

Chapter 12

Strategies for Family Learning in Museums

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I made a brief presentation at the Mid-Atlantic Association of Museums two years ago called "Museums as Resources for Family Learning: Turning the question around". In that presentation, I challenged museum professionals to temporarily suspend their traditional focus on the learning resources which museums offer families (special programs, hands-on exhibitions, special labeling strategies, etc.) and to consider instead the resources that family visitors bring with them to the museum. One of the resources which I briefly alluded to was the family's experience as a learning system.

These people have been in the business of learning together for many years. Dropped into the museum environment with new and different objects drawing their attention on all fronts, family members unconsciously draw on these learning resources to structure their free-ranging behavior. Their behavior, so deceptively chaotic on the surface, actually reflects a complex, well-balanced interweaving of personal and cooperative agendas to learn (Hilke, 1987).

In this chapter, I want to give some depth to this statement by looking at some of the specific strategies family visitors use in exploring our exhibitions. The evidence we will examine was collected by following family groups through exhibition halls in a large natural history museum. Both traditional and hands-on halls were included. A specially devised code (see Table 1) was used to record who did what to whom about what during the observation period. Each family member was observed individually for approximately 8 minutes. In all, 132 family visitors were observed representing 53 family groups. (A more detailed summary of the methods and results from this research are available in Hilke and Balling, in preparation).

In the next few minutes we will examine highlights from these data to address three questions:

- Do family visitors act as if they are trying to learn something about the museum exhibits?
- What strategies do family visitors use to learn about museum exhibits?
- What implications do these strategies have for exhibition design?

In presenting this information I have two goals of my own. First, to convince you (although I may be preaching to the choir, here) that visitor behavior is not capricious, random, or uninterpretable. It is often systematic and intelligent, even if it's not what you or the designer had hoped to find. Second, to share with you some of the specific strategies that families use in exploring exhibitions. Since most of the strategies I will discuss today showed no major sex or age differences, I suspect that these strategies are also employed by many of our other visitors, and may well be applicable to the design of exhibitions for more general audiences.

An Agenda to Learn?

Although family visitors might have been expected to spend a good deal of their time making plans for lunch, orienting to the environment, bickering over a place to stand, taking pictures, or talking about the latest Spielberg movie, the families we observed maintained a remarkable focus on the exhibits themselves and engaged in behaviors which supported the acquisition and exchange of information about those exhibits.

In our data, 86% of what family visitors said or did was directed toward specific exhibits or dealt with content related to the exhibition (Table 2).

Furthermore, while a family visit to any exhibition necessarily involved moving from place to place (14%), managing the social situation (13%), and other behaviors not necessarily related to learning; still, 66% of all the family behaviors in our data functioned purely to get or exchange information (Table 2).

Whether or not these visitors consciously pursued an agenda to learn, their behavior was structured as if they pursued such an agenda. Acquiring and exchanging information was the primary focus of their activity, and the exhibits the family passed were the almost exclusive focus of these efforts to learn.

How did they do it?

Strategies for Exhibition Exploration

Personal Strategies for Information Pick-up

Figure 1 graphically represents exhibit-related behaviors occurring at individual exhibition units. (Exhibit-related transitions, movements to and from exhibits, are not included). Within this set, behaviors which result in information pickup or exchange account for 78% of all behaviors, with strategies for information pickup and strategies for information exchange each accounting for substantial portions of the visitor's activity. Figure 1 also distinguishes between behaviors which do not require the attention of another individual for their success (personal strategies) and behaviors which are dependent on someone else's paying attention for their success (cooperative strategies). Personal strategies include behaviors such as looking, reading, or manipulating the exhibition. Cooperative strategies include asking for information, making statements, or answering in response.

Consider first the strategies family member's used to pick up information about the exhibits. The first point to make here is that strategies which are not dependent on others (personal strategies) dominate strategies for information pick up (see shaded areas in Figure 1a). Family visitors were more likely to try to find out about the exhibits on their own than they were to ask another family member for help.

