Good planning involves certain fundamentals. Ordinarily an exhibit, whatever type or size, should have: 1) good labels, including an easily visible and legible sh title, a more detailed subtitle, one or more additional labels giving necessary inform tion, and captions on objects where needed (like a newspaper story); 2) harmony betwe objects and labels—they should appear to belong together, both contributing to t same goal; 3) good design, including layout or arrangement, good use of color, typo raphy, lighting, etc.

Properly done, the planning adds up to a good result, giving the visitor educatic information, and inspiration pleasantly and in good taste.

What is a good result? A museum is like a business—it invests and expends capi to produce something. Our capital is money; it is also space and the energy and enth siasm of the staff. Museum workers are paid to spend this capital efficiently. *Efficiency* the key word. An army that is not efficient loses battles. An inefficient body becom ill and may die. An inefficient business goes bankrupt.

Before the efficiency of a museum, or of an exhibit, can be determined, the desir end result must be known and measured against the cost (in money, time, energy, space whatever the capital expended). We know how much money we spend and how mar hours our people work, but we do not know what we are accomplishing. This is the b problem, yet we museum people tend to ignore it while concentrating our attention c the little things. In other words, we may expend much time and effort toward discoverir exactly the right kind of adhesive for attaching labels, but we do not concern ourselv with whether or not visitors are actually learning anything from the exhibits.

An exhibit should be designed so as to produce a particular result. To decide *wh* to exhibit, *how*, and *where*, without first deciding *why*, is questionable procedure. Just a museum should have a purpose, an exhibit should have a purpose.

Often the actual reasons or the motivations behind exhibits may be to fill an empt case; to occupy an empty location; to avoid storing something attractive; to please a individual, such as a member of the board of trustees or an egocentric donor; to pursu the hobby of a staff member; or simply to add another exhibit. The only worthwhil justification, however, is to contribute to the education of the visitor—to teach some thing. But teach something *to whom*? People vary in many ways—in age, sex, size, socia class, religion, education, experience, nationality, intelligence, temperament, talents interests, values. They vary in environment—whether they live in the country or i the city, whether they were brought up in one region or another, and in attitudes— whether they are conservative or liberal, old-fashioned or modern, mentally health or not, whether they are "folk" in the anthropological sense or whether they partici pate deeply in international culture, whether they are rich or poor, secure or insecure Some people are color blind, others do not hear well, some are illiterate or not accus tomed to reading. Thinking of museum visitors as "the general public" and assumin that they are all pretty much alike is an ignorant or a lazy escape from thinking o

objects that it has acquired; its output is public education. If museums are to claim the prestigious title of "educational institutions," they must study their collections in depth and interpret them, not merely show what they have collected. *All* museums must do research, for each museum has things that no other museum has; and each museum is unique, also, being concerned with a region, subject matter, or public with which no other museum is concerned in just the same way.

The study of the collections may yield practical results other than the advancement of knowledge. Mummies in the Cairo Museum, x-rayed in December 1970, revealed gold arm bands and jewelry still in place beneath the undisturbed wrappings. Dr. James Harris of the University of Michigan, head of the scientific team that did the work, said, "This is the first discovery of royal Egyptian artifacts since discovery in 1922 of the tomb of King Tutankhamen."[3] Microscopic examination and technical tests sometimes reveal that museum objects are not what they have been assumed to be. This, of course, requires a thorough mastery of original techniques and materials.

Coupled with the large trade in antiquities, mostly illegal, is a thriving forgery business. On July 30, 1971, *The Times* (London) carried a story by Norman Hammond headlined "Tests show forged Turkish prehistoric pottery in many world museums." According to the article, the British Museum, the Metropolitan Museum of Art in New York, and the Ashmolean Museum at Oxford, among others, had purchased fakes during the 1960s. Technical methods developed in museum research had led to this discovery.

Even small museums should be concerned with research. Advanced degrees, large budgets, impressive collections, and luxurious surroundings are not required. But some small museums are not so engaged. Why? The word "research" may frighten the staff, who may not feel capable of research. Surely the curators must be capable, or they should not be curators, in name or in fact. There may not be time for research. The lone curator or the small staff with large ambitions may be devoting all available time to other activities, such as publicity and peripheral programs. The staff may even be overbalanced with clerks, guards, receptionists, teachers, librarians, registrars, guides, public relations people, and so on, to the exclusion of real scholar-curators. Robert Shalkop, director emeritus of the Anchorage Historical and Fine Arts Museum, notes that "careful scrutiny of the staff lists of many museums reveals an astonishingly small number of professionals," relatively few people who are "generating the program, as distinct from those who disseminate or publicize it."[4] He reminds us of the common observation that in our national economy advertising is often more important than the quality of the product.

Perhaps saddest of all is the case of the institution which could engage in research (and that may have done so in the past) but whose director is not a professional museum worker. Such a person may actually be hostile to serious museum work and may downgrade, if not actually eliminate, research. Shalkop puts it this way: "If a director is hired specifically for his public relations skills, he may have even less sympathy for the research

program and de-emphasize it for ideological as well as budgetary reasons. Thus the museum finds itself directing an increasing proportion of its efforts toward selling its educational product, and a decreasing amount to creating it."[5]

Research creates knowledge, and museum curators must become authorities on the kinds of materials collected by their museums. Assisting the general public to identify objects is one of the museum's public services. Research done over the years should make this relatively easy, and usually enjoyable, for curators. They will have to refuse, tactfully, the common request for the "worth" of an object. Most people brought up in our culture regard price as an attribute of all things and will regard any description of an object as incomplete without a price tag. Since museums deal in objects, people automatically assume that any curator worth his salt will be able to say how much an old family Bible is "worth," for example. Museum curators can usually sidestep this problem by explaining that most museums ordinarily receive their accessions through donation, that museums have no knowledge of market values since they only rarely buy and sell things, that the museum already has similar objects in its collections, and that the museum has no money (or very little money) to spend on purchases. Of course, if curators want to buy things that have been brought in they may do so, but they should try to get desirable objects donated and if the price seems out of line should try to find out what the going market price of such objects should be.

If visitors in the museum offices request corroboration that the objects they have brought in have great monetary value, curators must, again with great tact and genuine concern, do what they can to help. Employees of public museums are public servants, ones with specialized knowledge. Good public relations is the museum's life blood. Fortunately, skill in dealing with these matters comes quickly. For instance, no Stradivarius violins are lying around in attics waiting to be discovered by eager heirs. "Strads" have been copied through the years, even to the maker's label inside the sound box. (I once got one free with a set of violin lessons.) Nevertheless, it is always possible that a visitor will bring in something of importance, and you do not want a disdainful reception to cost your museum a valuable accession or, perhaps, a valuable friend.

