understanding" (43%).

The three **personal connection** experiences on the list were marked by fewer respondents: "Feeling inspired or spiritually moved" (26%), "Feeling an emotional connection" (14%), and "Recalling personal memories" (10%). (Figure 5, next page.)

These figures suggest that visitors were most likely to find *Echoes of the Part* satisfying as an **object/aesthetic** experience—which is consistent with expectations for art museum exhibitions—and secondarily as a **learning/understanding** experience. On the whole, visitors were least inclined to experience a **personal connection** to the exhibition or its subject. Nevertheless, qualitative interviews suggested that for the minority of visitors who did experience a personal connection (in terms of inspiration, emotion, or personal recollections), this connection could be felt very deeply.

Marking *any* experience *except* the most commonly-marked experience of "Seeing rare, valuable, or uncommon things" was significantly correlated with a greater likelihood of rating the exhibition superior:

- 39% of visitors who marked "Feeling an emotional connection" rated the exhibition superior, compared to 20% of those who did not.

Figure 5: Visitor Experiences in *Echoes of the Past* (in percent)
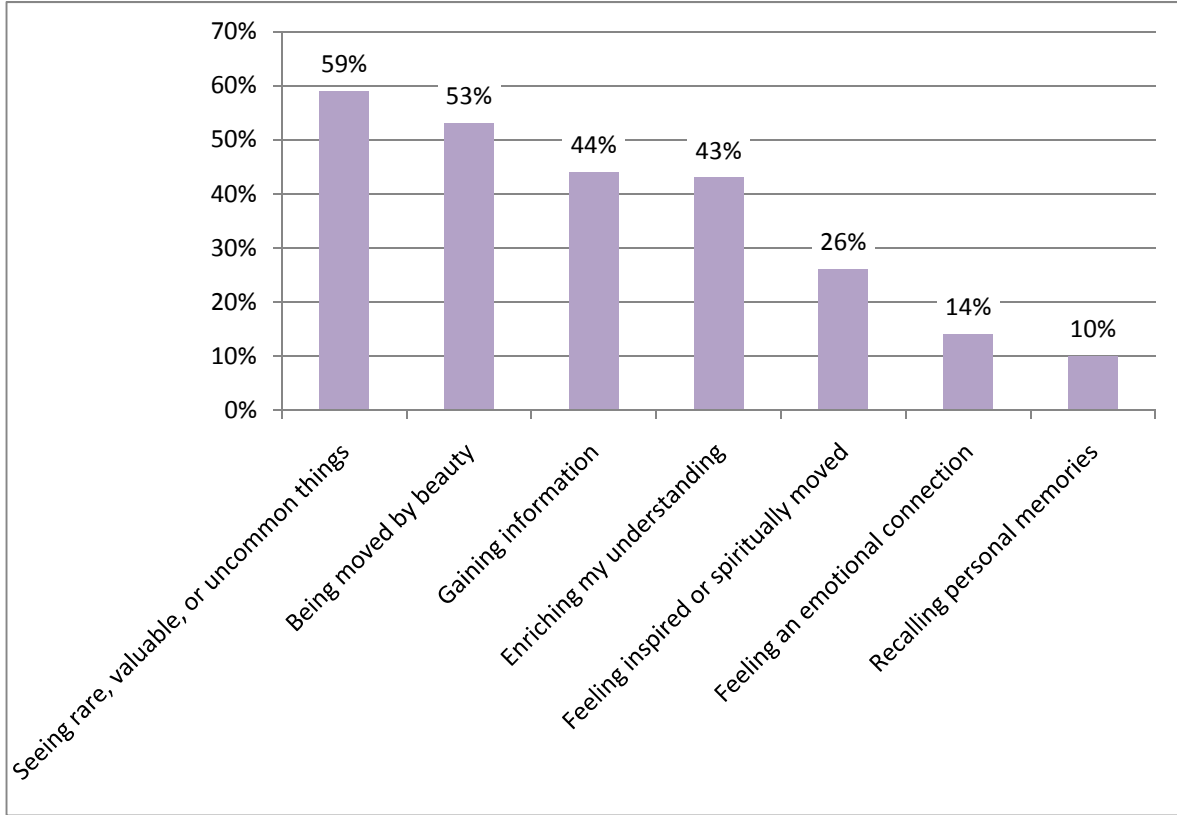
- 39% of visitors who marked "Recalling personal memories" rated the exhibition superior, compared to 21% of those who did not.

- 36% of visitors who marked "Feeling inspired or spiritually moved" rated the exhibition superior, compared to 18% of those who did not.

- 32% of visitors who marked "Being moved by beauty" rated the exhibition superior, compared to 13% of those who did not.

- 28% of visitors who marked "Enriching my understanding" rated the exhibition superior, compared to 18% of those who did not.

- 29% of visitors who marked "Gaining information" rated the exhibition superior, compared to 17% of those who did not.

Conversely, *not* marking "Seeing rare, valuable, or uncommon things" was associated with a tendency to rate the exhibition in the lower three categories of poor, fair, or good: 28% of

those who did *not* mark this experience rated *Echoes* less than excellent, compared with only 18% of those who did mark this experience. [9]

Age was a significant factor in the choice of several experiences. In all cases, the oldest respondents (over the age of 50) were more likely than their younger counterparts to mark the following experiences (Figure 6):

- "Seeing rare, valuable, or uncommon things" was marked by 69% of older (over 50) respondents, 59% of middle-aged respondents (aged 30–50), and 52% of younger respondents (aged under 30).

- "Being moved by beauty" was marked by 66% of older respondents, 57% of middle-aged respondents, and 42% of younger respondents.

- "Enriching my understanding was marked by 60% of older respondents, 38% of middle-aged respondents, and 34% of younger respondents

- "Gaining information" was marked by 54% of older respondents, 35% of middle-aged respondents, and 42% of younger respondents.

Figure 6: Age-related Differences in Experiences (in percent)

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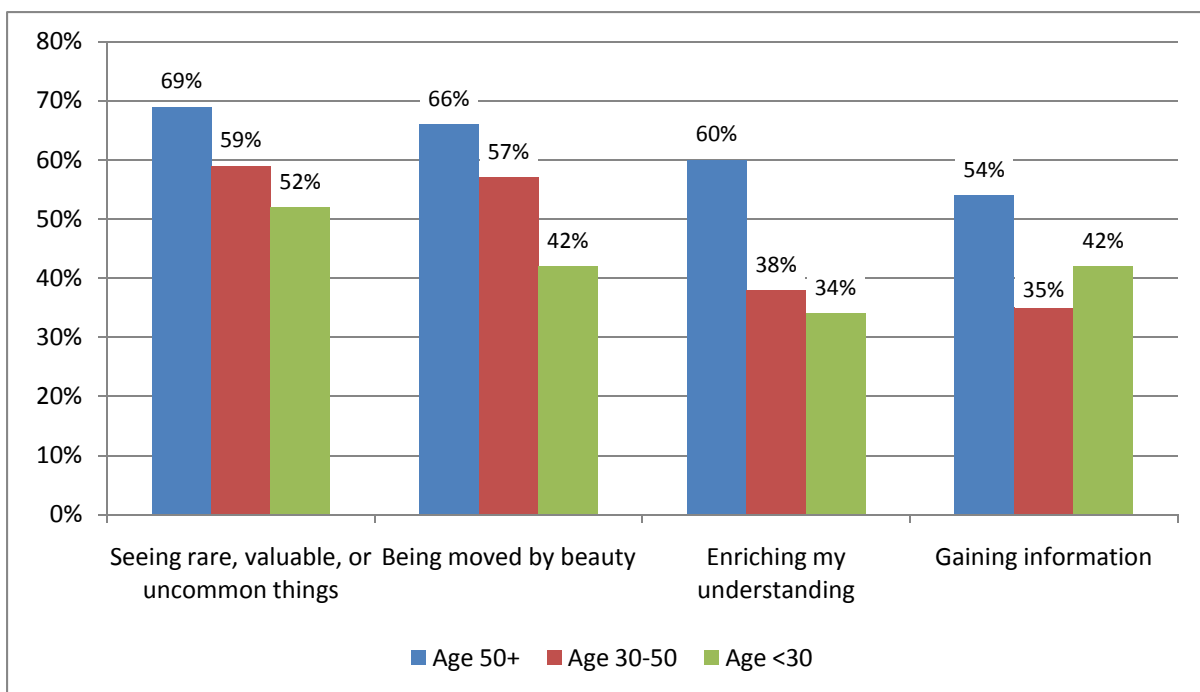
[9] This suggests that having an experience of "Seeing rare, valuable, or uncommon things" was, in a sense, the minimum that visitors expected from *Echoes*. While having this experience did not translate into a greater inclination to give the exhibition the highest overall rating, failing to have it did translate into a greater inclination to give it a low overall rating.