Table 3 lists the strategies actually used for information pickup. Evidently the family's preference to find out for themselves also translated into a preference to pick-up information first-hand. Reading (look graphics) and listening, two behaviors which generally provided predigested information about the exhibits, were observed infrequently. Whereas strategies which provided direct first-hand experience with the exhibit were five times more prevalent. Of these, hands-on manipulation (where available) and simple looking were the strategies most preferred. (A similar preference for basic information over interpreted information was also present in cooperative strategies for information pickup and exchange. See Hilke and Balling [in preparation]).

Complementing this propensity for family visitors to acquire information on their own and first-hand was a distinct tendency for family visitors to decide for themselves just what they would see and when they would move on. Despite the near ubiquity of other family members (for example, 90% of all behaviors occurred in the presence of

another family member), movements between exhibits were undertaken alone more than 50% of the time. See Figure 2a.

Taken together these findings suggest that individual family visitors pursued personal agendas to learn. They made personal decisions about what they wanted to attend to, tried to find out things for themselves, and used strategies which allowed them to acquire information first-hand.

Cooperative Strategies for Information Pickup and Exchange

No matter how personal their individual pursuit of information, however, the family's experience at the exhibition was inescapably a social experience, and the actual information family visitors were exposed to was heavily influenced by the presence of other family members.

In Figure 2b, the social context for exhibition behaviors has been highlighted. With only 10% of exhibition experience occurring alone, it becomes clear that family visitors pursued their personal strategies for information pickup in the presence of other family members.

Within this social context, family visitors occasionally requested information and exchanged information when requested (see *s in Figures 3a and 3b). However, most information transferred was unsolicited – the spontaneously sharing of salient aspects of each family member's experience (Figure 3b).

This tendency for family visitors to broadcast their experiences within the group increased the information available to other family members nearby, thus augmenting the information that would have been available to family members had they been visiting the exhibition alone.

Interestingly, there is both a compelling symmetry and a marked asymmetry in the way family visitors initiate such information exchanges and the partners each chooses. As is evident in the overall totals in Table 4, parents and children both initiated and received a fair share of the interactions which comprised the family's exhibition experience. Evidently, the family visit to the museum was quite egalitarian in providing everyone their chance to communicate to members of the group and, in turn, to receive communications from other group members.

However, within this evident egalitarianism in participation, there was striking bias in the particular partners chosen by individual family members. Specifically, children were much more likely to choose parents as interactive partners than they were to choose their siblings. Similarly,

parents were much more likely to choose their children as interactive partners. As pointed out in Hilke and Balling (in press) such a cross-generational bias in choosing interactive partners enhances the learning potential of the family experience by putting individuals with the least common experiences and knowledge in direct contact.

Conclusions and Implications

Despite the seeming chaos that reigns when families enter our exhibitions, our data suggest that family visitors are engaged in activities which promote both personal and group learning. By adapting strategies for family learning that have been practiced for many years, family visitors pursue personal agendas to learn about the exhibition, while enhancing the experience of other family members. What could be better for our museums?

Alot!

If family visitors were exhibition designers, their journey through the exhibition hall would be guided by the following sorts of questions: (1) What is this exhibition supposed to be about? (2) What is the curator/designer trying to say here? (3) What is it that ties all of these artifacts/ graphics together? (4) What are we supposed to do here in order to discover this information?

But family visitors are not exhibition designers, and they are not generally oriented to what the exhibition is trying to say. Rather, they pursue a highly personal agenda to learn; an agenda which is oriented to what they find useful, interesting, and engaging in the exhibition.

Family visitors entering an exhibition hall are more apt to be asking themselves: 1) What looks interesting in here? 2) What is there in here that I recognize? 3) What don't I understand in all of this stuff? 4) How is all this stuff related to things that I already know or should know? 5) Is there something to do here?

While the exhibition developer strives to insure that valuable relationships exist between the verbal, nonverbal and artifactual content of the show, many of these relationships are apt to be missed by family visitors. The family's primary agenda is not to look for relationships within the content of the show. Rather, family visitors will seek relationships between their own knowledge/experience and the content/structure of the show. The dominant perspective from which the exhibition is interpreted is more likely to be the visitor's own background

experience, own knowledge, and own interests than it is likely to be some common thread or theme of the show.