A new use of the collection came about with the advent of television. I once put on weekly programs dealing with museum objects and exhibits through a local television station. It was a reciprocal arrangement. I would occasionally lend the station objects to use on other programs and commercials (usually with credit given to the museum, which created publicity and good will) and the station cooperated admirably with me in putting on the museum program. Preparing and presenting it every week required a considerable amount of time and work, but my staff and I became convinced that it was worth it when we compared program viewers with museum visitors. More people saw *one* half-hour television presentation than had visited the museum in ten years. If you measure your success not by the banging of the turnstile at your front door, but by the amount of contact you are making with human minds, you must be impressed by the potential application

of television to museum work (not to mention what you can accomplish on the world-wide computer web).

Objects may be lent to schools, other museums, and stores. Displays in downtown department store windows have the same justification as television programs. The time-worn expression is "bringing the museum to the people." Hundreds or thousands of people who have never been to your museum will walk down Main Street and through shopping malls and see your objects. Your spinning wheel and antique clothing will enhance the store's display, but a sign will give credit to the museum. Such incidents may not accomplish much solid education, but they do create good—and free—advertisement. Incidentally, an anniversary celebration of a store or other business is an opportunity for the local history museum to get in on the act. If they do not think of you first, call them. However, do not ever forget what is more important than great publicity: the safety of the objects.

Objects from your collection may often illustrate the presentations of reputable public lecturers, and you may find such loans worthwhile. In addition, special public demonstrations, such as an antique car in a garage, or an ancient musical instrument used in a concert, may use your objects. Assistance with a Forest Service display or one on environmental protection by a private association at a county fair is also a source of publicity as thousands of people see your objects or signs and your name.

Reference is an important use for any collection. Ned Burns recommended thinking of the museum collections as two series, one for exhibition, the other for study.[6] The first series requires attractive specimens in good condition; irreplaceable items are kept in the second. According to Burns, the value of the collection is not in its size but in its utility.

Biological collections illustrate the usefulness of the collections for reference—for comparison and identification. For example, in the identification of animals, insects, or plants the scientist refers to standard descriptions and to the range of actual specimens on file. When a new species is first described, the "type specimen" is safely deposited in a museum (or museum-like facility) if possible, where it can be consulted for comparison with other related examples under study. The analogy with the iridium meter bar at the National Bureau of Standards is inescapable.[7] When a farmer brings in a creature that is eating the south forty, the expert can determine exactly what it is by consulting the reference collections. The farmer is hardly different from the antique collector who wonders about the origin of a tole coffee pot.

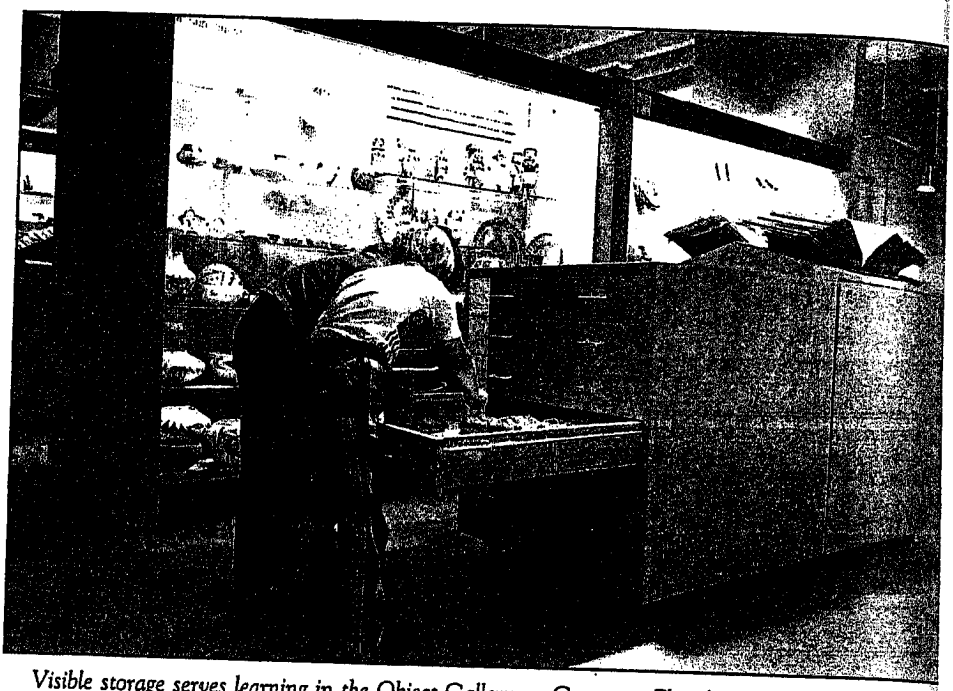
We have seen that the collections may be used for reference, for store displays, as visual aids in public lectures and in schools, and for television programs (and much more). A principal use is research—the study of the objects in their contexts by the staff and by outsiders. Such research leads to new knowledge, new sources of materials, publications of various kinds, the avoidance of fakes, the preparing of catalogues and label copy, and the greater skill and knowledge of the staff. Another obvious use of collections is in exhibits, both permanent and temporary, which will be discussed in the next two chapters. Do keep in mind that exhibits are only *one* of the uses that support the educational

mission of the good museum of today. Use of the collections relates to storage; that is, to where the objects are when they are not out on public view. In the last century (and, unfortunately, still in a multitude of amateur "museums") there was no issue involved. Anything worth looking at was displayed in the public exhibit areas. With the advent of the doctrine that good museums be intentionally educational, selectivity entered the picture. This was not only because teaching requires focusing on specific objects and specific associated ideas and the avoidance of distraction meanwhile, but also due to the recognition that anyone's attention span and mental endurance are limited. A museum visit, to accomplish something worthwhile, must be relatively short and concentrated. Hence, museums wealthy in collections kept most of their objects in storage, merely selecting what was needed in the educational program for the public.

Much of the public, however, has specialized interest in one kind of object or another. An amateur archeologist might want to see all of a museum's arrowheads; a butterfly collector might want to see all of a museum's butterflies; an art student might want to see the entire collection of drawings; and so on. Feeling guilty over depriving the public, museum people have said that lack of space for exhibits was to blame, or that with a new bond issue the museum could expand its building and then be able to exhibit more of the collections. Museums for years have said that they do not have *permanent* exhibits since their exhibits rotate, allowing all of the collections to be seen in turn, over a period of a few years. All poppycock, of course.