Exhibition-specific visitors also were more likely to mark certain experiences, including all three of the **personal connection** experiences that were marked by relatively few respondents overall (Figure 7):

- "Enriching my understanding" was marked by 55% of exhibition-specific visitors and 39% of general visitors.

- "Feeling inspired or spiritually moved" was marked by 39% of exhibition-specific visitors and 24% of general visitors.

- "Feeling an emotional connection" was marked by 28% of exhibition-specific visitors and 14% of general visitors.

- "Recalling personal memories" was marked by 16% of exhibition-specific visitors and 7% of general visitors.

Figure 7: Exhibition-Specific Visitor-Related Differences in Experiences (in percent)
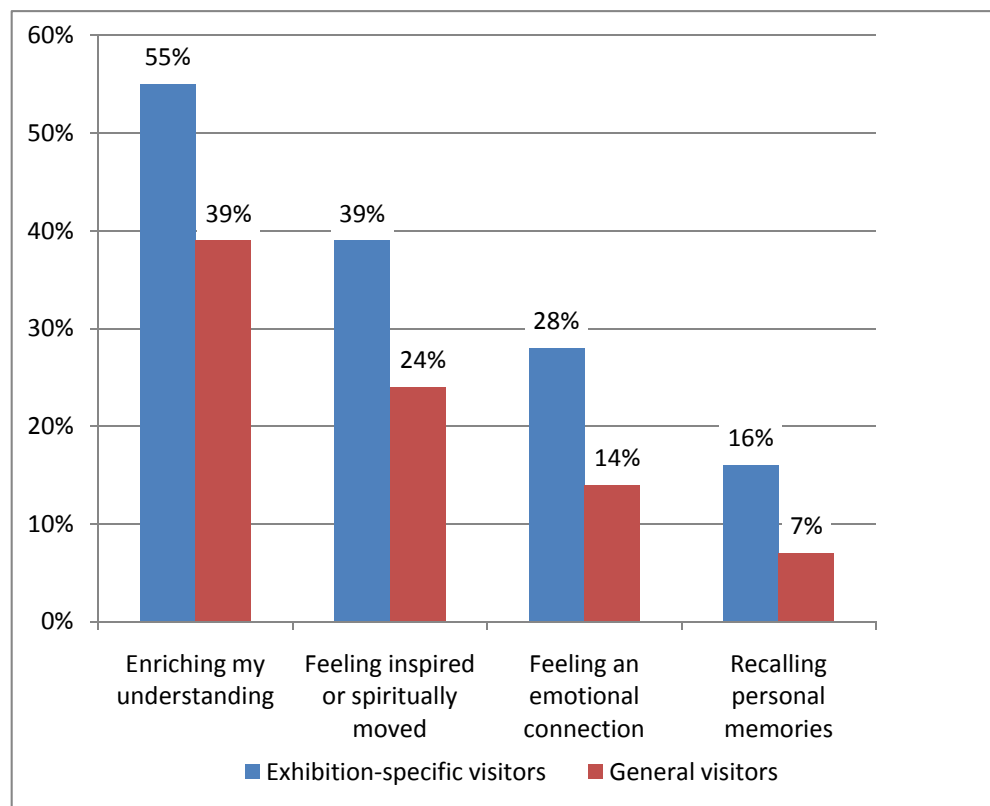
Finally, repeat visitors to FSG were more likely to mark certain experiences, including both of the **learning/understanding** experiences and two of the three **personal connection** experiences (Figure 8):

- "Enriching my understanding" was marked by 53% of repeat visitors and 37% of first-time visitors.

- "Gaining information" was marked by 50% of repeat visitors and 39% of first-time visitors.

- "Feeling inspired or spiritually moved " was marked by 37% of repeat visitors and 20% of first-time visitors.

- "Recalling personal memories" was marked by 15% of repeat visitors and 6% of first-time visitors.

Figure 8: Repeat Visitor-Related Differences in Experiences (in percent)
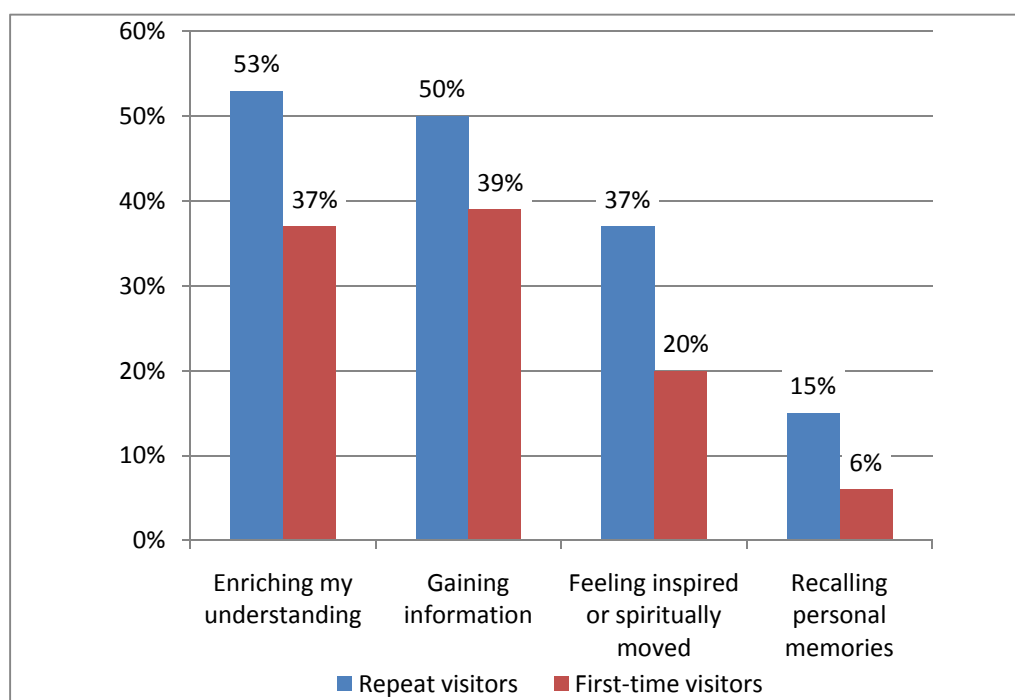
On average, visitors marked between two and three experiences. About two fifths of respondents (43%) marked three or more experiences; we will refer to these as "high-experience visitors." High-experience visitors were more likely than other visitors to rate the exhibition superior (34% vs. 14%), and less likely to rate it less than excellent (11% vs. 31%). Certain visitor characteristics were correlated with being a high-experience visitor:

- Exhibition-specific visitors were more likely than general visitors to be high-experience visitors (55% vs. 40%);

- Repeat visitors were more likely than first-time visitors to be high-experience visitors (53% vs. 37%);

- Older visitors (aged 50 an over) were more likely to be high-experience visitors (61%) than middle-aged visitors (aged 30–50—41%) or younger visitors (under age 30—31%).

Amount of Information

On the whole, visitors thought that the amount of explanatory and contextual information in *Echoes of the Past* was "About right." Among those who were not satisfied with the amount of information offered in the exhibition, far more thought the problem was "Too little" information (13%) than "Too much" information (1%).

