● THE COLONIAL WILLIAMSBURG

interpreter

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Exploring in Museums

Dr. Frank Oppenheimer is the founder and director of the Exploratorium in San Francisco, a science museum where adults and children may touch, hear, see, and explore in the fields of science, art, and technology. Dr. Oppenheimer has combined his scientific interests as a physicist with a consuming interest in how people learn to establish a museum inviting young and old to experiment and search for answers about nature. Bill Tramposch interviewed him recently at the Exploratorium.

BT: When you appeared recently on the educational television program, NOVA, you said the reason we have museums is to help people understand the world they live in. You went on to say that if we lose interest in our world, we soon lose interest in many other things, too. How does the Exploratorium exemplify these thoughts?

FO: What I've learned is that a museum can really serve many functions. For one thing, there are many props here, so that people who already know something can come here and teach other people. Our staff doesn't have to do all the teaching. The visitors do a lot of teaching of each other. Sometimes school children have been here and want to return with their brothers and sisters or their parents or friends and tell them about the place. Or there are parents who want to tell their children. One sees a great deal of teaching going on, which couldn't happen without the setting—without the props. A museum is a kind of place to which people go with the expectation of showing things to each other. That's true whether it's an art gallery, a natural history museum, a basic science or technology museum. I have learned that this particular role of a museum is much more important than I thought at first.

The museum becomes a kind of "woods of natural phenomena" or a "woods of history," which one doesn't ordinarily run into. People can explore it on their own by finding their own path and making their own abstractions. Part of the trick of a museum, I think, is to have the exhibits laid out in such a way that visitors can make these abstractions. One of the ways to make it possible for the visitor to do so is to have each idea illustrated in many different contexts by using a variety of props. For example, it's important that in our section on reflection we have many different examples: flat mirrors, entertaining mirrors, and magnifying mirrors, etc. By experiencing something over and over again, people begin to see the essence of what the idea is.

BT: There are those who think that a museum tour should be structured from A to Z, and there are those who believe that learning should be spontaneous, and that it should be a "woods of history," as you call it. Obviously, you would prefer the latter in a museum experience, choosing your own course of action.

FO: I think, however, that the interesting thing about learning is that everything one says about it is true. That is, a guided tour can be very useful, but the kind of exploration I am talking about is also very useful. I think one would like to have opportunities for both. For example, a guided tour of a large group doesn't work here because, in order to get something out of the tour, visitors have to drop behind and play with exhibits. But a guided tour for four people works very well. I've done it. You go along, stand aside, and wait while they talk with each other and do things, and then you go on. But that's something we can only aim for. We can do a little of this, but we can't arrange guided tours of four for the many thousands of people who come here. So there's a practical limit to what you can do. It is certainly true that some of both of

(continued, page 2)

those methods, guided tours and spontaneous exploration, would be good. I'd also like to find ways of having demonstrations of some of the phenomena, especially in electricity. You can't get every idea across without talking about it a little. So, I think this mixture of different ways of educating should be in the museum, without the notion that this or that way is wrong. The way you have to do it may depend on other considerations. It is like saying if one teaches just by having students memorize, the result is not a good education. But, it is, nevertheless, a good idea to learn how to memorize.

BT: Whereas you call members of your teaching staff "Explainers," we call ours "Interpreters." We look for certain characteristics in an effective Interpreter, and I noticed a lot of these admirable characteristics in your Explainers while viewing the piece on NOVA. What do you look for in an ideal Explainer or Interpreter?

FO: In general, we want people who are enthusiastic, observant, and articulate. They don't necessarily have to use the King's English, but they should want to express themselves, and they should like to talk. Basic scientific knowledge is not a criterion. School grades are not a criterion. They must feel that it is a hard job and a demanding job. We want them to take it seriously and be "on" when they are here and also agree to work as often as possible.

BT: My next question is that, at first glance, it seems as though a history museum and a science museum would be relatively distant cousins to one another, but you've cited a few things that they have in common. Will you discuss further these shared purposes of history and science museums?

