

A Picture of Visitors for Exhibition Developers

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Introduction

This paper is intended to provide the beginnings of a blueprint to help exhibition developers, in whatever role they may hold, to understand how visitors use exhibitions and exhibits. The picture which is painted is still a little fuzzy but some of the detail is clear.

The Original Idea

The Science Museum in London, UK, is committed to the enhancement of the public understanding of science and to improving the accessibility of the Museum to its visitors. One of the ways we believe we can help achieve these aims is through the development of an idea one of us had when acting as project manager of a major redisplay. For this task, it was felt desirable for the project team to have an agreed-upon 'model of visitor behavior,' even if the model was wrong. There were two reasons for doing this. First, to encourage consistency within the team by providing a shared view which would help avoid endless arguments about undefined assumptions regarding our potential visitors. Second, should we wish to actually test such a model, it would provide a mutual starting point.

The model aimed to incorporate four main points:

- How visitors approach galleries as a whole. For example, do they want to envisage the gallery as a whole, or do they prefer a maze?
- How visitors approach the exhibits within a gallery. Do they read everything in sequence, or do they browse at random, only stopping to look at something that catches their eye?
- The quantity of information visitors require. Do visitors read anything at all, or will they read 400 words if it interests them?

- How the project team should view the visitors. Should they be seen as passive recipients of the information which is provided, or as active participants in the process of acquiring the information?

A literature search resulted in the construction of a model which suggested the following:

- Visitors do indeed appreciate a comprehensible structure to the exhibition as a whole, even if they don't follow it. They like to be able to orientate themselves within the exhibition.
- Few, if any, visitors will have the time, concentration, determination, or interest to look at everything in the exhibition, let alone read everything.
- Visitors browse through an exhibition looking for cues to make them stop.
- Most people spend only a short time at most of the exhibits they come across, and pass by having seen little to tempt them to stop. This is not a pejorative statement, nor is it assuming visitors are not taking anything in or not enjoying the experience.
- Perhaps most importantly, most people spend a much longer period looking at a small number of exhibits—the ones they actually stop at. It is at this point that the museum has the chance to put its ideas across to the visitor.

Based on these suggestions, the following guidelines for exhibition layout were developed:

- There should be an understandable logic to the arrangement of the exhibits, so that visitors can know where they are and can identify where they want to go next.
- Where there are groups of exhibits, the physical and conceptual boundaries of each group should be clear, as should the relationship between the groups.
- Within a group the links between exhibits should be clear. Each exhibit should have a consistent physical and textual structure so that each exhibit can be "read" in the same way without having to learn a technique for each exhibit.

- Each exhibit and each group should have a bold title to be read from approximately five meters. The title should allow people to sum up the exhibit as they pass by, and decide whether they want to stop and spend their time there. Alternatively, the title should be intriguing or interrogating if its intention is specifically to draw people to it. These are the cues which are provided to allow them to decide whether they want to stop.
- Each exhibit and each group should have a piece of introductory text which briefly says why the exhibit or group is there and what the main theme is.
- Each object label should have the same structure so that they can all be “read” in the same way. These labels should be comprised of a title to be read from approximately three meters, an introductory paragraph to say why the object has been included, and the remainder of the text to include other necessary information.

The model also had consequences for evaluation of the particular exhibition which was being created. Literature on the use of formative evaluation to improve attracting power and holding power seemed to be of little practical use and were felt to have the potential to be simplistic and misleading. Such indices did not address what would happen when such an exhibit is placed in a gallery of exhibits developed in a similar way. Would they simply be in competition with each other? Consequently it was decided to focus only on the attracting power and holding power of certain key exhibits where the intention was to attract and hold all visitors. This focus would be directed primarily toward the siting of key exhibits, and on formative evaluation to improve their attracting and holding powers relative to all the others in the exhibition.

In the main it was believed that the project team should concentrate on the use of formative evaluation to improve the comprehensibility of an exhibit so that:

- as visitors passed by they could decide, on the basis of the cues they were given, whether or not they wished to stop;
- once they decided to stop, the concepts, information, and relationships between the objects presented should be capable of being understood by the target audience;
- once they stopped they would be provided with the amount and level of information appropriate to the target audience;

- the target audience for a particular exhibit would include those visitors who stop to look at that exhibit. This is not meant to imply that such visitors are a sub-group of visitors. On the contrary the model assumes that all visitors will stop at one exhibit or another. Rather it means that the text for a particular exhibit could be targeted at those who stop at it and are in, for example, the top 10% of time-spenders at that exhibit. This is perhaps a rather unusual idea and will be developed later.

Our criterion of success was taken from the work of Steve Griggs who recommends "that an exhibit communicates its message if a visitor, on seeing the display, can *comprehend* the information without any misunderstanding or misconception about its conceptions and intention" (Griggs, 1984; p. 416). It is then up to the visitor to decide whether he or she wants to learn or to forget the information with which they have been presented.