Those who thought there was too little information appeared to be more likely to rate the exhibition less than excellent (37% vs. 20%), and less likely to rate it superior (14% vs. 24%), compared with those who thought the amount of information was about right.[10]

Individual Components

The survey asked visitors to rate three separate components of the exhibition—"Artworks," "Layout/spatial organization," and "Overall look/feel"—on the same five-point satisfaction scale used for the overall exhibition rating (poor, fair, good, excellent, and superior).

Interestingly, visitors were considerably more likely to rate each of these individual components superior than they were to rate the exhibition as a whole superior: 37% for overall look/feel, 35% for artworks, and 32% for layout/spatial organization, as compared to 23% for the exhibition as a whole.[11]

Technological-Informational Resources

An issue of particular interest was visitor use of technological-informational resources provided in the exhibition, and how use correlated with visitor characteristics, satisfaction, and experiences. These resources included:

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[10] The statistical significance of this cross tabulation was on the borderline of what OP&A would normally report as meaningful, with a Chi-square 2-sided significance of .051.

[11] The study team is uncertain how to interpret this finding.

- Two computer touch screens located within the exhibition;

- Several computer terminals located at the exhibition exit;

- An introductory "travelogue" video, located at the main exhibition entrance; and

- A room-sized "digital cave" installation depicting a virtual reconstruction of one of the caves on which the exhibition focused.

We will refer to these collectively as "informational resources" for convenience, although the digital cave was conceived as a work of installation art rather than as a didactic display, and the introductory video lacked explanatory narration, conveying information in a more impressionistic way. By design, a large part of the contextual information that might otherwise have gone into wall text and object labels was placed on the touch screens and computer terminals, where it was hoped visitors interested in learning more about the cave sites and objects would find it.

Most visitors noticed most informational resources (although qualitative interviews indicated that some confusion may have existed among visitors about the names used on the survey by OP&A to refer to the various resources[12]): 70% noticed the "Introductory video at exhibition entry"; 73% noticed the "Computer terminals at exhibition exit"; 74% noticed the "Touch screens in the galleries"; and 91% noticed the "Digital cave (virtual temple installation." (Figure 9, next page.)

Although the last figure is high in absolute terms, the study team was somewhat surprised the figure was not higher, as it would have been impossible to tour the entire exhibition without noticing the digital cave installation. Some of the visitors who failed to mark this response probably were experiencing confusion about the terms used on the survey, as discussed above and in the footnote. Alternatively, some were probably casual visitors who did not go all the way through the exhibition. It is impossible on the basis of the available data to hypothesize about the breakdown of this 9% of respondents between these two categories; however, anecdotal observations suggest that it was not uncommon for casual visitors to dip into a room or two and circle back before reaching the digital cave.

Depending on the informational resource in question, use among visitors who noticed it ranged from about a third (for the computer terminals) to about four-fifths (for the digital cave). In terms of all respondents, 23% used the computer terminals; 35% watched the introductory video; 46% used the touch screens; and 75% watched the digital cave.

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[12] For example, some interviewees thought the term "computer terminals" referred to the touch screens on the exhibition walls until this was clarified for them. Another example, discussed in the section on observational findings, is that some visitors confused the exhibition entrance and exit—which may have caused subsequent confusion about what was meant by the "introductory video at exhibition entry" and "computer terminals located at exhibition exit."

Figure 9: Noticed and Watched/Used Informational Resources (in percent)
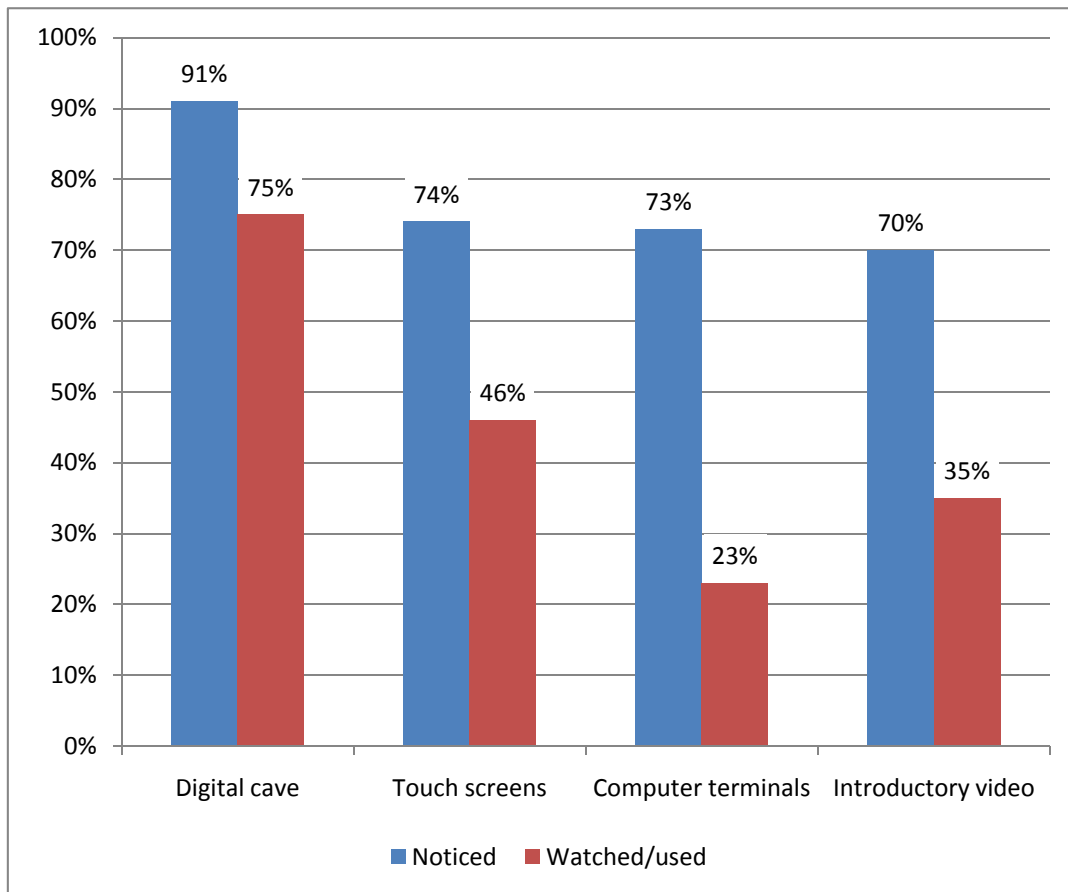
Relationship with Amount of Information

The study team found no relationship between use of any informational resource(s)—or, for that matter, noticing any informational resource(s)—and visitors' inclination to rate the amount of information in the exhibition "about right" or "too little."

Nor did any relationship exist between responses to the amount-of-information question and either "low use" of informational resources (defined as watching/using *no more than one* of these resources) or "high use" of these resources (defined as watching/using *at least three* of them).

Relationship with Learning/Understanding Experiences

Visitors who made low use of informational resources were much less likely than other visitors to mark the experiences of "Enriching my understanding" (51% vs. 34%) and "Gaining information" (51% vs. 36%) than other visitors. Conversely, visitors who made

high use of informational resources were more likely to mark these experiences: 51% vs. 40% for "Enriching my understanding,"[13] and 53% vs. 41% for "Gaining information."

Use of *any* of the informational resources *except* the computer terminals was associated with a higher likelihood of having the experience of "Enriching my understanding": watching the digital cave (47% vs. 34%), using the touch screens (53% vs. 35%), and watching the introductory video (50% vs. 40%). Having the experience of "Gaining information" was more common among those who watched the digital cave (49% vs. 30%) and used the touch screens (58% vs. 34%).

Relationship with Overall Rating

There was a strong correlation between overall exhibition rating and use of informational resources. Use of *any* of the four informational resources was associated with a higher likelihood of rating the exhibition superior:

- 36% of those who used the computer terminals rated the exhibition superior, compared with 19% of those who did not;

- 35% of those who watched the introductory video rated the exhibition superior, compared with 17% of those who did not;

- 35% of those who used the touch screens rated the exhibition superior, compared with 13% of those who did not;

- 26% of those who watched the digital cave rated the exhibition superior, compared with 16% of those who did not.

In addition, high-use visitors had a much greater tendency to rate *Echoes* superior than visitors who were not high-use (43% vs. 16%).