To successfully convey a particular message or perspective to the visiting family, an exhibition development team must correctly anticipate some of the relationships, questions, and interests that will move the family's physical and mental explorations. It must anticipate the kinds of strategies that family visitors will use, providing adequate raw materials (in the form of artifacts, activities and signage) for first-hand discovery of the exhibition's message, and leaving room for family visitors to discover important aspects of the exhibit on their own.

Families bring to the museum impressive strategies for personal and cooperative learning and they will use these strategies spontaneously in the museum without prompting or instructions from staff or label copy. Are our exhibitions ready for them?

References

- Hilke, D. D. (1987). Museums as resources for family learning: Turning the question around. The Museologist, Vol. 50 #175.
- Hilke, D. D. and Balling, John D. (in preparation). The family as a learning system: An observational study of families in museums. Audience Research, MBB66, National Museum of American History.

Table 1

**Sample transcript: A young girl enters
an exhibit hall with her family**

<u>Line #</u>	<u>Agent</u>	<u>Action-Event</u>	<u>Topic/Content</u>	<u>Social Context</u>
line 1	girl	go to	static exhibit	alone
line 2	girl	look intently	static exhibit	family
line 3	girl	look text	static exhibit	mother
line 4	girl	ask name of	static exhibit	mother
line 5	mother	respond w/name	static exhibit	girl
line 6	mother	ask to show	static exhibit	girl
line 7	girl	respond/show	static exhibit	mother
line 8	girl	leave	static exhibit	alone
line 9	girl	go to	static exhibit	alone
line 10	girl	look intently	static exhibit	alone
line 11	girl	ask to come	static exhibit	boy
line 12	boy	does not respond	static exhibit	girl
line 13	girl	go to	mother	alone
line 14	girl	state neg. evaluation	boy	mother
line 15	mother	does not respond	boy	girl
line 16	girl	go to	static exhibit	mother

Note: During observation of a family visitor every action undertaken was recorded on a separate line as a sequence of four two-digit numbers reflecting who (agent) did what (action-event) about what (topic/content) to or with whom (social context). A new behavioral line was recorded any time one or more of its component numbers changed, or after 15 seconds whichever came first. This table provides an English translation for a sample of the behaviors recorded.

Table 2

Relative frequencies of behaviors, broken down by type of behavior and Locus of Attention (Content)

Marginal totals reveal that the vast majority of family behavior is focused on exhibit content (88%) and involves the acquisition or exchange of information (66%).

BEHAVIOR	CONTENT			TOTAL
	Exhibit	People	Other	
Pure Information (gaze at, ask, tell, show, move-on-looking, etc.)	59%	2%	4%	66%
Experiential (relate to self/other say good/bad, etc.)	5%	—	—	5%
Interactive (tell to do, ask for attention look/do in response, etc.)	11%	1%	1%	13%
Transitional (go to, turn away, follow, look back, etc.)	10%	2%	2%	14%
Other (gaze about, play, wait, not known, etc.)	1%	1%	1%	2%
TOTAL	<u>86%</u>	<u>6%</u>	<u>8%</u>	<u>100%</u>

Table 3**Personal* Strategies for Information Pickup**

Personal strategies make up 36% of all behaviors coded at exhibits. Most of these strategies are attempts to learn information first hand.

	<u>Learn First Hand</u>		<u>Learn Second Hand</u>
Gaze at	33% (495)		
Manipulate	24% (358)		
		Look/read text	17% (241)
Move-on-looking	16% (241)		
Touch	6% (94)		
Look intently	3% (49)		
		Listen	1% (17)
	<u>Total: 82% (1237)</u>		<u>Total: 18% (259)</u>

* Personal Strategies are strategies for information pick-up which do not require another person for their success.

Table 4**Observed frequencies, expected frequencies,
and observed/expected ratios in the selection of
interactive partners: parents vs. children.**

While all family visitors initiate and receive a fair share of interactions, there is a marked bias in the choice of interactive partners for both parents and children. Parents most often choose children when directing questions or statements. Similarly, children most often choose adults.