Unfortunately, since the project was not continued, the model was not developed further. However, a new project has provided an opportunity to resurrect the original model of visitor behavior. This resurrection has involved updating the model to accommodate the evidence of internal evaluation work, more general visitor research, and the growing body of visitor studies literature.

Developing The Idea

The original model provided something practical and tangible that can be adapted for other project teams within the Science Museum. The four main areas addressed by the model were:

- how visitors will approach the gallery as a whole;
- how visitors approach the exhibits within the gallery;
- the quantity of information they require;
- the type of behavioral response (how should visitors be viewed).

The Gallery as a Whole

On the first day of the 1992 Visitor Studies Association conference Ross Loomis presented a précis of the findings of orientation studies. For the sake of brevity, please refer to Chapter Five of Loomis' (1987) book *Museum Visitor Evaluation: New Tool for Management*, which addresses this topic. Little will be added here except a note that there are advantages of stage setting and a coherent structure.

Exhibits Within the Gallery

In the original model it was felt appropriate to use John Falk's analogy of museum visitors being like people who are out window shopping—when something catches their eye they stop and look, and may eventually take away a purchase, i.e. take away ideas and information. Thus most people will spend a significant amount of time at a small number of exhibits at which they have decided to stop. It is this circumstance which makes possible the exchange of ideas and information by looking, listening, reading and discussing with party members (Falk, 1982). The work of Paulette McManus points out that a “visitor reads up to 20 words in 5 seconds as he or she walks towards an exhibit, without an observer being aware that reading is taking place” (McManus, 1987; p. 265). Visitors appear not to be reading but in fact they are scanning objects and text, looking for cues to help them to decide if they wish to stop and invest their time.

One of the ways to portray where visitors stop and invest their time is to translate the results from behavioral mapping into contour maps (see Figure 1). The inference here is that few, if any, of the visitors look at everything in an exhibition. To misquote Abraham Lincoln:

“you can encourage some of the people to read/look all of the time, you can encourage all of the people to read/look some of the time, but you can't encourage all of the people to read/look all of the time.”

Steve Bitgood has said: “It is my opinion that at least 50 percent of the visitors should read a label” (Bitgood, 1987; p. 3). However, this can be unrealistic within the Science Museum. For example, the Land Transport gallery has 126 cases, 122 free-standing objects and 1,158 object labels. Even if the labels were only 50 words long, visitors would have to spend some four hours just reading the words (assuming a reading time of 250 words per minute). There are twenty further, equivalent gallery spaces in the Science Museum—some three and a half days' worth of continuous reading.

Based on available information, it can be said that any factor that involves visitors' time does not follow a normal distribution curve. Some form of exponential distribution seems more appropriate. This applies to time spent in the Museum, time spent in a gallery and time spent at an exhibit. For example, time spent by tracked visitors in exhibitions follows the pattern shown in Figure 2.

Much of this confirms work done by Margaret Menninger (1990) on “survival curves.” However, these ideas can be taken even further. One of the Science Museum's evaluated exhibitions, a bicentennial celebration of the birth of Michael Faraday (see the earlier Figure 1), provided some interesting data. If attention paid to the exhibits is plotted—be this text, objects, or interactives—it would appear we have yet another exponential decay (see Figure 3). Breaking this down into the types of exhibits a very different pattern can be seen in Figure 4.

Frankly it is far from easy to explain this, since it appears that visitor attention to text and objects follows an exponential decay, but attention to interactives is linear. It is hoped that future evaluations carried out in the Science Museum will be able to follow this line of enquiry.

The examples given above serve to confirm the suggestion of the original model that few, if any, visitors will have the time, concentration, determination, or interest to look in depth at much of an exhibition. In general, visitors browse through an exhibition looking for cues to encourage them to stop and invest their limited time. Most people spend only a short time at most of the exhibits they come across.

Quantity of Information

Initially no published data were found to support the belief that visitors could be spending a considerable time looking at objects and reading labels they are interested in, since no researchers seemed to have observed or questioned visitors to ascertain the times they spent at those exhibits to which they devoted most of their time. It was therefore a hypothesis waiting to be tested.

This paper proposes an exponential model for visitors' investment of time in a label. The model encompasses the sort of label in widespread use in the Science Museum: title, summary paragraph and a paragraph of secondary information. In other words there are three levels of information. It is suggested that each label has three populations of visitors which correspond to these levels: title-readers, title-and-summary-readers and whole-label-readers. There are of course other populations, perhaps the largest of all being non-readers. There are also those who perversely read only the beginning and the end! Combination of the three primary populations might produce results like those shown in Figure 5.

Each label should be seen as a unique event, and the individuals that constitute its population of readers will vary from label to label. In other words, it cannot be assumed that the whole-label-readers will be the same people for each label.