FO: I don't know enough about history museums. It seems to me in terms of history, one's trying to find out what happened—not so much what is happening—but what did happen. In some ways that's like astronomy or geology or evolution in biology. One wants to look into the past and see what happened. The techniques for finding out those things are related to the techniques for finding out what is happening. I think that one should be aware of that relationship. If you want to know what's happening in government now, what's causing wars and fighting, you use somewhat the same techniques that you use when finding out what happened long ago. What went on is the first question, followed by how you find out what went on—that technique is one of the most important things.

BT: The fascinating history of history museums shows us that in the beginning they were "cabinets of curiosities" where we could see many things, ranging from stuffed alligators to pieces of the Fort Sumter flagpole, all in cases. Here visitors could roam around reading various labels and trying to understand. But interpretation has evolved from these static exhibits to exhibits encouraging more active visitor involvement. The reason that I'm attracted to the Exploratorium is that you really have invited a lot of involvement, and what we've done at Colonial Williamsburg on occasion in that area has worked very well. So, my next question is, suppose you were suddenly made the director of a historic village museum. (You said that you don't really know very much about history museums, but you probably know more than you suspect.) What do you think you would try to do?

FO: I would start reading a lot of history and try to find out what I wanted to tell people. I think that all teaching should come, not from what we think people ought to know, but from what you know yourself and want to tell people. That happened here to a certain extent. I thought that perception would be a good theme to start with because I'd done a little work in that. So, I read books on it and got people from all around learning about the various effects—it was a very exciting period. I think the important thing is that the director of a museum be somebody who loves the subject and wants to tell other people about it.

BT: Should the director have a message that he wants to tell people? For example, should a museum like Colonial Williamsburg have a particular message and in every way possible try to promote it?

FO: I don't think so. I suppose, in a sense, I have a message, and it is that the world is understandable. But that is a very broad message, and it isn't a message that science is good or that science is bad. If you go to a museum and the message is the main point of it, once you've been there, there is no point going back. That's why I use the word "woods," because if you go to the woods and enjoy it—it doesn't have a message—but you want to go back over and over again. The same is true of a beach, playing tennis, all of those places

where you don't get it all done in the first visit.

BT: My feeling is that one of the worst experiences visitors can have at a museum is to have interpreters simply stand there and talk to them—without being stimulated to think much. If you administered an outdoor history museum, is there any particular type of activity in which you might get visitors involved?

FO: I might ask the question, "What's going on now that resembles something that went on then?" What kind of things were happening to peoples' values at that time that compare to changes that people are going through now? I would try to relate some of these things, not to say that they are cause and effect, but just to point out that the new technology that changed everybody's life then is comparable to what's causing change now. Things like that. I'd try to get people to think of things that were happening then that are similar to those happening now or before colonial times. . . . Another thing about history, I would think, is that as one reads it, one has the sense that one event led to another or caused another. This kind of causal relationship, which may be vague in history, I would think should be brought out. There should be room for fantasy: What would have happened if Lincoln had not been killed?

BT: The question we often wrestle with at Colonial Williamsburg is, "How can we get the visitor more involved in learning?"

FO: In order for learning to take place, the learner has to make some sort of decisions. For example, the trouble with things like television is that the learner doesn't make any decisions, and the same thing is true with listening to a lecture. The only decision to be made is to turn it off or go to sleep. But if you're reading a book, you can decide to read it over again, to skip it, or to come back to it the next day—and you can stop to think about things in the meantime. With anything you're learning, like a musical instrument, you can decide, "That's good enough," or "I want to try it over again," or "I'll practice that drill." So, I think in order to have good learning and even good enjoyment, you have to be able to make some decisions. It isn't just where you go, but it is what you do with each exhibit. Then you're making decisions about what to do—of the possible to-dos and not-to-dos, whether or not you're going to read the detailed explanations that tell you what's going on. There are a lot of decisions, and that kind of opportunity, I think, is important to have. One of the historical exhibits that I like is "We the People" at the Smithsonian, where you are encouraged to wander around. You stop in front of the women's suffrage things and you can read those, but you may not read something else. You discover a little tidbit of wonderful quotes here or Lincoln there. There's a real sense of exploring, of finding hidden things that you believe are your own.