<u>Agents</u>		<u>Recipients</u>	
		<u>Parents</u>	<u>Children</u>
Parents	observed	143	889
	expected	313	721
	o/e ratio	.46	1.23
Children	observed	747	73
	expected	541	281
	o/e ratio	1.38	.26
Overall	observed	890	962
	expected	854	1004
	o/e ratio	1.04	.96

Figure 1. Exhibit-Related Activities (88% of all Exhibit-Related Behaviors)

Behaviors which result in the pick-up or exchange of exhibition information account for 78% of all exhibit-related activity

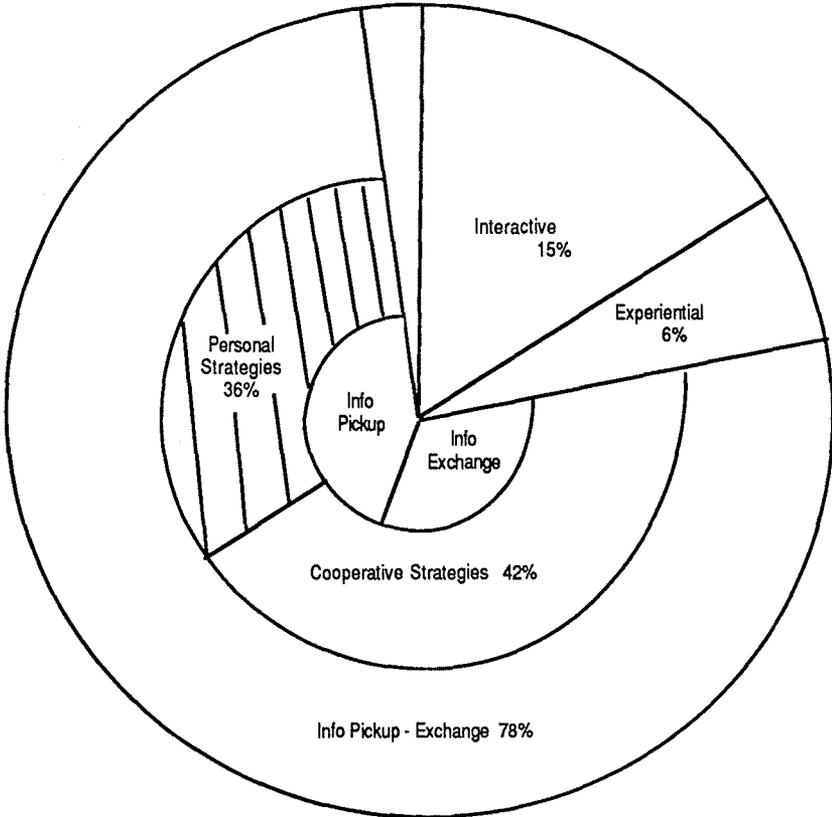


Figure 2. The Social Context of Exhibit-Related Behaviors

Figure 2a. Transitions
(12% of all Exhibit-Related Behavior)

Visitors choose for themselves which exhibits to explore while 90% of all exhibit-related behaviors occurred in the presence of other family members, movements between exhibits (Transitions) were undertaken alone more than 50% of the time.

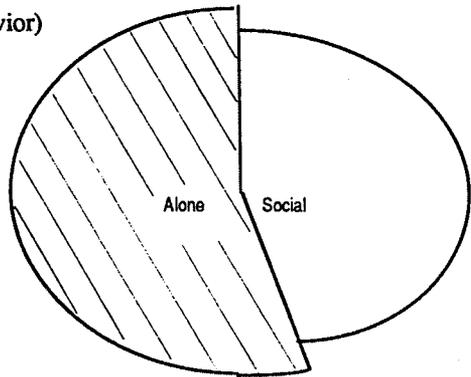


Figure 2b. Activities (88% of all Exhibit-Related Activity)

Personal agendas for learning are manifest in a distinctively social context. With only 10% of exhibition experience occurring alone, it becomes clear that family visitors pursued their personal agendas to learn in the presence of other family members.