This introduces a paradox: the model described here suggests the possibility of providing a substantial text for the small percentage who have accepted the cues to stop and invest their time in that exhibit, yet this substantial text may be the very cue that causes the majority of visitors not to invest any of their time in that exhibit. This is not an invitation to write a small book and call it a label. The evidence for numerous visitor studies is quite clear: increasing the number of words decreases the number of readers.

It is apparent that our model raises important issues which will need to be addressed by further research. However, it also provides a hypothesis which in principle is capable of being tested immediately.

Type of Behavioral Response

A major issue, and one that is all too easy to miss, is that attracting power and holding power imply that there is some unique characteristic which an object

(or label) should possess in order to attract and hold all visitors. In reality, exhibit developers should consider the characteristics of the visitor, and not the objects. It is another manifestation of "beauty lies in the eyes of the beholder."

The fourth point of the model was initially phrased as "the type of behavioral response." This has been adapted to fit an area that, so far, has not been addressed. Looking at the Science Museum's visitors as a whole can be highly misleading and inappropriate. It works against the provision of an accurate picture because it obscures that fact that visitors are not a homogeneous group. It is therefore proposed the the following categories can be used to describe the Science Museum's visitors:

- The "buffs"—the experts who know the location of every rivet on the Spitfire. They are often male, usually adult, often solitary visitors, usually with a professional or leisure interest in the topic of a gallery. They invest large amounts of their time in very specific parts of a gallery.
- "It's for the children"—usually families with children of ages four to fourteen, who implicitly or explicitly are a "learning unit." There may be two groups here: the focused learners and explorers and the "we should do this for the children, but let's get it over and done with as quickly as possible."
- "I'm museuming"—often couples, often tourists, often older. Culture-vultures who know the international museum code, they tend to systematically work their way through the museum.
- School visits—in the UK these group visits are usually related to the national curriculum and range in age from five to seventeen.

Each of these groups is different, with different expectations, different reasons for visiting and, in general, different needs. What must be done next is to incorporate the needs of these groups into our model—or to ignore them if the targeting of the exhibition does not include a particular group.

Conclusions

It is believed that this paper presents the beginnings of a synthesis that can be of use to other exhibition developers. The model is an evolving one. There is a need to incorporate new findings, including the work of other visitor studies, and to test the validity of the above suggestions, as well.

The purpose of this paper is quite simply to help the authors to be more effective in the development of new interpretive projects. Our intent is to provide ourselves and our colleagues with a feel for the visitors who come to the Science Museum, come into the galleries, take part in programs, attend lectures and so on. We want to provide a more tangible image than that ill-defined,

nebulous term “the general visitor.” We will continue to update this model and refine our understanding of our visitors. This paper is merely a beginning.

Note: A list of work completed to-date can be provided on request from Sandra Bicknell.

