

Enlightening or Embarrassing? Drama in the Science Museum, London, United Kingdom

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Evaluation and Communication and People

When developing an evaluation study it can be helpful to think along the lines of a model of communication. This model, at its simplest, is a message from the sender, being sent via a medium of communication, to the receiver. Feedback is provided via an evaluation, so the sender can see what was actually received.

An assessment of the effectiveness of communication can be seen as the overriding purpose of museum-based evaluation. The intent of the communication may vary, the medium or media of communication may vary, the characteristics of both sender and receiver of the communication may vary, and the equation is rarely simple. There is the potential for distortion at every interface.

Despite this, museum evaluation has provided a wealth of data on the effectiveness of exhibits as communicators. We have information about two-dimensional media (text, text panels, graphics, pictures). We have information about three-dimensional media (artifacts, models, reconstructions, dioramas), and we have information about motive three-dimensional media (hands-on exhibits, working models). But, what about people themselves as a three-dimensional medium of communication? And, even more challenging, since some of these people may be portraying past events, can they can be seen as four-dimensional communication media?

Drama in the Science Museum

Science and technology museums in the United Kingdom are gradually increasing the roles for first-person interpreters, but very little is actually done to look at the effectiveness of these real people as communicators of messages. The Science Museum in London uses professional actors to provide a realization of both fictitious and real characters from the history of

science, technology, and medicine. In an attempt to understand more fully how our visitors react to such live interpretations, an evaluation was commissioned from a consultancy firm, The Susie Fisher Group.

Evaluating the Drama

The evaluation was complex in its methodology, its findings, and their interpretation; a mix of qualitative and quantitative work, a mix of affective and cognitive issues. We would like to share some of the richness of this study, though space forces us to be highly selective. We will explain a little about what was intended and why, a little about the methods used, a little more about the findings, and then some of our conclusions.

The Goals

Let's start with the goals for drama in the Science Museum. The overriding purpose for the drama is to give a human face to the Museum. This is done by generating a feeling of warmth through both the interactive nature of the drama and its ability to enliven and entertain. It is hoped that this sense of warmth is provided via the personality of the character and through the provision of female, as well as male, roles.

Another of the goals is to create salience—something of relevance. It is hoped that the drama not only attracts attention to itself (and the exhibit), but also provides a memory trigger and a living picture, crystallized in time, for the visitors. The drama also is a means of communicating not just information, but complexity. It is hoped that it provides an associated historical context, an overview, a bridge between the past and the present, a means of allowing issues to be debated, clarification of detail, and a sense of process (how things have changed, as well as how things were done), together with the opportunity for multiple interpretations.

There are five main groups of people who have vested interests in the drama in the Science Museum: staff in the interpretation unit, curators, the drama managers, the actors, and the visitors. Each of these groups has different, though often overlapping, concerns. For the interpretation staff, the prime concern is about how to maximize communication and comprehension. For curators, the first concern is whether the visitor/actor interaction will stay accurate over time. The managers wonder whether drama is a serious and enduring tool, whereas the actors wonder how they can develop their skills. For the visitors we have a question of whether this whole thing is embarrassing or enlightening. It is upon these last two groups, particularly the visitors—the people at the sharp end—that the evaluation is focused.

The aims of the study fell into three main areas: what was happening now, what immediate improvements could be made, and a look to future developments. The Museum wanted to look at the here and now (the status quo), in terms of both the drama's goals and visitor reactions to the drama.

For this reason, it was necessary to establish typical behaviors between visitors and actors during a variety of performances. Another requirement was to understand how visitors feel about the drama and what motivates them to participate, or not participate. It was also felt that the evaluation should throw light on the stakeholders' concerns and place them in perspective, vis-à-vis the visitors. There was also a need to assess what combination of factors created the most potent and constructive communication to visitors. The current success of the drama in achieving its goals needed assessing. And, finally, the Museum wanted recommendations on the appropriateness of drama as an interpretive tool, and some directions for future development. In other words, to see where we are now, to improve the existing position, and to look to the future.