Use of *any* of the four informational resources, and high use of three or more of them, were both also correlated with a reduced tendency to rate the exhibition as less than excellent.

Conversely, low use of informational resources was associated with a greater likelihood of rating the exhibition less than excellent (30% vs. 14%) and a reduced likelihood of rating the exhibition superior (14% vs. 32%)

Thus, use of informational resources was clearly associated with an enhanced visitor experience in *Echoes of the Past*.

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[13] The statistical significance of this cross tabulation was on the borderline of what OP&A would normally report a result as meaningful, with a Chi-square 2-sided significance of .052.

Relationship with Age and Exhibition-Specific Visitor Status

The study team was interested in whether any correlation existed between visitor age and the tendency to use informational resources. The initial assumption was that older visitors might be less inclined to use new technologies with which they may be less familiar.

The study team did discover a relationship between age and use of some informational resources, as well as high use of these resources overall. However, the relationship was the opposite of what was initially hypothesized. Older respondents were *more* likely to use some individual informational resources, and to make high use of the resources as a whole.

Older respondents (50 and over) were more likely to watch the introductory video (45%) than middle-aged respondents (aged 30-50—32%) or younger respondents (under 30—29%); they were also more likely to use the touch screens (58%, compared with 39% and 42% for the other two groups, respectively). Older respondents were more likely to make high use of informational resources (38%) than middle-aged (27%) or younger (21%) respondents. Thus, the patronizing stereotype of the older, technophobic museum visitor befuddled by "newfangled" technologies was completely off the mark.

However, it should be recalled that older visitors were more likely to be exhibition-specific visitors, who in general tend to be more engaged with all aspects of the exhibition, including the instructional resources. Exhibition-specific visitors were found to be significantly more likely than general visitors to watch/use all of these resources except the computer terminals: 54% versus 30% for the introductory video, 85% versus 71% for the digital cave, and 54% versus 41% for the touch screens. Exhibition-specific visitors were also more likely to make high use of instructional resources overall (44% versus 22%), and less likely to make low use of them (33% versus 52%).

Qualitative Findings

Presentation

Interviewees generally had strong positive reactions to the object presentation and aesthetic design of the exhibition. The lighting and color scheme were intended to evoke a cave-like setting, and this was among the most commented-on aspects of the design. Comments included the following:

> *I think that having the show in a darkened space creates that cave-like feeling, so you feel you are going in [a cave]. The lighting is beautiful, and the way [the statues] are spaced and arranged.*

> *******

> *It definitely makes you feel like you're in a cave. That part I definitely think was achieved. You do a good job of making it situational—there's no excess light to influence your vision. And it's not too dark that it's oppressive. They definitely did a good job controlling the situation and putting highlights on the different structures.*

> *******

> *I've been to Asian art museums all over the world, and I've never seen such an impact of these black galleries with the lighting on [the objects]. It just opens your eyes and allows you to focus on the objects without being overwhelmed by everything around them. It's wonderful. … I guess it's the impact of the lighting and then the black behind it. It makes the brain kind of open up and take in the object. That's the only way I can express it.*

While many interviewees specifically mentioned the "cave-like" lighting and color scheme, others felt the aesthetic design added another dimension to the exhibition that set a tone for how they felt while walking through it. Words or phrases used to describe this added dimension were "a sense of calm," "harmony" or "harmonious," "peaceful," and "centering."

> *It was such a sense of calm—walking in there, looking through that. It's just fascinating how all that was carved so long ago; it's just amazing, beautiful.*

> *******

> *I like the whole atmosphere … of this. We're in a really stressful job. We're travel nurses and we work with hospice, and it's very centering to come here today.*

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> *The atmosphere fits well with the theme, which is supposed to be peaceful. So of course having an exhibit about Buddhism you expect to be brought into such an atmosphere.*

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> *It's dark, it's intimate, and distractions from the outside are diminished, because you are focusing on this piece that is lit up, but surrounded by darkness. So the mind is quieted, and you can focus and appreciate.*

Some interviewees also suggested ways in which curators could have added to the overall feel and experience of the exhibit:

> *[In the exhibition] you are "in a cave," and having been in caves all my life, I know there are sounds in caves.[14] There were no sounds in there to speak of. … But I don't know if they would be able to [validly re-create the types of sounds that would have existed in this context].*

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> *If there's a piece that you could reverentially touch, and something explaining that this is what others have done in the past to show respect, [some visitors might appreciate that]. You can see on statues like this that the feet are more rounded out because they have been touched for millennia. … It's kind of a trade off; on the one hand, how much damage can be done to this deity through constantly being touched? I'm not sure. … If you see a piece with the feet worn down, that is a definite sign that that was used as an object of worship.*

The placement of the wall text was problematic for some interviewees. References were made to wanting explanations on the statue bases, or to not noticing explanatory text that was in fact present. One interviewee also commented on the placement of the touch screens:

> *I was in a group of about six, and none of us even went to [the touch screens]. The location was also a problem. The placement seems off to the side, in a corner. It seemed like an afterthought.*

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[14] The speaker was a professional archeologist.

Layout

Related to the presentation of the objects was the exhibition's layout. For some viewers, there was confusion over where to start ("Really, the only thing that was confusing to me was where I should start"), or how to proceed through the space. The observational findings, discussed in the next section, also suggest that a significant percentage of visitors were not, at least initially, sure how to proceed through the exhibition.

For example, one woman in her 50s admitted that she had not initially been aware that the exhibition entrance and exit were both portals into a space that connected in the middle:

> *I'm confused now about how I went through it. I had gone through the one room with the Buddhist hand and then circled around [back out the entrance]; and then I realized there was another room back there. When I went through that, I realized that room came back out into the room I had just been in. So I didn't really make that connection until I had come at it the other way. It was a little confusing there.*

Other interviewees, however, were drawn as intended to the main entrance. For some, this was due to the striking lighting and visual presentation of the statues in the first room, which were clearly visible from the exhibition forecourt area. ("To me, it was obvious that this was the main entrance, because it is so strikingly visual; it just says 'Hello—come in.'") For others, the introductory video helped confirm the starting point:

> *I was a little confused about which room I should start in, because I wanted to make sure I understood the whole story. But I think seeing that video at the beginning helped me.[15]*

Technology

Echoes of the Past incorporated a number of technological components, which were labeled "instructional resources" for convenience in the quantitative findings section above. Some of these were fairly typical for museum exhibits, such as the introductory video; but the digital cave installation was more cutting-edge.

One interviewee thought the mix of ancient statuary with modern technology was a poor fit in purely aesthetic terms, and called the resulting juxtaposition "jarring." No one else expressed such overarching aesthetic qualms, but the extent to which others personally found the instructional resources useful varied considerably, depending on the visitor and the resource in question.

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[15] On the other hand, as discussed in the observational findings below, some visitors appeared to think that the computer terminals were an introductory element; a substantial percentage of those who went to the computers before entering the exhibition subsequently entered through the exit portal.

Introductory Video

Some viewers did not notice the introductory video due to confusion about where the exhibition started. ("I think I might have gone in the wrong door … I don't know. The introductory video…? … I guess I missed that too.") Others did not notice the video because they were immediately drawn into the exhibition itself:

> OP&A: *Did you look at the introductory video when you went in?*

> VISITOR: *Nope. I just dived right in. I didn't want to waste my time with that.*

Those who did watch the video found it added a geographical context that helped to frame and enhance their experience in the exhibition:

> *For example, the travel video of someone actually going to the site—that's the first thing I looked at, and it helped a lot. It put it in the context of where [the complex of caves] actually sits, geographically. And it also helped me to visualize how these things looked in their original setting.*

> *******

> *You have to have a sense of a place before you see the art that was made there, because otherwise you don't really understand—it's just a carving of a Buddha, and you've seen so many Buddhas before and it doesn't have any religious significance to me. So it's important to see the place.*

> *******

> *[It was useful to see how you would] travel from a modern industrial complex to the mountains, and to see how you would get there. … You go to some site out in the country, but you have to go through industrial suburbs, down these rutted roads, and you eventually end up somewhere beautiful. But it's very unexpected. And then once you get there it's also helpful to see that people still worship at these sites, which gives you the sense of the tragedy of all these figures having been pulled out and de-contextualized.*

Digital Cave

The digital cave, a 3-D video reconstruction of the southern temple cave, was frequently commented on. Many interviewees felt it added an immersive dimension to their experience in *Echoes*.