Growing in favor among museologists is a kind of compromise between the dominant motifs in exhibition of the nineteenth and of the twentieth centuries: between "show everything to the point of hypnotic boredom" and "show a relatively few things to the point of simultaneous teaching and frustration." That compromise is called "open storage," a term you encountered earlier as a criticism of outmoded, "amateurish" display practice (if you have it, show it). The term has implied for years a lack of discrimination in the selecting of objects from the collections to exhibit; that is, displaying a high percentage of the collections and not having sufficient, "behind the scenes" storage space reserved for the bulk of the museum's holdings. Since the rise of the concept of the museum as an educational institution, museum professionals have had the didactic or artistic notion that visitors will learn more or enjoy the museum experience more if they are not overwhelmed by objects but have their attention directed to relatively few, choice, and well-interpreted things.

A good idea, but it is axiomatic that if an idea can be carried too far, it will be. Some museums have shown too few of their objects; that is, fewer than they had room for. Some museums have emphasized interpretation, ambience, and artistry so much that when objects are shown they seem incidental, decorative, even at times intrusive and jarring. But wherever a given museum falls on the continuum between too many objects and too few, the dilemma is felt. (Many a museum has found it useful in raising funds for a building addition to justify it by the legitimate need for more exhibit space, when what the staff

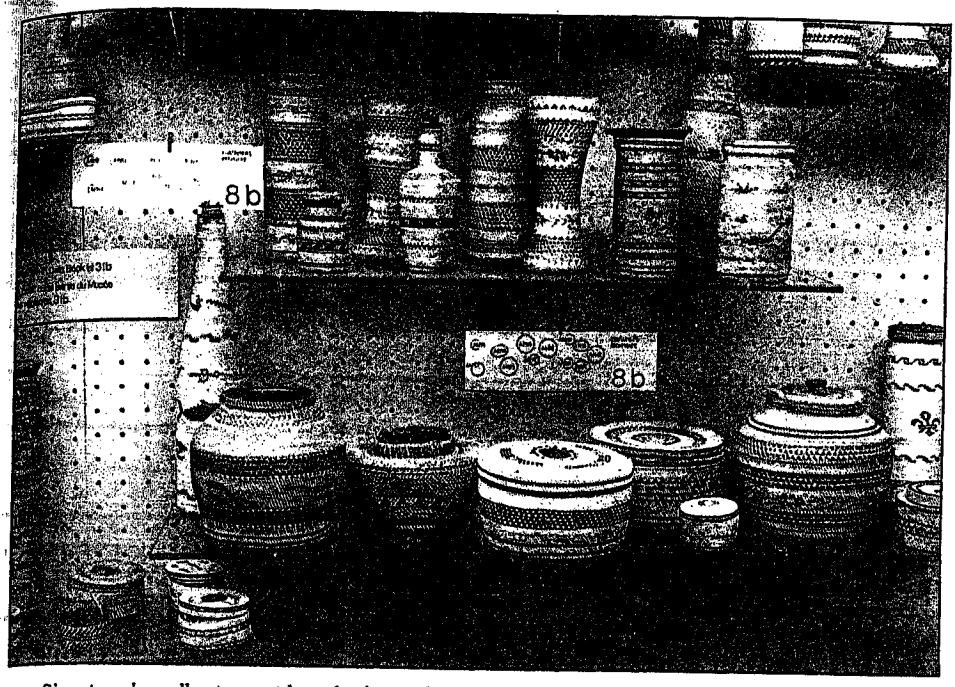


Visible storage serves learning in the Object Gallery. —Courtesy, Florida Museum of Natural History, University of Florida, Gainesville. Photo by Jean Hamilton

wants even more in the expansion is the additional storage, conservation work rooms, offices, and other non-public facilities in the plans.)

Increasingly in recent years, a new solution has been successfully tried and well-received by the public. It is *intentional* open storage; having as an adjunct to regular, interpretive exhibition areas other spaces in which the bulk of the related collection can be shown. A notable early example is that of the anthropology museum of the University of British Columbia in Vancouver.

In 1988, the American Wing at the Metropolitan Museum of Art in New York City opened the Henry R. Luce Center for the Study of American Art. (Note the word "study.") The former stored collections, never seen by the public, are grouped into general categories that include oil paintings, furniture, clocks and ceramics, in large, well-lighted rooms fully accessible to the public. Walls of glass, floor to ceiling, protect the thousands of objects which are shown row on row, and level above level, with no labeling. Computer terminals give the public direct access to register and catalogue information on each piece (as is done in the Strong Museum in Rochester, New York, and elsewhere). Thus the term "open-storage" has taken on a new and respected meaning. Museologists on the "cutting edge" are already planning the next logical step: expanding by computer net-



Showing the collections with each object identified and details available nearby in a catalogue. —Courtesy, Florida Museum of Natural History, University of Florida, Gainesville. Photo by Jean Hamilton

works and large viewing screens the public's visual access to important holdings in *other* museums and in private collections as well, while they, the visitors, are exploring a subject field in depth when visiting a particular museum.

EXERCISES

1. Explain:
   a. "the two faces of a single coin," preservation and interpretation.
   b. importance of a museum library.
   c. dichotomy between research curators and interpretive curators. (If a curator must interpret, should he or she give up research? Should a curator engaged in research be divorced from interpretation?) Pro and con, please.
   d. museum conferences as research.
2. If you are keeping a scrapbook of clippings about museums, is there a story in it related to forgery or museum research? If so, give a short review of it. If not, what do you recall reading recently in this regard?
3. What kind of museum spends the most money on research? Why?

4. Discuss museum television programs, pro and con. Should museums concentrate on this use of their collections? Should a museum become a "prop room" for a television station?
5. List four to six different kinds of businesses, professions, or other occupants having windows in shopping malls or downtown areas of heavy pedestrian traffic. Imagine and describe window displays based on objects borrowed from a museum. Be as specific as you can, and if you are familiar with a museum, use that museum's collections in your imagination. Relate kinds of displays to kinds of businesses.
6. This assignment deals with research by the small museum. Discuss the possibilities for research in a small museum with which you are acquainted. What kinds of research projects can you imagine? How would the community benefit directly? How would the exhibits be improved by research? If possible, discuss this with a member of the staff of a museum.
7. If you are familiar with a particular small or medium-sized museum, how might it engage in intentional open storage as described at the end of this chapter? Give not only difficulties but also advantages in such an arrangement. If not familiar enough with a museum to give specific suggestions, discuss the general issue of closed versus open storage.