The Methods

To deal with such a range of issues meant the development of an equally diverse range of methods. We therefore observed visitors at four three-hour performances, and activity notes were recorded. We also video-recorded sessions. There were discussions with four groups of visitors: children ages 8-9 who had recently been to one of the Museum's drama theme days; teachers and parent helpers who had recently seen the actors; adults without children who were currently visiting the Museum; and eight of the Museum's actors. Further qualitative information came from an observer-participant who accompanied two family groups as they went round the Museum, and from teachers with Dictaphones.

Quantitative data were gathered from two questionnaire surveys. One was a self-completion questionnaire designed for a drama workshop on lasers (133 were collected) and the other was an interview with 208 people at six of the drama locations.

Each element of this study was intended to provide a layering of data. The observation work helped us to develop the other parts of the study. In general, the qualitative work helped us develop the quantitative. The quantitative survey corroborated the observations and gave us a measure of the visitors' views. The qualitative gave us the reasons for these views.

The Findings

A basic overview of the evaluation study showed that the drama received a ringing endorsement from both participant and non-participant visitors. This approval was evident in comments such as:

"Actors add another dimension to the Museum."

"It is much better to have a living exhibit than just labels and gadgets."

"It is just what the Museum needed—not everyone is bright enough to understand all the exhibits."

Children seem to be the main means of access to the drama; they are the main beneficiaries, and they make a bee-line for the actors. Adults, on the

other hand, seem inhibited, socially wrong-footed, on the defensive, and appear to feel that they are being tested. As a consequence, it was felt that the Museum should prepare people for the actors, and provide visitors with a sense of the rules of the game.

It is helpful to develop these ideas in a little more detail. We have been selective with the amount of information that can be shared in this article, and there is a great deal that has been left out.

Observation Data

The observations showed that interest begets interest—the more people who are present, the more people will be attracted. Costumes and props are a big draw, as they seem to signal something different. Children are the people who stop, while the accompanying adults tend to look benignly on. There is a complex sizing-up process going on between actor and visitor: “Is this one going to stop, or not?” This is manifest through eye contact, movement of the actor, hailing by the actors, and the visitors’ speed of walking. This all appears to form an example of a classic approach/avoidance encounter. The result is a slow sidle round the periphery and away. Adults seem to like to maintain an adult-to-adult complicity: “You’re not really him, are you?” Meanwhile, the actors are having a desperate struggle to maintain character in the face of environmental disruptions: chimes, announcements, corridor traffic, and being asked the way to the washroom. Finally, in general, a role which incorporates a major visual display (such as a large and hard-to-miss object) seems to be a more effective crowd-puller than a single person.

Quantitative Data

Moving on to the quantitative findings, let’s start with the basic demographics. About three-quarters of the sample interviewed were participants (71%)—a deliberate quota. The sample was then selected in a manner that encouraged randomness. Children over the age of five were interviewed, and a range of days provided children in school groups and children with their families. The sample’s demographic profile was similar to the Museum’s general profile and there was no significant difference between the participant and non-participant profiles.

About a fifth (95% confidence intervals for a sample size of 200 are presented in Table 1) of the sample had seen drama performed in a museum prior to their visit to the Science Museum. This compares to 11% from a similar study conducted at the Canadian Museum of Civilisation. A fifth knew about the Science Museum’s drama before encountering it in the galleries.

Table 1
Confidence Levels for Sample Size of 200

	10 or 90%	20 or 80%	30 or 70%	40 or 60%	50%
95% Confidence Interval	±4%	±5%	±6%	±7%	±7%

We asked visitors how they felt when they first saw the drama (see Figure 1). The most common response was that they were intrigued or interested (over a fifth of adults mentioned this sort of thing). Visitors also mentioned that they felt the people looked strange or were wearing funny clothes (this was the most common response from children, with nearly a quarter of all the children interviewed mentioning this sort of issue). Other responses related to visitors thinking that the drama was a good idea and that they were curious. Less positive responses were that visitors were surprised in that they didn't realise the person was an actor, they felt unsure, and they wondered what was going on:

“I thought she was a model at first—I couldn't think what she was doing there.”

“I thought he was trying to sell something.”

Here we have the first indications that the visitors' reaction to the drama was a little ambiguous. On the one hand very positive, and on the other the indication of a degree of threat—the visitors not feeling wholly safe with the endeavour.