> *It was beautiful. I loved the [digital installation] that showed how it looked in the caves. … I liked what you guys did—trying to put people there.*

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I love the projection on the screen, because it felt like you were right there. And you were really inspired by the size of the projections.

The digital cave also enhanced the contextual experience for many interviewees:

VISITOR #1: *We [spent] at least 10 or 15 minutes [in the cave], I think.*

VISITOR #2: *I thought it was very impressive. In China, you can't actually see these things so close. Here, it was very close and you could see all of the details.*

VISITOR #1: *Especially with the colors. You could see the bright colors very clearly on the video. It was pretty amazing. And then to have the sign to the far right, where it showed the perspective of the cave—that was interesting, because you could almost imagine what it was like. It was hard when you were just sitting there [to imagine the actual configuration of the cave], but [the wall panel told you] okay, the cave is actually this large and in this shape.*

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It certainly does add another dimension to viewing these things. Photographs are so flat. It does put you there, because it is not a smooth 360-degree view, so those planes come at you and it can be a little distracting. But it's definitely an enhancement.

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I'm sort of spatial; I see things in three dimensions. It's harder for me to see things in two dimensions. … Spending time in the digital cave helped me to understand how things went together.

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OP&A: *How about the cave installation? Did you spend any time in that?*

VISITOR: *Yes. Do more of that, please!*

OP&A: *What did you like about it?*

VISITOR: *That I could sit and be an observer. You can learn by reading, but you can also learn by seeing, and I particularly enjoy learning by seeing. The steps that the artist took with that installation worked for me—showing where it comes from with the old photographs, showing what it looks like now, and then reconstructing it in that way—putting these heads in where they belong.*

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I love seeing the objects from different views—I liked the photographs of different views of the objects that gave you almost a 3-D effect. That was in contrast to the [introductory video] there, which struck me as almost uni-dimensional; that, I didn't respond to.

However, not all interviewees had a positive experience with the digital cave. A few suggested it was distracting, overwhelming, or puzzling. One woman elaborated as follows:

I didn't know what to take out of that. I didn't like the yellow paint that was on the faces of the objects, and I didn't understand why that was there. I got a little overwhelmed by it, too; I wanted to get out of there. I found it kind of generally interesting, but I didn't know why the object fragments were shown in yellow. It didn't evoke anything for me; it wasn't like the [statues themselves] …. For me, the screens were too close; they kind of came at me.

Some visitors even had negative physical responses to the digital cave, with one noting: "The [room] with the three walls almost made me feel a bit wobbly, because you were surrounded by them." During observational sessions in the digital cave and when administering written surveys, OP&A staff also encountered visitors who complained of mild dizziness or disorientation in the digital cave.

Touch Screens

Interviewees had mixed reactions to the touch screens present in the exhibit. Some noticed but opted not to use them. As explained by one, "I want to see the real thing." Others simply did not notice them, did not realize they were interactive, or expressed confusion as to what OP&A staff was referencing:

OP&A: *Did you use the touch screens?*

VISITOR: *Apparently not, because I didn't really notice … you mean the wall-mounted things…?*

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OP&A: *Did you use the computers at the exit…?*

VISITOR: *I thought we were just talking about that.*

OP&A: *We were talking about the touch screens—the touch screens on the walls in the galleries.*

VISITOR: *I thought you meant the computers. I didn't use the touch screens. I was talking about the computers.*

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I thought it was just a video when I was walking by it.

*****

I didn't realize those were touch screens. I thought those were videos, or just flashing through a couple of phrases.

Among those who did engage with the touch screens, many found the screens enhanced their understanding of the objects and saw them as good sources of information.

I love seeing the objects from different views—I liked the photographs of different views of the objects that gave you almost a 3-D effect.

*****

[I was not looking for anything specific on the touch screens;] I just sort of explored to see what was on there. I thought the touch screens were good for putting things in the context of where they physically existed originally.

*****

I like the touch screens. [The information] was very concise. I liked them better than reading the [texts] on the walls for some reason—but I'm not sure why, because I'm not very computer-savvy. But it was very user-friendly.

Computer Terminals

Computer terminals were set up at the exit of the exhibition and provided still more information on the background of the objects, the ongoing archaeological project in the caves, and where to go for more information.

While interviewees often voiced appreciation that the computer terminals were there to provide further information for those who were interested in pursuing it, some felt they proffered too much information:

The computers had almost too much information. It's a good source of information, but … I wanted to use them to maybe gain some brief insight, but it was more than brief. [Laughs] It was a lot of information. … It was a little bit too much.

*****

I almost thought it was too much information at times. With the computers they had set up, you would sometimes go to a page and there would be writing, writing, writing. I didn't really want to spend time reading it all.

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I noticed the work stations when I came out, but at that point I was pretty much done. But again, for the person who is very interested and wants to dive deep down the rabbit hole, that could be very interesting.

Emotional Experiences

Few interviewees discussed emotional responses to *Echoes of the Past,* beyond feeling a sense of calm or peace. However, those who did talk about emotional experiences felt these very strongly and were quite moved:

I feel it absolutely, positively feeds my soul. I feel better after I've left. I had a long day at work, and I just thought, "I'm going to stop at that Buddha exhibit before I go home and get on the Beltway, where [I go crazy]." It's a little compassion boost. So I absolutely feel that I leave an exhibition like this a better person for being here. I come to remind myself of what I'm supposed to be doing, and how I'm supposed to be thinking and living. Just seeing [the Buddha] over there—he's just like, "It's cool."

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OP&A: *Did you have any emotional response to this exhibition? Did it connect at any level with your feelings, as well as your understanding?*

VISITOR: *The short answer is an emphatic yes. The long answer is much more involved. I don't know how much time you have. [Laughs] Due to my upbringing, I have a soft spot for Asian art. My particular response to this exhibition is ... [sighs] Buzzwords: peaceful, curious, a general happiness.*

Historical Background

Interviewees frequently commented upon aspects of the historical background of the exhibition. For example, one raised the issue of the age of the objects and how such statues would have been made at the time of their creation:

I would say the statues they have in the exhibit are quite amazing. What I can't believe is that the carvings are so old, and that people in that time had the instruments to do it.

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By far the most-discussed historical issue was the removal of the objects from their original settings within the caves in the early 20th century. Mixed reactions were common, and included disapproval of the initial removal of the statues; gratitude that they are now safe, cared for, and available for a wider public to see; resignation to the fact that humankind can be short-sighted and acquisitive; and appreciation that the museum would confront the issue of the expatriation of cultural heritage openly:

> *These objects [were] essentially looted at some point in the past. I don't know how to describe [my response to that]; … not so much anger as disappointment. It just brings home the reality that so much of the stuff you see in museums like this actually belongs somewhere else, and got looted at some point in history. I realize that's how things happened back then … but it still made me feel a little uncomfortable … to realize that these objects had at some point in the past essentially been stolen. … One of the written wall texts made it clear that this was common practice at the time. They also pointed out that now these objects are being conserved, and that [partners] in China actually had contributed to the exhibition. That kind of mitigates the [discomfort] somewhat—knowing that if museums had not acquired these objects back then, they might have been lost altogether. I think that [information] was presented in a good way, in a way that was neither too negative nor too positive. It admitted to the reality of what happened, without trying to spin it either way.*

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> *It's sort of tragic that all these things were stolen. … [But now] they're being preserved, so that's good.*

> *******

> *I guess that's a big question for museums everywhere. They purchased these objects outright from collectors or whoever ended up with the pieces, but they originally belonged to and were stolen from national heritage sites or from families during political crises. It's an interesting question, and I know it is tough one for museums. So I think it is commendable that they at least [were willing to admit they have such pieces].*

> *******

> *I thought [the exhibition] was very brave and beautiful. I just didn't understand why all of this—the heads—was stolen. I don't understand why they don't give them back. It's sad for me to see that all these heads were stolen.*

> *******

Sometimes people don't know what they're doing. The people who took these pieces away in 1910 or 1920 … perhaps they just didn't know that they were stepping on sacred ground and taking things away. Or perhaps they did, but they were just so curious, because it was something new and something beyond what their minds had been exposed to. … That reminds me of those giant Buddhist sculptures [in Afghanistan] that were destroyed on purpose. That's very sad. But on the other hand, yes, it's sad and terrible and outrageous, but that's sort of the way the world goes.

