

The Museum and Science Education

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The museum is an archive and repository of culture. It is a dwelling-place of knowledge as well as the Temple of the Muses. But that isn't all. It's a happening place.

The museum has assumed a role in science education, so things *must* happen if it can make the claim. Certainly the collecting, labeling, and arranging of artifacts and specimens is an important part of the museum. So is educating the public in this, our scientific age.

The museum's commitment to education is a late one. It is a recent step in its evolution. At one time, private collections were the only museums. About the time of the French Revolution collections became public, perhaps in the feeling of egalitarianism. Displays that delight a taxonomist might not necessarily appeal to the public. Museums have gone beyond their taxonomic role to take on a research function, too. However, it is the role of the museum as educator—particularly in science—that is the concern of this issue of EDUCATIONAL PERSPECTIVES.

The goods of the museum are behind show-cases or otherwise inaccessible to the public. It is hard to do a good job of educating just with

the eyes. Dr. Heartig, in an article in this issue, points out the importance of using all the senses in learning. In older museums, the building itself was designed as a show-case. Hawaii Hall, the main exhibit room in the Bernice P. Bishop Museum in Honolulu is a three-story structure with vaulting ceiling and balconies on which are situated small show-cases. One gets the feeling of show-cases within a show-case. The building is an attempt at a grand style of architecture typical of the late 19th century, and characteristic of many of the old buildings at museums and on college campuses today.

Too much of a muchness with everything displayed. The taxonomists delight is not the teen-agers delight. Everything need not be shown to delight the public. Show-cases are now filled with explanations of the exhibits. A Hawaiian rotating fishhook is not merely labeled and shown with many of its kind, but an explanation and diagram of a fish being caught accompanies the hook. It is the next best thing to holding such a hook in one's own hands.

The public is led into experiences. Now one might walk past a doorway

in which a single cephalopod is exhibited against a dark background, illuminated tastefully by a flood light. Attracted by the single shell, the person walks toward it only to find that the corridor turns to the right and there is another illuminated case with a simple description of, say, fossil cephalopods. He walks toward the new exhibit and finds another one. And so he is drawn through the exhibit hall and, hopefully, comes out with some information that is valuable to him and an experience worthwhile, even though he may have missed the intent of the exhibit designer.

What, really, is the museum trying to do? How is it trying to educate the wandering patrons who visit its halls? What is it doing to help children gain a better understanding of the world around them? We know that something happens when a community becomes involved in building a museum. A good community needs a good museum. This is what the people of Portland felt. The story is told in this issue by Raymond Barret, of the OMSI—the Oregon Museum of Science and Industry.

Museum directors are not uninterested in attendance figures. Such

statistical information is an indication of how effective the program is. If the museum is good—and its prices low enough—people will come back. But attendance is only part of the picture.

School teachers bring students to the museum. It is a worthwhile trip, a cultural experience. It is a relief from the classroom for some but a very important part of what the teacher is trying to bring to the students for others.

Fear Deadens Experience

Fear sometimes deadens the museum experience for the kids. "All right," says the teacher, "We're going to the museum. Look around and find something interesting because you're going to have to write about it when we get back." Perhaps the statement is tempered somewhat, but there is the stern voice of duty to be reckoned with. How can you possibly enjoy a museum if you know you're going to have to write about it when you get back? You learn to fake something or other if you have the ability. If not, the grade informs you of that fact. Someone is standing in judgment of your behavior. Someone is not accepting you, but judging you. So why try?

It is bad enough to have to write a paper. But you're not allowed to follow your interest in the museum. You're herded through in school groups. Stay in line! No talking! Get rid of that gum! Quiet! No running! Quiet—there are other people in the museum. Now . . . in this case we have . . . Quiet please! Now children . . .

The museum is not a swinging place. I hold no brief for chaos. It is difficult, though, to allow freedom. Adult fears may be understandable but not really justifiable. What good experiences have been ruined by adults who mistake spontaneity for misbehavior?

Would that kids were trusted, that teachers were free enough and the museum gracious enough to allow children to follow their fancies in a free way. In particular museums designed for children it can happen. So we must compromise. But who likes to be herded? How can you really experience anything when the non-experiencing members of the group are making noise and wise-cracks? A museum is a place to contemplate. And this must be a part of what is possible in a good museum program.

Museum Trips

So the group makes it to the museum one day while the kids are in the elementary school. That's all. A hundred eighty days of school a year for twelve years, but that brief hour may be their only contact with culture. The first contact is a novelty anyway. So many things are going on and need to be experienced that you find it a big buzzing confusion. What about repeating the experience and absorbing what is there? What about becoming involved in one's own interests and not just what we happen to be studying in school at the time?

Repeated visits? Sorry. The school system budgets so much a year for field trips and we have to give everybody a chance. Fortunate are the students who go to a school close to a museum and who have a wide-eyed teacher who knows the excitement of a museum.

Repeated visits above the elementary level? This is almost impossible because the students are no longer in the self-contained classroom. They move from class to class and to take students out would mean depriving another teacher of the right to teach students on that day. The time that students may be out of class and the teachers still happy is limited to a few days a year.

You write that paper for the teacher on the Trip to the Museum. The teacher who stands in judgment upon you smiles approvingly. And so do your parents. You're a success, my boy!

But something really does happen in a museum to kids. The pictures we present here, the work of Francis Haar, shows that in a free, open experience they laugh, listen, react, respond, contemplate. Children may be more responsive than adults. Certainly their feelings are more accessible, they are more free and uninhibited . . . In these photos we look at the children in a hundredth of a second. It is a sampling, not a complete record. It is a sampling that says that something worthwhile is going on. The children are learning and experiencing. What is important is the response. Here it is overt and obvious. Response can be far more subtle and hard to detect. But anyone in the work of educating others knows how important a response is. So, the museum in its work in science education, plans experiences that will elicit response and learning.

We need but to look at the pictures of these children to feel and to understand. We know their experience.

What happens to the free-swing responses as we get older? We hope they're there in a deeper way. Children never go to sleep in a planetarium show. The children grasp life through the appreciation of what is. The present moment. That is all there is. Perhaps in that is the challenge of the museum. The children respond, affirm their own beings, enlarge themselves.

If someone wants to find out something about the sky, where does he go? To the working observatory? No, says Frank Orrall astronomer and professor of physics at the University of Hawaii. Such observatories

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