NOTES

1. Carl E. Guthe, *So You Want a Good Museum* (Washington, D.C.: American Association of Museums, 1957, 1973), p. 4.
2. Hiroshi Daifuku, "Museum Research," in *The Organization of Museums: Practical Advice*, Museums and Monuments Series, no. 9 (Paris: UNESCO, 1960).
3. Associated Press dispatch, Lewiston (Idaho) *Tribune*, January 14, 1971.
4. Robert L. Shalkop, "Research and the Museum," *Museum News* 50, no. 8 (April 1972), p. 11.
5. *Ibid.*
6. Ned Burns, *Field Manual for Museums* (Washington, D.C.: National Park Service, 1940).
7. Since 1960 the meter has been defined in terms of radiation wave length of the element krypton.

13
Permanent Exhibits

A distinction was made in the first chapter between a display and an exhibit. To put it in other words, an exhibit is a display plus interpretation; or, a display is showing, an exhibit is showing and telling. Therefore, an exhibit should not be thought of as a single object, like a piano in a historic house, but rather as a deliberate interpretation of a subject or a grouping according to a theme—the entire, furnished parlor or the whole historic house is the exhibit. The term "exhibit" carries the connotation that something has been added to the object or objects shown (interpretation) in order to accomplish something of importance (education, in the broad sense). The techniques of exhibit planning and construction assume their proper perspective only with this end result in mind.

While exhibits are the obvious, public aspect of museum work, and while visitors judge the worth of the museum on the basis of its exhibits, much needs to be done well, "behind the scenes," before the exhibit program can be of high quality. Museum workers need to be aware of the basic techniques of good exhibit production, but they also need to understand the needs and behavior of museum visitors—the customers who come into the museum to get its product. (Or what the visitors regard as its product. Remember that what they want to get and what museum professionals most want to give them are not necessarily the same.) Museum workers, in other words, must see exhibits from both sides.

Probably the greatest museum of science and industry (technology) in the world is the Deutsches Museum in Munich. Although one thinks of the variety and quality of its exhibits rather than of their sheer mass, their total size will help to make a point. The Deutsches Museum has more than twelve miles of exhibits. A visitor moving at the rate of twenty feet per minute, which is not extremely slow, would take fifty-three hours, or twenty-one visits of two and a half hours each, to see all of the exhibits. Visiting once a month for two hours and fifteen minutes, which is about the limit for a visit (not only do the feet get tired, so does the mind), moving at the ideal rate of speed—the one exhibit designers hope the visitor will use—*a person would need two years to see the exhibits in this one museum.* (Munich, incidentally, is a "museum city." It has many museums worth careful

and leisurely visiting.) We have all heard someone say, "You can't see everything in the museum in an afternoon. I could spend two or three days there." Actually, two or three weeks would be more accurate, if one is speaking of one of the larger museums.

What does this mean for exhibit designers? In practical terms it means that they do not have easy jobs. They cannot expect every visitor to fully appreciate every exhibit. Designers in large museums must recognize that each visitor will see only a fraction of the exhibits. Curators and exhibit designers should post signs where they will see them every day. The signs should read:

> A visitor is a pedestrian whose feet hurt, who is tired and preoccupied, and who is on his way to somewhere. An exhibit must stop this person, hold him or her, and give improvement while giving pleasure. An exhibit that does not do this is not a successful one.

KINDS OF EXHIBITS

According to purpose or intent, exhibits may be classed as aesthetic or entertaining—to show objects that people enjoy looking at; factual—to convey information; or conceptual—to present ideas. They may be classed according to the organization of the material as systematic—organized according to similarity of the objects and their "genetic" relationship to each other; or ecological—organized according to area, "habitat," or living relationship to each other.

In Figure 13.1 the examples from history and science, equating the period room and the habitat group, are clear enough. Obviously, the period room is also an important kind of exhibit in art museums, where the fine arts and the decorative arts are combined in rooms representative of the life of wealthy people (whose furnishings and interior decoration were created by artists). The examples given for art, while not as simple as the example of the period room versus a single kind of art, are meant to suggest that even within the fine arts the exhibitions may be organized in quite different ways. An ecological or habitat group exhibit that shows together in realistic fashion plants, animals, and earth features that exist, or have existed, in the same natural environment is a kind of diorama, which is a three-dimensional scale model of a realistic scene, whether life-size or in miniature.

CHARACTERISTICS OF A GOOD EXHIBIT

A good exhibit, regardless of what kind it is, will have certain characteristics:

1. *It must be safe and secure.* It must provide for the protection of its objects, the museum, the staff, and visitors. (An exhibit of nitroglycerine would be questionable, as would be an exhibit of silverware on an unprotected table.)
2. *It must be visible.* The exhibit must be lighted, unobstructed, and shown with a minimum of inconvenience and distraction. Those who have visited regional museums and had to lean over a hay rake to see what was behind it and decided to bring flashlights on their next visit will understand this. (Exhibits near unblocked windows usually suffer because of the glare in visitors' eyes.)

3. *It must catch the eye.* An exhibit that visitors pass by is a failure.
4. *It must look good.* A dirty, crudely made, tasteless exhibit will repel the visitor.
5. *It must hold attention.* An exhibit must educate, stimulate, produce emotion, entertain, or whatever. To accomplish its purpose requires time—long enough to get its message across (naturally, some exhibits require more time than others). Usually, this means the exhibit must stop the visitor for a few seconds to a few minutes.
6. *It must be worthwhile.* When the visitor stops and gives the exhibit his attention, he has entered into a contract with the museum. The museum must not betray his trust. It must give the visitor something of value in exchange and justify his faith that the exhibit is worth stopping for.
7. *It must be in good taste.* Taste must be defined for each museum and each kind of visitor, but the designer must endeavor not to offend. He must respect public mores, accepted standards of decency, the sensitivity of minorities and ethnic groups, religious beliefs, and similar areas of concern to museum visitors. This does not mean that nude statues must be draped, that science exhibits must omit references to human evolution, or that Leif Ericson cannot be mentioned if the museum is in an Italian neighborhood. Shock, used judiciously, may even have value. One cannot accurately describe life without including some unpleasant topics, but like a dash of hot sauce in the beans, a little goes a long way. The museum administrator, his staff, and the board of trustees must be in tune with the times and their community. Their job is to elevate the public, but with the public's consent. Museum work is as much an art as a science.