*****

I noticed a family where the father was telling the children "These were originally in a cave, and now they're here in this exhibition. Do you think they are better here, or in a cave?" And of course the kids said, "In a cave!" There was no hesitation: "In a cave."

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As I was going through it, I wondered if the Chinese government is interested in getting some of these statues repatriated to complete the cave again. I've been to China a few times, and it seems like a desecration to me. Although I'm very happy to have seen the artwork and I found it stupendous, I just wonder … It makes me sad that it is here and not where it belongs.

Information

Some interviewees judged that the information provided in *Echoes of the Past* was about the right amount ("The labels were just the right size—totally 'bite-sizable'"), and that the information answered many of their questions.

I thought the text panels answered most of my questions. I thought they were adequate for the exhibit; any more text, and you would just be looking at text and not at the artwork, don't you think? That gets boring after a while, if you leave a gallery and you realize all you have been doing is reading and you forgot to look at what you're reading about. I didn't feel that way in there.

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I thought [the information] was good, because one thing the text tells you is the missing parts. The hands that are gone, [but the text tells you] what they would have been doing or holding or what-have-you. And of course [without the text], we'd have no idea what those monsters were all about.

Some interviewees, however, felt that with all the instructional resources, the informational content became mentally taxing by the time they had finished with the exhibition:

> *I liked the last room, but by the time I got here I was "informationed out."*

In addition to asking about their general impressions of the amount of information available in the exhibition, the study team asked interviewees whether the exhibition raised any specific questions for them, and if so, whether it provided answers.

Some interviewees admitted to leaving the exhibition with unanswered questions. In some cases, this was because obtaining the information would have required interaction with an instructional resource that the visitor did not use, such as a touch screen or computer terminal. In other cases, the relevant information was available in labels or wall text that had been overlooked. This appeared to be a particular problem with respect to the text panel in the digital cave and the text panel on expatriation of cultural patrimony, both of which were mounted in somewhat out-of-the-way places (in a corner of the digital cave installation room and outside the exhibition exit, respectively). Some interviewees also thought that the background color of text panels tended to blend in with the color of the wall on which they were placed, increasing the chances that they would be overlooked.

> OP&A: *Did you see the wall text to the right in the digital cave that discussed how the cave was an art installation?*
>
> VISITOR: *I didn't see that at all. I thought of [the cave installation] more as an informational piece than as an art work in itself. I would have liked to have seen a video of some sort to give me the context on each of these pieces. I did see the panels where they discussed "here's the niches."*
>
> OP&A: *Did you realize that the digital cave only represented one of the three cave locations?*
>
> VISITOR: *That was not clear to me, no. But then again, I did not see the text.*
>
> *******
>
> OP&A: *Did you want [more discussion of the expatriation issue] in the exhibit?*
>
> VISITOR: *Yeah, probably. I don't know the explanation for them being here.*
>
> OP&A: *Did you see [the cultural patrimony panel]?*
>
> VISITOR: *No, I didn't see it.*

Some interviewees also mentioned broader unanswered questions related to Buddhism or related themes:

> *I was left with a question, because I don't know very much about Buddhism and its history, so this was helpful to learn something. Where are the women? When you look at the Buddhas, they all seem to be male. So it left me wondering, where are the women?*

However, some interviewees noted that they did not expect exhibitions to provide answers to all questions that might arise, and that good exhibitions often leave visitors eager find out more:

> *I think I leave with more questions than I had before I came, which is also maybe one goal of a museum exhibition. It's not going to answer all of your questions. It will inspire you to think of new ones.*

> *******

> *[The exhibition] still brings up questions. For example, if the pieces were restored to their original sites, would they actually be safe there, or would they just be stolen again? Is there protection available for these places? Are the restorations of good quality? So I do leave with a lot of questions, and probably an interest in doing more investigating into it.*

Such interviewees discussed going to the library or to the Web to answer their questions, or possibly even going to China to visit the caves in the future.

Observational Findings

Visitor Use of Exhibition Elements

Introductory Video

OP&A staff observed and timed 68 visitors[16] who watched the introductory video, which ran on a continuous four-minute loop.[17]

Watching times ranged from five seconds (0:05) to five-and-a-half minutes (5:30). Among those who watched the video, the mean watching time was two minutes and twenty seconds (2:20), and the median was two minutes (2:00)—approximately half of its total running time.

Although the video was intended as an introduction, one third of those who watched it did so after exiting the exhibition (27 out of 77 visit groups).

Digital Cave

OP&A staff observed and timed 31 visitors who watched the digital cave, which ran on a continuous eight-minute loop.

Watching times ranged from ten seconds (0:10) to fourteen-and-a-quarter minutes (14:15). Among those who watched the installation presentation, the mean watching time was four minutes and eighteen seconds (4:18), and the median was three minutes and five seconds (3:05)—a little over one third of its running time.[18]

Most visitors did not backtrack to check what they saw in the digital cave against the objects they had previously seen. Only about one in seven of the groups going through the exhibition in the intended direction—that is, entering through the main entrance portal and approaching the cave via the corridor with the glass showcases—went back to look at the heads or 3D-print replicas in the corridor showcases after viewing the installation.

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[16] Including both individuals visiting alone and visit groups. Note, however, that only one member of a visit group was observed at a time. Initial observations determined that visitors in groups generally moved through the exhibition together. (For example, when one member of a group picked a door to enter, the others tended to follow this lead. Similarly, visitors in groups tended to watch/use the instructional resources together.) Thus, in subsequent observation sessions, OP&A observers made no effort to track the behavior of every individual in a visit group. Rather, only the first group member to engage in the behavior of interest was tracked and/or timed.

[17] In the case of the digital cave and introductory video, "watched" means stopped and observed for at least four seconds.

[18] The considerably higher mean time arises because a small number of outliers spent extended periods in the cave.

Among those who watched the installation, about one in five (6 out of 31) read the wall text panel in the cave. All of them did so after watching the installation for a while, rather than upon entering the cave space.

Computer Terminals

The study team observed 32 visitors who stopped and used the computer terminals located at the main exhibition exit. These users were not timed.

Although the computer terminals were situated by the exit and were intended primarily as a supplementary resource for visitors who had completed their tour of the exhibition, half of the observed users (16 of 32) went to the computers before entering the exhibition. Of these, one quarter (4 groups) returned to the computers after going through the exhibition. Of the groups that used the computers before entering, two thirds subsequently went into the exhibition through the exit portal.

The remaining half of the observed user groups (16 out of 32) used the terminals only after going through to the exhibition, as intended.

Expatriation Text Panel

The text panel on the expatriation of cultural heritage objects, located on a column immediately outside the main exit of the exhibition, appeared to be virtually invisible to visitors. During the observation session for this component, the study team observed 39 visitors exiting *Echoes*, none of whom stopped to read the text.[19] While the caution given in the Methodology section about quantitative generalizations applies, both formal and anecdotal observation by the study team strongly suggest that only a small minority of visitors read this text panel.

Exhibition Visit Flow

Initial observations suggested that a substantial percentage of visitors to *Echoes* did not enter the exhibition through the main entrance. In subsequent observations, the frequency of use of the two exhibition portals for initial entry was counted.[20] A total of 162 visitors were observed as they entered and exited the exhibition, with findings as follows:

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[19] While conducting other data collection tasks in the exhibition, study members occasionally observed visitors reading the text.