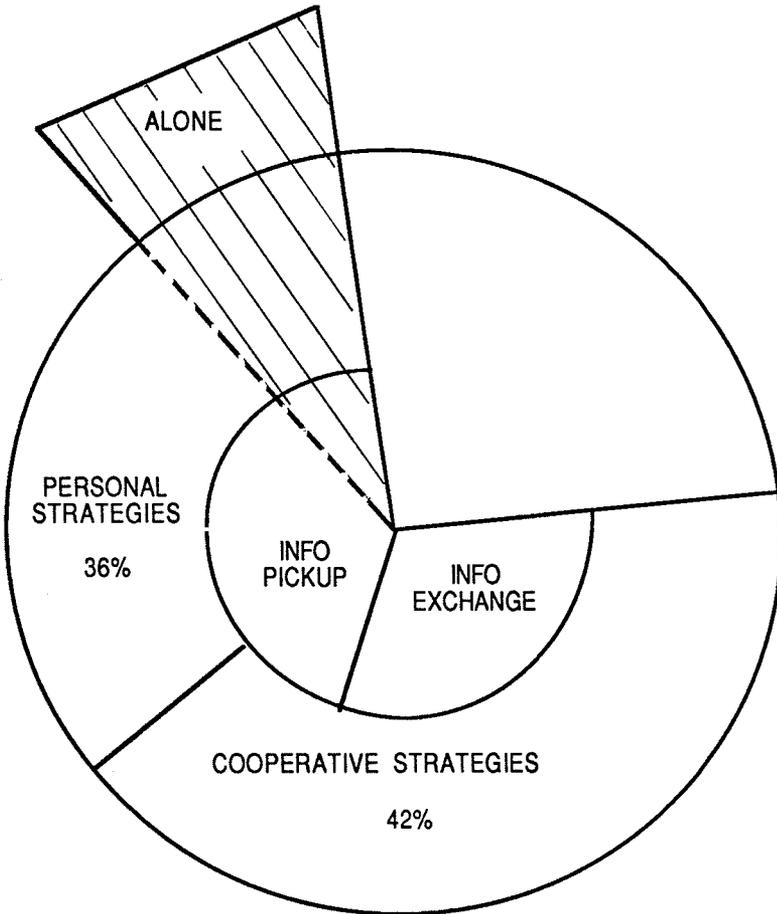


Figure 3. A Close Examination of Strategies for Information Pick-up and Exchange

Family members occasionally requested information and exchanged information when requested (see *'s). Note, however, that most information transferred was unsolicited – the spontaneous sharing of salient aspects of each family member's experience.

Figure 3a. Strategies for Information Pick-up

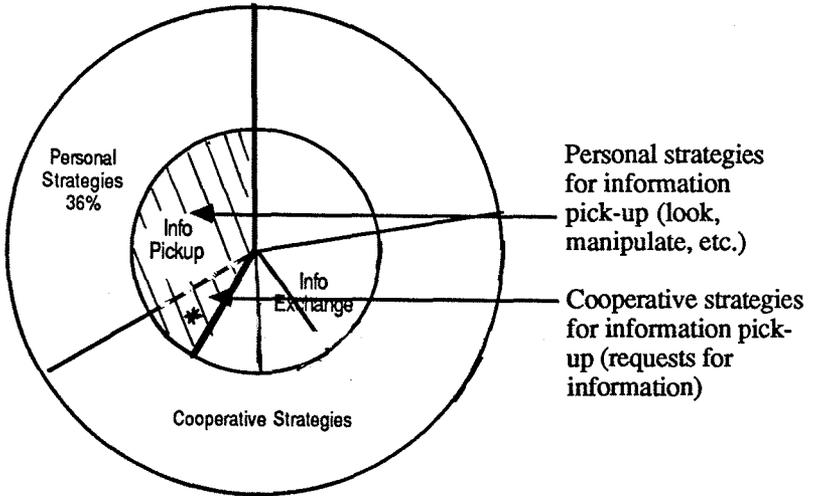


Figure 3b. Strategies for Information Exchange