To summarize, the good exhibit uses significant objects, has an important purpose, and is well planned.

	SYSTEMATIC	ECOLOGICAL
Art	French Impressionist paintings exhibited together in the same gallery.	Paintings, drawings, sculpture produced in the same social milieu, representing the response in different media to the same forces.
History	The evolution of home lighting with candles, oil lamps, incandescent lamps.	A period room with clothing furniture, reading matter, etc., representing a real room typical of a specific time, place and economic level.
Science	Birds of the same and related species arranged according to a closeness or relationship.	Birds, animals, plants shown in a natural setting illustrating the sharing of an ecological niche, a diorama.

Good planning involves certain fundamentals. Ordinarily an exhibit, whatever type or size, should have: 1) good labels, including an easily visible and legible sh title, a more detailed subtitle, one or more additional labels giving necessary inform tion, and captions on objects where needed (like a newspaper story); 2) harmony betwe objects and labels—they should appear to belong together, both contributing to t same goal; 3) good design, including layout or arrangement, good use of color, typo raphy, lighting, etc.

Properly done, the planning adds up to a good result, giving the visitor educatic information, and inspiration pleasantly and in good taste.

What is a good result? A museum is like a business—it invests and expends capi to produce something. Our capital is money; it is also space and the energy and enth siasm of the staff. Museum workers are paid to spend this capital efficiently. *Efficiency* the key word. An army that is not efficient loses battles. An inefficient body becom ill and may die. An inefficient business goes bankrupt.

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An exhibit should be designed so as to produce a particular result. To decide *wh* to exhibit, *how*, and *where*, without first deciding *why*, is questionable procedure. Just a museum should have a purpose, an exhibit should have a purpose.

Often the actual reasons or the motivations behind exhibits may be to fill an empt case; to occupy an empty location; to avoid storing something attractive; to please a individual, such as a member of the board of trustees or an egocentric donor; to pursu the hobby of a staff member; or simply to add another exhibit. The only worthwhil justification, however, is to contribute to the education of the visitor—to teach some thing. But teach something *to whom*? People vary in many ways—in age, sex, size, socia class, religion, education, experience, nationality, intelligence, temperament, talents interests, values. They vary in environment—whether they live in the country or i the city, whether they were brought up in one region or another, and in attitudes— whether they are conservative or liberal, old-fashioned or modern, mentally health or not, whether they are "folk" in the anthropological sense or whether they partici pate deeply in international culture, whether they are rich or poor, secure or insecure Some people are color blind, others do not hear well, some are illiterate or not accus tomed to reading. Thinking of museum visitors as "the general public" and assumin that they are all pretty much alike is an ignorant or a lazy escape from thinking o

visitors as representing many "publics" or as being individuals. Museum visitors are—to a greater or lesser degree, depending on the museum and its location—heterogeneous rather than homogeneous.

The next question is "*Teach what?*" (in the few seconds that you have the visitor's attention). A paragraph of technical information? An obscure fact unrelated to the preceding exhibit or the next? Exhibit planners should decide what is to be accomplished; plan the exhibit so as to achieve this goal; then evaluate the results to learn how well the exhibit is fulfilling their intention. Only in this way can they achieve efficiency.

The end is not the collections, the museum, the exhibits, or even the viewing of exhibits by visitors. These are all means. The end is the change brought about in the minds of people. This is what museums exist for, and the measure of the success of a museum is how well the aggregate of these mental alterations serve the goals and purposes of the museum. Just as the efficiency of a machine is determined by measuring the amount of work done for a given expenditure of the energy required to operate it, the efficiency of a museum is arrived at by comparing what it accomplishes with what it spends. Unfortunately, though we know what we spend, we do not know what we accomplish.

Studies have attempted to discover what particular exhibits in a particular museum are looked at most and longest, and some museums have even distributed self-testing questionnaires to measure how much information a visitor has acquired in a particular room or exhibition area. These, however, are but the beginnings of the recognition by serious museologists that an exhibit (or a museum) is not necessarily an effective educational instrument simply because it is there. If museums are to justify the spending of public tax money, they must give serious thought to what they are actually giving the public in return.

Watching visitors in their museums should be required of all professional employees. Not only will they learn where visitors appear to be disoriented and, therefore, need direction in the form of signs and arrows, but they will find out what attracts visitors and holds their interest. They will discover that certain exhibits are more successful in holding attention, and they should then undertake to learn why. Perhaps the appeal of one exhibit can be re-created in others. The exhibit designer should create exhibits and arrange them in a logical—and educational—progression. The designer is a storyteller who must be concerned with structure, drama, suspense, climax, relief, humor, and whatever else a good storyteller employs. He or she must help visitors to avoid viewing exhibits out of sequence, skip essential labels, and otherwise fail to get the most out of their museum visit.

How does the designer go about planning an exhibit? There are several approaches to the problem:

The "Open Storage" Approach

As objects are acquired, they are put on exhibit immediately: 1) with no organization at all; 2) together with similar objects; 3) with other objects from the same donor, lo-

cality, or time period; 4) in some combination of the foregoing. (But recall the other kind of open storage, discussed in the previous chapter.)

In this approach, labeling is either absent or spotty, giving unnecessary information, such as "oil lamp" or "donated by Mrs. Elmer Judd." A "museum" with such exhibits will commonly have a guest register, a conspicuous donation box, and perhaps an attendant who is not well informed. The name "open storage" implies that objects have not been selected from the collections for display as much as that the exhibits are the collections and vice versa. It is a serious criticism of a museum to say that its exhibits have the appearance of "open storage." The object approach is a step up the ladder from the open storage approach.

The Object Approach

The exhibit is planned, and the objects are taken from the collections. The intent is to produce an educational exhibit. The objects are 1) selected; 2) arranged in a case; 3) researched; 4) labeled; and 5) lighted. The object approach may be the result of a nonintellectual motive or a scarcity of ideas; in the extreme, it may result in a display of objects with little informational content.

About sixty years ago an advance in exhibit theory called the "Idea Exhibit" began to come into its own. It emphasized concepts rather than objects. That is, the starting point in the creation of such exhibits was the message to be put across, not the excerpts from the collections that were to be put on view.