[20] Those who were obviously wandering about the exhibition area to orient themselves to the building (without spending any time specifically looking at the exhibition content) were not counted. Initial observations were made at a time when the gallery adjacent to *Echoes,* which shares a forecourt with the *Echoes* gallery, was closed. The exhibition *Family Matters: Portraits from the Qing Court* opened in this gallery partway through *Echoes'* run at the Sackler, and subsequent observations were conducted after it opened.

- About three in five observed visitors (98 out of 162) went through the exhibition in the intended sequence, entering through the entrance and leaving through the exit.

- About one in five (32 out of 162) saw it backward, entering through the exit and leaving through the entrance.

- Another one in five (32 out of 162) entered and subsequently exited through the same portal (entrance or exit). In some cases, this pattern was repeated with the other portal before the visitor left the exhibition area.

While the study team did not time visits, there did not appear to be any obvious relationship between which portal was used for initial entry and engagement with the exhibition. That is, some of those who saw *Echoes* backward, or who entered and exited from the same portal, spent a good deal of time in the exhibition and appeared to be deeply engaged with it.

To explore whether the exhibition flow design was unclear, brief unrecorded follow-up interviews were conducted during the observation sessions with visitors who entered and exited in some pattern other than the intended entrance-to-exit path. Responses suggested most visitors understood that the two portals connected to the same exhibition, but not necessarily that the exhibition was intended to be seen in a certain direction. In most cases, however, this lack of understanding did not appear to undermine their satisfaction with *Echoes*.

For example, when asked why she entered through the exit portal despite reading the introductory panel immediately adjacent to the main entrance, one visitor said that she chose the exit portal simply because the room into which it opened was quiet, while there were people talking in the room into which the entrance portal opened. She indicated that she was vaguely aware that the other portal was the intended entrance, but did not seem to consider this sufficient reason to begin there under the circumstances.

Some visitors who entered and exited through the same portal said that although it was clear to them that the two rooms off the exhibition forecourt were part of a single exhibition, they did not realize the sides were connected and that they could have gone all the way through. Two reasons for this misunderstanding were adduced:

- Visitors went in and saw the digital cave, but it was dark and they did not notice that there was a passage on the other side.

- Visitors went up to the cave, but did not enter because of time constraints, and so did not realize the two sides connected.

Some visitors were initially drawn to the computer terminals, which may have led them to subsequently enter the exhibition through the exit portal.

Visitors who came into the *Echoes* forecourt from the Chinese collection were more likely to enter the exhibition through the exit portal (38%) than were visitors who came from other parts of the museum (stairwell from the lobby, 10%; South Asian galleries, 19%; *Family Matters* exhibition, 16%).

Discussion

Visitor responses to *Echoes of the Past* were, on the whole, similar to responses to other Sackler Gallery exhibitions studied by OP&A. In terms of overall satisfaction, *Echoes* came down in the middle of the pack in comparison with other Sackler exhibitions. Aficionados of Asian art, as proxied by exhibition-specific visitors and repeat visitors to FSG, were particularly pleased with it—a typical finding for Gallery shows.

Responses to the survey question about experiences, as well as anecdotal evidence from qualitative interviews, indicate that *Echoes* succeeded particularly well as an object/aesthetic experience, because of both the quality of the artworks and the striking manner in which they were presented. It also worked for a smaller but substantial percentage of visitors as a learning/understanding experience. These findings, too, are not unexpected for a Sackler show.

However, the study team did identify two areas where more surprising findings arose. These were related to the exhibition layout and the technological-instructional resources it offered.

Layout

One area where there appeared to be room for improvement concerned the exhibition's layout. Observations indicated that a sizable percentage of visitors did not grasp the linear, entrance-to-exit layout of the exhibition.

Whether this confusion undermined such visitors' satisfaction with the exhibition, however, is unclear and probably unlikely. While visitors going through the exhibition in the intended direction would probably grasp the context of the objects better than those viewing it backwards, the aesthetic appeal of the show would not be affected. And as noted above, the aesthetic experience appeared to be the main point for the majority of visitors.

In any case, potential confusion about how to go through a similarly-configured future exhibition in the same space could be easily and cheaply rectified through measures such as screening off the exit portal from the forecourt area or mounting panels announcing "Entrance" and "Exit" over the appropriate portals.

Instructional Resources

The decision to convey contextual information through visual presentations and interactive technologies appears, on the whole, to have been a successful experiment. Although causal mechanisms are unclear, on the whole use of instructional resources was correlated with higher overall satisfaction with *Echoes*.[21]

Many visitors used and benefited from these resources. Even the least-used resource (the computer terminals) was used by nearly a quarter of survey respondents, and the most-used resource (the digital cave) was very popular among visitors, despite some inevitable criticisms. Visitors who stopped to watch the introductory video or digital cave presentation tended to stay for fairly substantial periods of time, suggesting that they derived some benefit from these resources.[22] Even visitors who did not personally make much use of the instructional resources often seemed to appreciate the fact that the museum had provided them for others who did want to dig deeper.

While qualitative interviews suggested that some visitors missed information available through the instructional resources that they might have found enlightening, this certainly would also have been the case if such information had been posted in traditional wall text—particularly since transferring all of the relevant information to wall text would have involved a very substantial increase in the words on the walls.

One comment from a single interviewee aside, there is no evidence that visitors disliked the aesthetics of juxtaposing modern technology with ancient artworks.

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The study team also found it interesting to assess the findings from *Echoes* in light of FSG's three stated underlying goals for its exhibitions: posing provocative questions, providing tools that engage visitors to find out more, and eliciting emotional and personal responses. In these areas, the success of *Echoes* appeared to be mixed.

Providing Tools

Of the three areas, *Echoes* appeared to be most successful in providing tools that engage visitors to find out more about the exhibition subject. This is mainly due to the variety of instructional resources available within the exhibition, and the depth of information

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[21] This does not necessarily imply a causal relationship (i.e., that use of these resources tended to boost visitor satisfaction). It might, for example, be the case that visitors predisposed to high satisfaction with an exhibition—for example, Asian art aficionados—were also predisposed to using the instructional resources.

[22] Anecdotal evidence does suggest, however, that some people who spent substantial time in the digital cave did so, at least in part, because it offered a place to sit and relax, rather than exclusively out of an interest in the installation presentation.

conveyed through them. Interviewees who made use of these resources suggested that the introductory video and digital cave conveyed an intuitive feel for the physical context of the caves, while the touch screens and computer terminals were valuable sources of more "factual" information. While some interviewees felt the computer terminals might have had *too much* information and were a little overwhelming, the information they contained was also available online to be explored at leisure later, if visitors were so inclined.

Posing Questions

The success of the exhibition in posing provocative questions is less clear. The question of how the artworks came to be removed from their original sites and displayed in the West certainly struck many visitors as interesting and provocative. But it is safe to say that posing questions about expatriation of cultural patrimony was not itself a central aim of the exhibition—even if the issue inevitably needs to be addressed in a show of this nature.

Evidence that the exhibition commonly raised questions for visitors about the works themselves or their cultural and historical significance is more ambiguous.

- Some interviewees noted their curiosity about related historical/cultural issues such as the tools and technologies used to carve the statues and the absence of females among the represented figures. However, these appeared to be expressions of idiosyncratic personal interests, rather than examples of visitors picking up on questions posed by the exhibition itself.

- Learning/understanding experiences were relatively common among visitors, but this does not necessarily mean the exhibition raised specific questions.

Eliciting Personal Responses

Evidence of the exhibition's success in evoking personal responses among visitors was also mixed.

- Experiences of personal connection to the exhibition (inspiring or emotionally moving visitors, or evoking memories) were the least common type of experiences cited by survey responses—far behind both learning/understanding experiences and object/aesthetic experiences.

- Among interviewees, feeling a sense of calm or peace was mentioned quite frequently. Beyond this, discussion of emotional connections raised by the exhibition were rare. However, those few interviewees who did talk about emotional connections appeared to feel these connections quite strongly.