References

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Suggested Reading

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Figure 1

Contour map of what visitors paid attention to

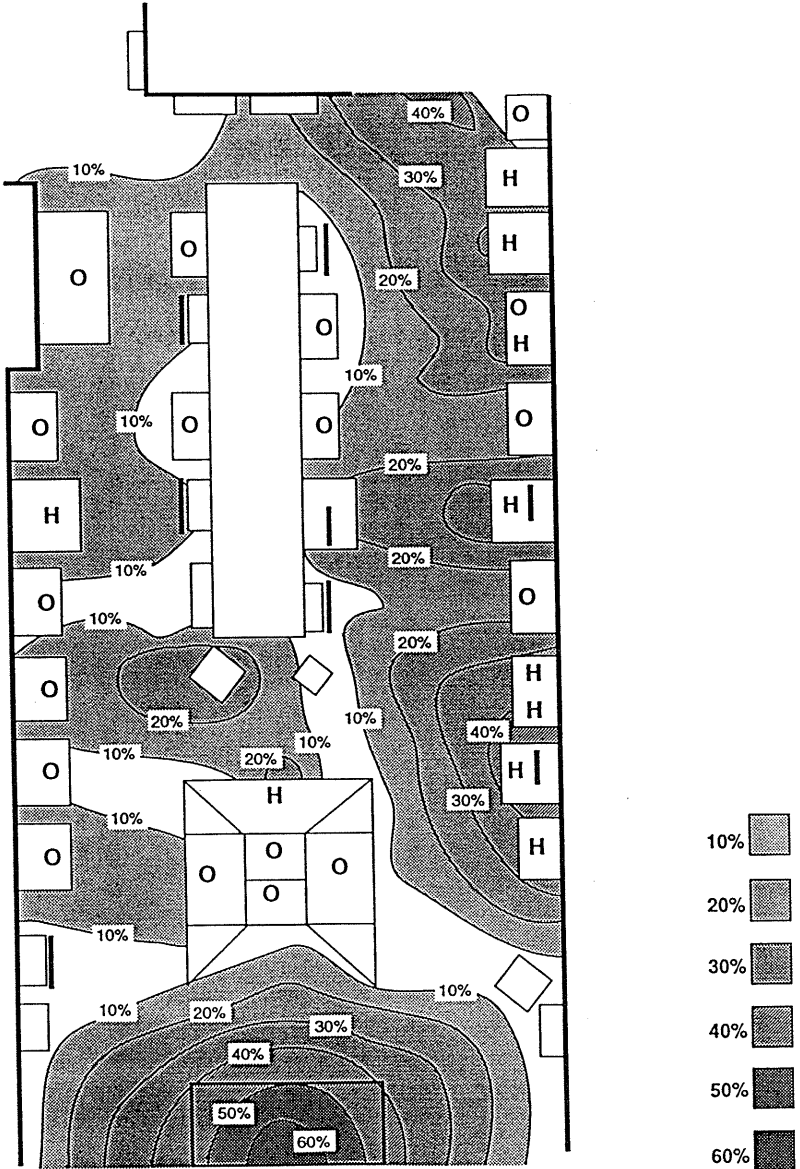


Figure 2
`Survival curve' for visitor
time in the Babbage exhibition
with data point plot

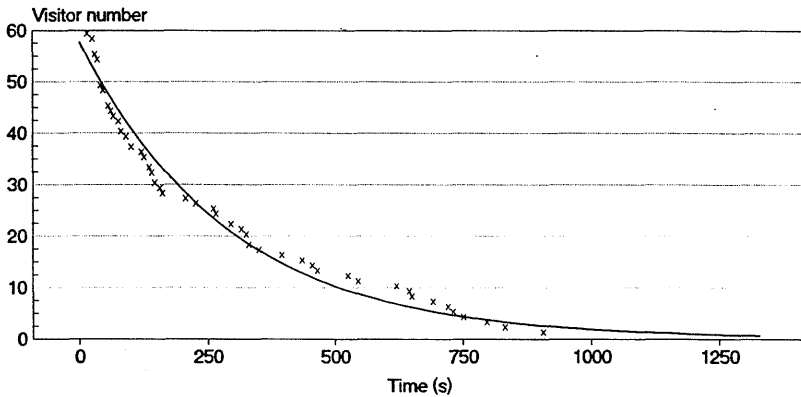


Figure 3
Attention to exhibits
Faraday exhibition

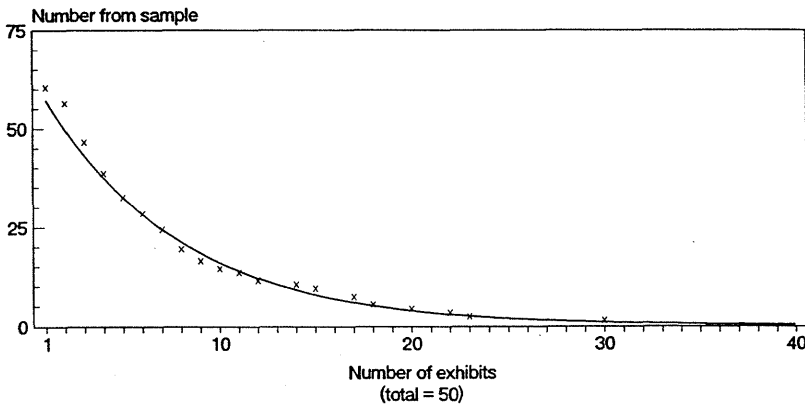


Figure 4
Attention to exhibit types
Faraday exhibition

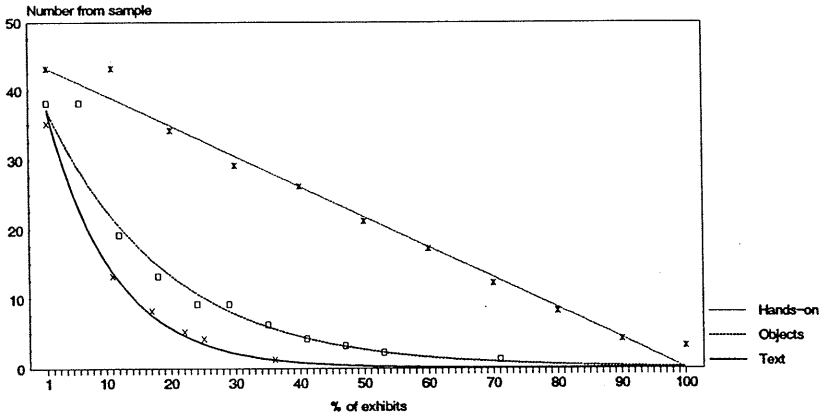


Figure 5

Reading labels