The Idea Approach

Concentrating intently on the educational mission of their museum, the curators 1) decide what story or idea should be presented; 2) decide how the story can best be put across; 3) select needed objects from the collections for illustration, acquire them for the exhibit and use photographs, drawings, models and other aids; 4) plan the exhibit so as to teach, emphasizing the concepts or ideas with various techniques; and 5) install the exhibits, each as a unit. The idea approach may, in the extreme, result in a textbook-type presentation with many words, some pictures, and no objects. It may be the result of a scarcity of objects, or the desire of the curators not to be limited in their work of educating.

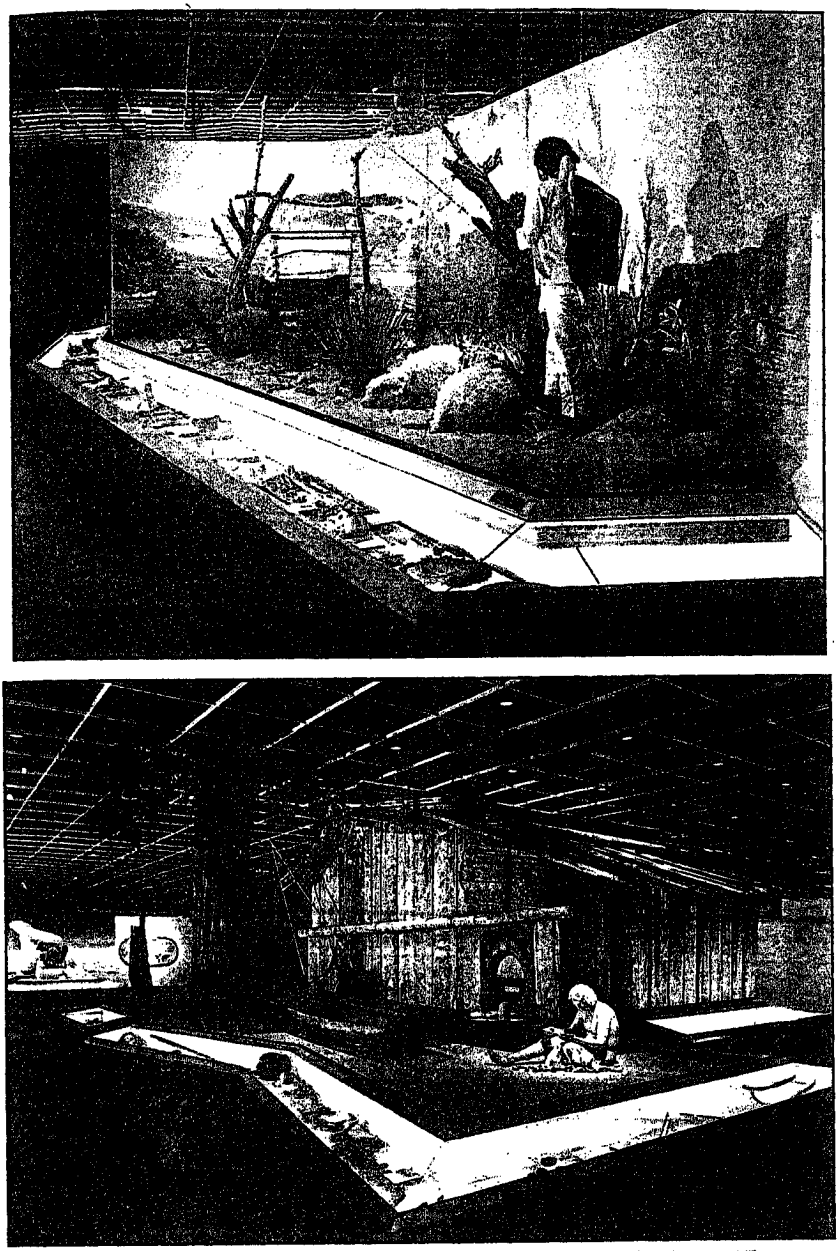
Both extremes are bad.

The philosophical questions are, on the one hand, whether the displaying of objects in itself is justifiable, and, on the other, whether museums should be so compelled to impart information that they do so in abstract fields or in fields in which they have weak collections.

The best solution, as a general rule, is the combined approach.

The Combined Approach

The curator selects both objects and ideas at the same time, based on 1) the significant objects in the collections (what is worth showing), and 2) the purposes of the museum (what is worth telling).

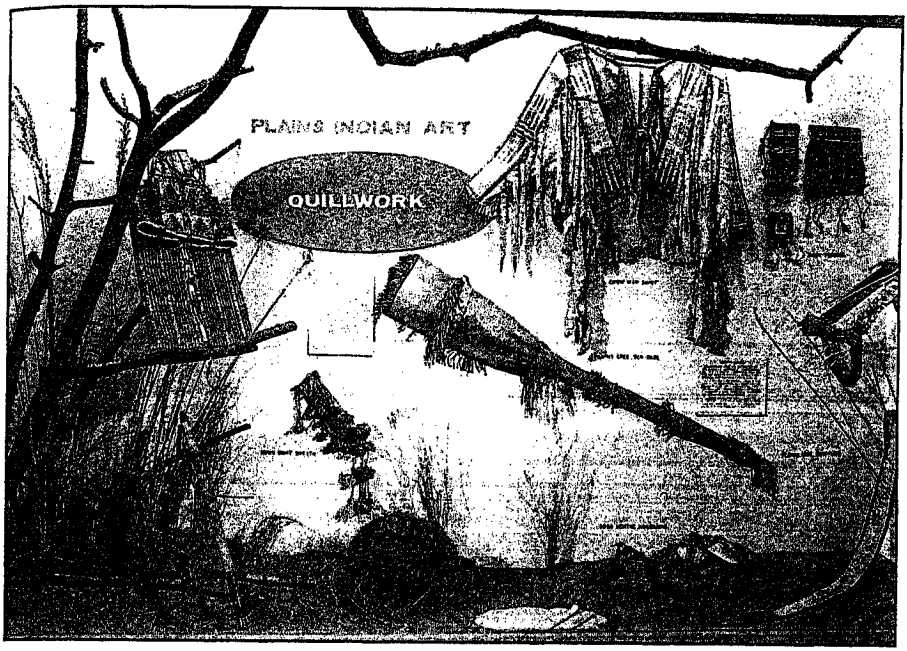


The Navajo of Arizona (top) *and the Yurok of California; Wattis Hall of Man. These two photographs show the more intimate effect, "visitor friendly," of exhibits that are not inside glass cases. Where circulated air is filtered and museum interiors are kept clean, especially in park settings, exposed objects do not get dusty fast and are easily accessible for periodic cleaning. The projections at the bases protect degradable aspects of the exhibits from visitors' hands and provide immediate, self-lighted and safe locations for identified small objects.* —Courtesy, the anthropology division of the California Academy of Sciences

A human "habitat group" helps to explain the early contact between the Native Americans and white traders of the upper Great Lakes region. —Courtesy, Milwaukee Public Museum

To repeat what was said earlier, an important consideration is that exhibits should be grouped in some reasonable order. Just as an exhibit should not contain a hodgepodge of objects, a gallery should not contain a hodgepodge of exhibits. At the same time, avoid monotony—row on row of the same size case, the same artistic techniques and styles, the same methods of organization. The result of these faults is Victorian classification, merely raised from the level of the object to that of the exhibit.