A number of interviewees also talked about indirect personal connections to the exhibition's subject, such as working as a professional archeologist (albeit with a very different cultural focus), visiting or having relatives in China, traveling to Washington to hear the Dalai Lama speak, and so on. These connections may not have been emotional per se, but they did constitute points of contact between visitors' personal lives and what they saw in *Echoes.*

Appendix A: Survey Form

8275596080

Arthur M. Sackler Gallery
Echoes of the Past:
The Buddhist Cave Temples of Xiangtangshan

Is this your first visit to this museum, the Freer and Sackler Galleries?
    O No   O Yes

Please rate your overall experience in this exhibition, *Echoes of the Past: The Buddhist Cave Temples of Xiangtangshan.*
    O Poor   O Fair   O Good   O Excellent   O Superior

Did you (A) *notice* and (B) *watch/use* the following technological resources in this exhibition…	(A) Did you *notice*? No	(A) Did you *notice*? Yes	(B) Did you *watch/use*? No	(B) Did you *watch/use*? Yes
Introductory video at exhibition entry	O	O	O	O
"Digital Cave" (Virtual temple installation)	O	O	O	O
Touch screens in the galleries	O	O	O	O
Computer terminals at exhibition exit	O	O	O	O

How would you rate the following content and design features of this exhibition, *Echoes of the Past*?	Poor	Fair	Good	Excellent	Superior
Artworks	O	O	O	O	O
Layout/spatial organization	O	O	O	O	O
Overall look/feel (lighting, colors, etc.)	O	O	O	O	O

How would you rate the amount of information available in this exhibition?
    O Too Much   O About right   O Too Little

Which of the following experiences did you find especially satisfying in this exhibition today?
    O Being moved by beauty
    O Enriching my understanding
    O Gaining information
    O Recalling personal memories
    O Feeling an emotional connection
    O Feeling inspired or spiritually moved
    O Seeing rare, valuable, or uncommon things
    O None of these

Did you come to this museum today specifically to see this exhibition, *Echoes of the Past: The Buddhist Cave Temples of Xiangtangshan*?
    O No   O Yes

Are you visiting this exhibition alone or with others?
    O I am alone   O I am with others

Are you male or female?   O Male   O Female

What is your age? ☐☐

Do you live in the United States or another country?

    O United States, specify zip code: ☐☐☐☐☐

    O Another country, specify: _____

If you have any other comments or suggestions, please let us know on the back of this form.

THANK YOU!

Ses ☐☐   Seg O 1 O 2 O 3   Sta O C O R O L O I   ID ☐☐☐☐

Appendix B: Survey Response Frequencies

Is this your first visit to this museum, the Freer and Sackler Galleries?

Yes: **64%**
No: **36%**

Please rate your overall experience in this exhibition, Echoes of the Past.

Poor: **0%**
Fair: **1%**
Good: **21%**
Excellent: **56%**
Superior: **23%**

Did you (A) notice and (B) watch/use the following technological resources in this exhibition…

Introductory video at exhibition entry

Notice: **70%**
Watch: **35%**

"Digital cave" (Virtual temple installation)

Notice: **91%**
Watch: **75%**

Touch screens in the galleries

Notice: **74%**
Use: **46%**

Computer terminals at exhibition exit

Notice: **73%**
Use: **23%**

How would you rate the following content and design features of this exhibition, Echoes of the Past?

Artworks

Poor:	**0%**
Fair:	**1%**
Good:	**17%**
Excellent:	**47%**
Superior:	**35%**

Layout/spatial organization

Poor:	**0%**
Fair:	**2%**
Good:	**20%**
Excellent:	**47%**
Superior:	**32%**

Overall look/feel (lighting, colors, etc.)

Poor:	**0%**
Fair:	**2%**
Good:	**16%**
Excellent:	**44%**
Superior:	**37%**

How would you rate the amount of information available in this exhibition?

Too much:	**1%**
About right:	**83%**
Too little:	**16%**

Which of the following experiences did you find especially satisfying in this exhibition today?

Being moved by beauty:	**53%**
Enriching my understanding:	**43%**
Gaining information:	**44%**
Recalling personal memories:	**10%**

Feeling an emotional connection:	**14%**
Feeling inspired or spiritually moved:	**26%**
Seeing rare, valuable, or uncommon things:	**59%**
None of these:	**2%**

Did you come specifically to see this exhibition, *Echoes of the Past: The Buddhist Cave Temples of Xiangtangshan*?

Yes:	**24%**
No:	**76%**

Are you visiting this exhibition alone or with others?

I am alone:	**21%**
I am with others:	**79%**

Are you male or female?

Male:	**44%**
Female:	**56%**

Demographic Cohort

GI (Born before 1925):	**0%**
Silent (Born 1925-1945):	**7%**
Leading Boom (Born 1946-1955):	**17%**
Trailing Boom (Born 1956-1964):	**15%**
Generation X (Born 1965-1981):	**25%**
Generation Y (Born 1982-1995):	**30%**
Generation Z (Digital Native, Born after 1995):	**7%**

Residence:

United States:	**89%**
Other country:	**11%**
D.C. Metro local:	**22%**

Appendix C: Qualitative Interview Guide

Selection of interviewees: *Approach exiting visitors or visitors about to leave the exhibition space. Observe first to select visitors who have spent* **at least five minutes** *in the exhibition.*

General Background

> *Note gender and estimated age*
- Where are you from?
- Who are you visiting with?
- Why did you come to the Sackler Gallery today?
- Have you visited the Freer and Sackler Galleries before?

Opening Questions

- Tell me about your visit to this exhibition.
   - What did you do in the exhibition?
   - Did you experience this exhibition primarily in terms of art and aesthetics, or in terms of exploring and understanding a different culture? Explain

Technology

- Did you use either of the touchscreens?
   - If so, what did you use them for? Did you find them easy to use? If you were looking for something specific, did you find it?
   - If no, why not?
- Did you stop to watch the introductory video at the exhibition entrance?
   - If so, what are your thoughts on it? Do you remember anything specific about it?
- Did you spend time in the virtual cave?
   - If not, was this a conscious decision? Explain.
   - If so, please discuss your thoughts on it. Did the cave experience change the way you looked at or approached the rest of the exhibition? How?
      > [**Prompts:** *Aesthetic versus didactic experience; hi-tech experience amidst traditional art museum presentation; relationship between objects highlighted in cave and physical objects in exhibition.]*

Exhibition Layout and Design

- Was it clear to you that the exhibit was organized into three separate cave locations?

Exhibition Content and Theme

- Did this exhibition raise any questions for you about the art itself or its historical context?
[Prompts if necessary:
    About how the art came to be here (expatriation of cultural objects)?
    About its place in the wider history of Chinese art and culture?
    About Buddhism and the cultural/religious context of the art?
    About the use of technology to "reconstruct" a site from scattered fragments?]
If so, did you find answers to these questions? Did you find tools that helped you with further inquiry? What are they? If you did not find answers, what more could the museum do to help?
- What do you see as the underlying theme or purpose of this exhibition?
[Prompts:
    Do they get the idea of using digital technology to reconstruct cultural sites from scattered fragments?
    The place of these works in Chinese art history / evolution of Chinese Buddhism?
    Do they see it more in terms of "art" or "archaeology"?]

General/Miscellaneous

- What did you like best in this exhibition? (Did you find anything inspiring? Moving? Uplifting? Memorable?)
    - Did you find yourself emotionally engaged by this exhibition? In what ways?

- Did you find anything confusing? What could have been done better?

Appendix D: Guidelines for Observation

Element #1—Introductory video: Record start and end times for users.

Element #2—Digital cave: Record start and end times for watchers. Record foot track of visitors: how visitors move back and forth between the Digital cave and the rest of the exhibition.

Element #3—Wall text on expatriation of cultural items: Count entering/exiting visitors and note how many stop to read the text.

Element #4—Computer use: Count computer users; note numbers that use computers (1) only before entering exhibition; (2) only after entering exhibition; (3) both before and after entering exhibition.

Element #5—Entry/Exit: Note direction from which visitors approach exhibition (China display, South Asia display, main staircase, neighboring exhibition). Count how many enter through entrance portal vs. exit portal. Count how many subsequently exit through the same portal that they entered; note whether they subsequently enter other portal or leave exhibition area.