We then asked visitors if they wanted to join in. Here there was a clear distinction between adults and children. The children were the ones who wanted to join in—two-thirds of the children wanted to join in, compared to two-fifths of the adults. However, a large percentage of the people interviewed did not wish to join in (58% of the adults sampled and 30% of the children). Most of the children who did not want to take part were older (i.e. 13-18 years old) and male.

By probing a little further, we tried to find out why some visitors wanted to join in, and some did not. Those people who wanted to join in mentioned that they wanted to hear what the actor was saying, were curious, saw other visitors standing around, were interested in the subject, wanted their children to join in, liked the interactive approach, thought it was funny or amusing, and because the actor spoke to them: “Actors are better than labels—they answer back.”

Those people who did not wish to join in said it was because the drama was more appropriate for children, they just wanted to listen, they felt too

shy or self-conscious, or because they were not interested and the drama was not for them:

“I didn’t join in because I would have felt weird standing up with them.”

“She frightened me a bit.”

“They make me feel nervous—I didn’t want to speak.”

“I took the back seat because I’m an adult although I would have quite liked to join in.”

“It was geared more for children.”

It is curious that some of the visitors (12%) wanted to participate by “hearing” the actor, whereas some visitors did not want to participate (8%) because they just wanted to “listen.”

Again, we are beginning to get some indication that not all visitors are comfortable with the drama. Interview-based evaluation is often criticized as being unable to solicit negative feedback from visitors (we do not share this view, as there are ways to encourage negative criticism). However, in this case we have 47% of a sample saying they did not want to join in, and 9% espousing quite categorically that this was because they felt either too shy, too self-conscious, they weren’t interested, or that the drama was not for them.

The interviewees were asked whether they agreed or disagreed with a number of sentiments—for example, whether they concurred with the statement that the actors made them feel uncomfortable. Some 88% disagreed with this statement. However, this means that some 12% did not contradict the statement. Likewise, although 82% of the sample interviewed disagreed with the statement that “Museums aren’t places for actors”, some 18% either did not answer the question, agreed with the statement, or were unsure of their response. Taken in real terms, this translates to a substantial number of people over a year (the Science Museum has some 1.3 million visits a year, although not everyone will encounter the drama during their visit).

With some of the other statements, the mix of responses became even higher and consequently the interpretation of the data is more problematic. For example, the comment that, “The performances are not aimed at people like me,” had 62% disagreement and 17% agreement, while 19% of the sample were “unsure.” Over a half of the visitors interviewed (58%) agreed with the statement, “I didn’t realize they were actors at first.” So who did visitors think these people were? Demonstrators, members of staff, volunteers, or were they simply outside their experience and so there was no readily available noun—what do you name an experience you have never encountered before?

Not surprisingly, there was a statistically significant difference in the responses from participants and non-participants as to whether the drama was for them or not (see Figure 2). Participants were nearly twice as likely

to disagree with the statement, "The performances are not aimed at people like me," and non-participants were twice as likely to agree.

The general conclusion of this study was a ringing endorsement from visitors for the drama provision in the Science Museum. However, this oversimplifies the findings, and upon deeper analysis we perceive there to be a paradox.

The Paradox

In this paper, we have not yet explored the qualitative data from the evaluation. The qualitative work probed further into the less comfortable issues associated with drama in the Science Museum. The paradox is that, on one hand, we have a ringing endorsement of the drama, but, on the other hand, we have fear and trepidation. These latter points are manifest in a social leglessness on the part of the visitors: What do I do in this situation? How do I talk to these strange people? What's going on here?

There is a difference between children and adults. The children seem unafraid, and we suggest that this is mainly because they have nothing to lose. Children are always in the position of knowing less than adults, and boredom is a worse monster than embarrassment. The implication of this is that children are more liberated than adults. They think about what they can get from an experience and worry less about whether they will be shown up.

On the other hand, the adults are distrustful ("My God, what's going on?") and are caught off guard ("They should warn people first.") and they are afraid of being shown up. The implication here is that adults need to know some social guidelines to help them to be able to interact with the actors. The uncertainty and personal risk needs to be reduced, to enable adults to see the positive side of the drama interaction, and to lessen the degree to which they hide behind their children, or actively avoid the actors.