There are so many different kinds of objects to be shown and ideas to be imparted that it may not be possible in a few words to explain how to create a good museum exhibit. Perhaps most museologists would agree, however, that an exhibit represents an important part of the "story" the museum has to tell. It is a measurable aspect of the museum's scope. Most exhibits, then, are a grouping of objects, labels, and pictorial and electronic aids which together are meant to accomplish something. The typical exhibit will have a large sign saying what it is about (the main label). One or more additional labels will convey essential information. The exhibit will contain carefully selected objects, each with an identifying caption, and a longer, detailed label will be available for the viewer who has the time and interest to read it. Photographs, maps, and diagrams, if these will help to explain the subject matter, may be included. In an art exhibit, large letters on the wall of the room may say "France, 17th Century." This is the main label. Individual paintings will be identified as to title, artist, and the years of the artist's life. Somewhere in the



An exhibit on a single topic, the craft of quillwork among the Plains Indians. The main label, or title, is "Quillwork," and the exhibition of which this exhibit is a part, "Plains Indian Art," is named as well. A porcupine is shown in a suggestion of a natural setting, and individual objects decorated with quills are identified. A long label explains the subject, and an additional label on the right discusses Cree Indian quillwork in particular. This simple format can be used effectively, even by small museums with limited budgets. —Courtesy, Milwaukee Public Museum

room one or more labels may help to explain the style or styles represented, the development of technique, and even something of the social context of the art works. In some art museums the labeling is largely in the form of a guidebook for the visitor or plastic-protected labels mounted on paddles which the visitor carries around; picking them up on entering a gallery and depositing them on leaving. In European museums these are commonly available in several languages.

The selection and grouping of the objects in an exhibit can be done in two main ways. They can be of the same type but illustrate varieties of the kind of object or the evolution of the object through time. This kind is called *systematic* or *genetic*. An example from zoology would be on the subject of the cat family. The exhibit (or exhibition) might show lions, tigers, ocelots, the domestic cat, and others, a "horizontal," at-the-same-time-period exhibit showing co-existing varieties, or the exhibit might show the descent of one form, perhaps the domestic cat, successively from ancestral forms, a "vertical," change-through-time emphasis.

An exhibition, like an individual exhibit, should have organization and interpretation. Here, the entrance to a major portion of the museum's exhibit area bears a main label, "Africa," photographs, a map, secondary labels, and three-dimensional objects to prepare visitors for the exhibits they are about to see. —Courtesy, Milwaukee Public Museum

An example of dramatic exhibition technique. The actual skeleton of a dinosaur is mounted in a lifelike pose alongside the visitor walkway. In the rear, an enormous mural illustrates the natural setting in which it lived. —Courtesy, New Mexico Museum of Natural History, Albuquerque

The other way would be to show several different, unrelated objects as they would naturally or normally exist together. This would commonly be called the *habitat, association, or ecological* grouping. An example from the decorative arts would be a period room setting representing a drawing room of a wealthy family of the 1890s. Furniture, rugs, draperies, wall decorations, objects on tables, and perhaps even the clothing on manikins would all be typical of the time, the location, and the social class represented. Returning to the example of cats, habitat groups have long been popular exhibits in natural history museums. A pride of lions (as mounted specimens, produced by taxidermists) would be depicted in a life-sized natural setting with plant life, birds, other animals, and geological formations all accurately portraying a real coming together of different "objects" in nature, at the same place and at the same time.

Summary of Ten Exhibit Types: *According to intent or intellectual content:* (1) aesthetic or entertaining; (2) factual; (3) conceptual. *According to interrelationships of the objects,* two extreme forms: (4) systematic—either "horizontal," a detailed treatment at one moment in time, or "vertical," showing development through time; (5) ecological. *According to the planning process:* (6) open storage with no organization; (7) open storage with some logical arrangement—by type of object, source, etc.; (8) object approach; (9) idea approach; (10) combined approach.

Striking a balance between teaching and entertaining is an ever-present problem in all good museums. Leaning more to one side or to the other marks the personality of the individual museum. The Smithsonian's enormously popular and entertaining National

Spanish colonial art in South America shown in a simulated room setting.
—Courtesy, Milwaukee Public Museum

Air and Space Museum in Washington, D.C., is sometimes in the news in this regard. In March 1992, its "Star Trek, the Exhibition" was the most heavily attended museum installation ever; arguably, the most popular museum presentation in history. In 1995, that museum's planned interpretation of the atomic bombing of Japan that brought World War II to an end created a public furor that forced much blander labeling; a minimum of interpretation along with a portion of "The Enola Gay" bomber. Public museums do not have an easy task when it comes to controversial issues.

It is gratifying to see the good art museums taking on more of an interpretive function than in the past. The Joslyn Art Museum in Omaha was a pioneer, years ago, not just in displaying French Impressionist paintings, but in explaining by labels in the same location what Impressionism was. Similarly, Boston's Museum of Fine Arts in selected areas has sought to explain the social settings in which some of its paintings had been created; recognizing that while fine art is personal expression, each artist is a product of the culture and times in which he or she lived.

The Portland (OR) Art Museum now distributes "Discovery Guide" cards in its exhibit galleries. These cards describe the principal art works that are there (one per card) and they focus the visitor's attention by asking questions, such as: "What do you see first when you look at the painting? How does the artist direct your eye to that focal point? How many contrasts can you find (among the various people in the picture)?" and the like. The card further directs the viewer to observe characteristics of the *style* of painting represented by the particular example, such as "Look for contrast in light and dark, diagonal lines, motion and emotion (etc.)."