BT: The question we often raise is, "Are we, as educators at the museum, to teach a message from beginning to end, or should we in museums try to stimulate people so that they might return or perhaps read more, or learn a craft—something that they wouldn't have done otherwise."

FO: Let me ask you this question: What is the mission of a parent bringing up a child?

BT: I would say that our mission is to try to assure the child's growth without interfering with it too much so that in the end, and very soon, we could watch our child grow independently.

FO: Don't you also, if there are values and information you believe in, transmit them as well? I think it is that combination which is really being transmitted by a teacher. One becomes a parent—not all the time—to the people who come to the museum. We provide opportunities for them and tell them things that we know, but our own sense of values is also expressed. So, in answer to your question about the distinction between teaching and education, I don't think there is a valid distinction. Teaching is a very broad thing. It is transmitting the culture. Within it is stimulation. Within it is motivation. Within it is learning discipline. What a museum doesn't do is teach people how to do anything—it teaches people how to think about things.

BT: In your sense, a museum would teach a person to think about things from a slightly different perspective, so as to see it with greater understanding.

FO: A museum is a wonderful place to make connections, which are hard to find in a book or in a course.

BT: The connections are made more easily because the visitor himself is making those connections as needed.

FO: That's right, and because there are many different kinds of connections, each visitor might make different kinds of connections.

(continued, page 4)

Exploring, *continued*

BT: The last question I have then is, How do you know if the program that you've launched has been a success?

FO: It isn't ever totally successful. A lot of people come away from here feeling like they've not learned anything. But I watch people, I listen to them, and talk to the ones who come back. Many adults say, "I wish science had been taught this way when I was a kid." That, to me, is an important statement because it means they have learned that science could have been taught so that they would have felt they understood it. I also look around and notice the exhibits at which people are confused. Then I take the staff there and we reread and rewrite the graphics. The main reason I think we're successful is because people get so intensely involved here—all sorts of things can happen in the museum and they hardly look up. That kind of intense involvement, I think, is a good sign.

Occurrences

Have you ever wondered what it was like to spend an evening at the theater two hundred years ago in Williamsburg? Well, soon you can find out. On December 16, following the Grand Illumination, the Company of Colonial Performers will open its newest play, *The Sham Doctor*, by Edward Ravenscroft, first performed in Williamsburg in 1752. It was produced by the Hallam Company at the Second Theater as an afterpiece on the same billing with *The Merchant of Venice*. This rollicking farce will prove entertaining for the entire family, so be sure to see it at the Lodge Auditorium on December 16 or on December 19 as a dinner play in the Virginia Room.

Christmas is always a time for many activities in Williamsburg. Keep an eye on the *Visitor's Companion* for all the events offered during the holiday season.

Tact

What can I do when a guest asks a question and expects me to confirm some information he already "knows?" The information is incorrect. To add to my uncertainty, he asked within hearing of a number of other visitors.

Signed,
Uncertain

Shades of last winter's in-service training! Remember the diplomacy exercise with George Collins? Perhaps now's the time to adapt your responses from that. Accentuate the positive! Surely something the guest said was correct, even if he mentioned only the right century. The number one consideration here is *his* self-esteem. Yours is not on the line.

What are some possibilities?

"I'm delighted that you offered that information! For some time what you have said has been considered a possibility. However, as I'm sure you are aware, research is continuing in that area, and later findings indicate that . . . . Isn't it exciting to think that even after two hundred years, past events have so much to teach us?"

Or, "Until I started training I felt as you do about that. Now historians have learned . . . because of their ongoing research. It's a real challenge to keep up with the amount of new information and reading available, isn't it? I was just thinking how different this aspect of life was in the eighteenth century. Fewer people read extensively, and fewer reading materials were available. Perhaps trying to stay abreast of information was less frustrating for them."

The whole point here is to educate the guest, pique his interest, and start his thinking processes. If you treat him as a person in pursuit of knowledge, he will respond in a like manner. Both of you will have gained from the interaction.

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