Children appear to be one of the in-routes for adults. To achieve contact, either adults have to become more childlike, or the Museum has to make interaction safer.

An Explanation

As part of the evaluation report, an intriguing two-dimensional "map" of the interaction was presented (see Figure 3). On the vertical axis of this map, we have an individual's spectrum of knowledge and experience: what is known and what is unknown. On the horizontal axis we have a personality attitude spectrum: people who are open and unafraid at one extreme and those who are closed and afraid at the other. If you are in familiar territory and you have an open/unafraid frame of mind, then, the experience is likely to be "boring," and you will pass by. If the experience is known but you are a more closed and afraid person, then, this is "safe" territory and you will stick with it. Once the territory becomes unknown, like drama in museums, the outcomes will change. For the unafraid and

open person, the unknown is “exciting” and will be homed in upon—much as children react to the drama. For afraid and closed people, an unknown experience is “dangerous” and threatening, and will be avoided—much as many adults react to the drama, keeping their distance and peeking round to see what’s going on (preferably with children as a protective physical barrier).

As an aside, this model might be applicable to more general museum visiting. The traditional visitors, who know the code, find museums safe—they are known territory—and this suggests that according to the model they can be seen as closed/afraid personalities. The social fun-oriented visitors would be seen as people who are after the excitement of the unknown. Teenagers, that group which is extremely hard to get into a museum, are “bored” because the museum experience is “known” and their open personalities seek more of a challenge.

Do We Meet Our Goals?

In general, the answer is yes. Yes to providing a human face to the Museum by generating warmth and by providing personalities, mixed gender roles, and entertainment. The drama was less successful in providing a forum for interaction. It did create salience (meaning) by providing a memory trigger for both the Museum and the artifacts, and by attracting visitors’ attention. It seems less clear whether the drama succeeded in creating a living picture crystallised in time—the creation of a sense of history through asking visitors to suspend their disbelief. There was success in communicating information, complexity, context, and clarifying detail; the drama provided issues for debate as well as presenting several interpretations. However, bridging the gap between the Museum and visitors, between science/technology and the visitors, between history and the visitors, seemed less successful. And, it appears that the drama neither provides an overview nor a sense of process.

Conclusion

This paper does not address the report recommendations, or how the Museum will use the findings of this evaluation to develop the drama. Our intention has been to focus on the findings partly as an example of the multi-layering of data that can come from mixed-method studies, and partly to focus on the effectiveness of drama as a medium of communication. We have also avoided the thorny issue of “learning,” and the vexed problem of “suspension of disbelief” (“I know this is unreal, but I’m going to pretend it is real”).

Going back to the question we posed in the title for this paper, is the drama enlightening or embarrassing? It is tempting to conclude from the questionnaire data that the drama is enlightening. Looking more deeply and

carefully at both the quantitative and qualitative data, we conclude that drama is both enlightening and embarrassing. The challenge for the Science Museum is to find ways of reducing visitor uncertainty and social unease with the otherwise highly successful drama roles.

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Suggested Reading

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Figure 1: First encounter - adults and children

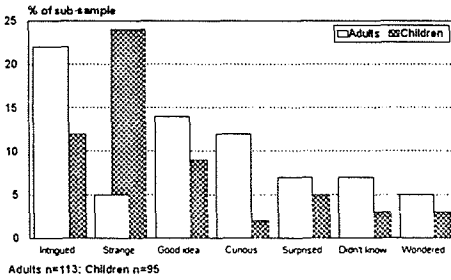


Figure 2: Not aimed at me - participants and non-participants

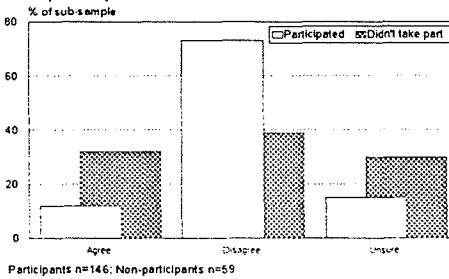


Figure 3: Mapping the interaction