As in every other aspect of museum work, the electronic age that has come upon us has created new expectations on the part of visitors and museum staff in regard to exhibits. The good exhibit techniques of the past no longer seem adequate. What we are accustomed to visually in motion pictures and on television now is far different from what captured our interest not very many years ago. Exhibition designers in science centers are well aware of this. Museum exhibit staff must also incorporate, when possible, such devices as computers, virtual reality, television, and interactive equipment. "Image processing," for example, consists of pictures of photographic quality that are visitor-manipulated through a computer; extremely effective in "hands on" education for people of all ages. Such techniques are entertaining, but more importantly they stimulate the mind, they enhance learning and imagination, and they enlarge the visitor's world. That is what the professional museum exists to do. This is not to imply that electronic marvels are necessary in all types and sizes of museums, but only to recommend that each museum explore the possible application of new technology to their exhibitions and their activities.

Care must be taken by all museums to avoid bias in exhibits. An example of a sexist stereotype at the Smithsonian's Museum of Natural History was reported in the press nationally in 1992. An older diorama there (which was a habitat group featuring lions) showed a male lion intently watching a herd of zebras while a female with cubs was looking

away, not interested. The exhibit label was changed to admit the error in the arrangement of the family group. Among lions it is the females that do the hunting. Male lions sleep a great deal and spend most of their time just lying around waiting for their mates to kill something. A similar misconception has existed in the common view of human life in the Stone Age. Man the mighty hunter as the supporter of his family has now been downgraded. Among primitive peoples it is usually the women that gather most of the food and the Victorian ideal of man the breadwinner, providing for his wife and children, is not much in evidence in what archaeologists and anthropologists are learning about the life of our ancient ancestors.

The director of the National Museum of Natural History, Robert Sullivan, estimates that half of that museum's 140,000 square feet of exhibit space needs to be altered to bring the museum into the multi-cultural, gender-neutral, ecologically aware present. If you are working in a museum look around you. You may find that you have some work to do that you had not anticipated.

In well-funded, medium-sized museums today permanent (long-term) exhibit installations are usually not done in-house but by professional exhibit companies under contract. This is in keeping with the decentralization of management for more cost effectiveness, and for increased expertise. The hand-crafted days are over for a professional museum. It is more economic and efficient, resulting in better products and services, to hire outside experts for particular needs. Of course, like everything it can be carried too far and often is. Letting outsiders do the exhibits in a kind of uniform way, especially when one company designs and installs the total exhibition in a new building, can easily result in not enough variety to sustain interest, inadequate identification with the local community (the museum's public), and a lack of personality. One is reminded of elevator music—slick, bland, characterless, unreal. There is also the obvious problem that exhibit designers and installers are not scholars. They are not, in their work at least, art historians, social historians, scientists, or educators. The museum professional staff members must not give up their responsibilities in basic museum work and in public education because a band of outsiders is temporarily in charge of exhibit production, regardless of the euphoria of the board and laymen at getting new, crowd-pleasing installations. Museology exists for teaching, not for entertaining.

In all museums, utilization of the space allotted to the exhibition function must have a logical basis. A museum's mission, based on its scope and its capability, will include information and ideas and a particular, manageable body of materials. It might be twentieth-century American art, flora and fauna of the southern Appalachians, the history of Stark County, or whatever. But each exhibit or each segment of the total presentation should occupy approximately the same fraction of the space as that segment occupies of the total "story." Do not use 25% of your exhibition space for showing objects and giving interpretation for 5% of your educational mission. Static displays of old pianos or automobiles in a history museum, a large collection of drawings by one artist in an art museum,

or the reproduction of a cave or a rainforest in a science museum may be wasteful of space. It goes without saying that it would be difficult, and unnecessary, to work with a precise ratio. A steam locomotive takes up more room that a wrist watch; an elephant, more than a hummingbird.

Most visitors come to the museum mostly to have a good time. They do not see their visit as going to school or deliberately seeking to learn something. The challenge to the museum staff is to accept the visitor on that basis, but then to stimulate and to enlarge his or her understanding while being interesting and entertaining. This is not an abrogation of responsibility and purpose. Sometimes the mere *introduction* of a topic or of an idea is enough. Depth of information can still be available in labels, in publications, in videotapes, and in public lectures.

EXERCISES

Every now and then a review is beneficial. What is a museum? A permanent, public, educational institution that cares for collections systematically. What is its basic ingredient? Collections. What is its purpose? Education. How is education accomplished? Through the use of the collections. What does good use require? Records, preservation, live storage. What is a major use of the collections? Exhibits.

This assignment is in two parts: answers to questions about exhibit matters and the actual study and observation of exhibits and of the public in relation to them. It will be assumed that you have access to a museum where you can spend several hours as a student and as an observer. If you are located too far from the kind of museum where this kind of work would be possible, you may substitute a store. It should be one that has a sizable number of customers and good window displays such as a department store in a town or small city. You will have to get the manager's permission to "loiter" and observe the behavior of customers. You will have to be discreet and as inconspicuous as possible. Offer to give the manager a report of your observations. He or she will probably appreciate learning what product displays seem to be most attractive to customers.

Part One

1. Define diorama and describe one.
2. An important rule in exhibit-making is "art should conceal art." It means that the exhibit designer should be clever enough to keep design cleverness from being obtrusive; that is, that the techniques used in the installation of an exhibit should not distract the viewer from the purpose of the exhibit. Describe an art exhibit, a history exhibit, and a science exhibit in each of which the advice "art should conceal art" was ignored to some degree. (These can be hypothetical, rather than actual exhibits.)

3. Write label copy for a sample of surface material brought back to Earth from Mars. In the exhibit you will have one or more scale models and photographs. Include all the labels you would use in your imagined exhibit; also a simple sketch if this would be helpful.
4. Discuss exhibit cases in relation to exhibits. Why have them? What do they do? How should they be designed? What is bad about them?
5. It has been suggested that art museums should not ignore the historic, human, and social aspects of art, and that other kinds of museums should not ignore the aesthetic qualities of their objects. Discuss.
6. Make an estimate as to the relative efficiency of two museums of your acquaintance and explain how you arrived at your conclusion.

Part Two

In a museum (or store, but explain why you had to select a store):

7. For two hours, observe visitors entering an exhibit hall or some other busy place where one must make decisions. Record visitors' movements and note what appeared to attract and hold their interest.
8. Stationed inconspicuously, observe about twenty-five visitors to one or two reasonably good exhibits. Report length of time visitors spent, what was looked at most, what least, what visitors seem to have gotten from the exhibit on the basis of their remarks and reactions. From that, try to decide how successful the exhibit is.
9. Choose an exhibit and evaluate it on the basis of the characteristics of a good exhibit.
10. Find and describe an example of each of the ten exhibit types.