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## Telling the Story: Better Interpretation at Small Historical Organizations

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### INTRODUCTION:

Interpretation is a five-syllable word with special meaning for those who work or volunteer for historical organizations. It's a word often coupled with two others in our mission statements: collect and preserve.

Unfortunately, it is often the part of our mission that is given insufficient attention. Too many organizations still take the easy route: just arranging artifacts in categories, creating historic tableaux with a few labels, or letting visitors wander through our historic houses. We can do better! Because interpretive programs are the most public and visible aspect of our operations, their quality determines how our organizations are regarded. One does not need to be part of a large organization to do excellent interpretation. Organizations with a few paid employees, or even those with all volunteers, can do it effectively.

The essence of interpretation is story telling. And what can be more natural for human beings than to tell stories? Communications expert Peter Orton tells us: “Stories enhance attention, create anticipation, and increase retention. They provide a familiar set of ‘hooks’ that allow us to process the information that we hang on them.”<sup>1</sup>

How do we tell compelling stories in historical organizations? Before we can answer that question, let us consider what interpretation is; what things to keep in mind when interpreting; and, in what ways museums carry out story telling. Planning an interpretive program is necessary, but cannot be effectively accomplished until the planners understand something about the institution, the goals of the institution and its interpretive program, and interpretation in general.

Recognizing that our organizations need to serve broad audiences makes telling our stories a lot harder. We cannot simply say that one size fits all and expect people to take it or leave it. However, an individual program might be developed by focusing on a segment of the overall audience, particularly on underserved segments.

Historical interpretation translates human stories from the past into meaningful thoughts for people in the present. It makes past experiences instantly understandable by a modern audience. At one historic site with a one-room school filled with benches, interpreters are often questioned by school children making instant associations with their own school. They ask, “How did they do their homework?” What they mean is where, since there are no desks. A clever interpreter replied, “Pupils complete their assignments on laptop chalkboards, called slates.” What this interpreter did was create an instantly recognizable concept in the child’s mind of a chalkboard the size of a laptop computer.

It can be hard for small local history museums to tell a story well. Resources are limited and small organizations often face the challenge of telling stories in difficult places such as historic houses converted to museum use. But perhaps the most serious challenge is simply a lack of familiarity with interpretative theory and technique. Too often, long-serving volunteers have become attached to certain stories and tours and are unwilling to consider changes that would serve new audiences. Even staff trained in museum studies or public history may

have had more courses in administration and collection care than in interpretation. Without effective interpretive programs, our organizations risk becoming irrelevant.

## THINGS TO KEEP IN MIND: THE OPERATIONAL PLATFORM OF ‘TELLING THE STORY’

Why tell a story? The answer is usually found in most of our mission statements: to educate. Local historical societies should be educational institutions. What good is it if we are mere repositories of historical facts and objects? Local history organizations should be able to tell people what all that stuff means.

Telling a story complements our primary educational goal by responding to two major reasons people visit museums and historic sites, namely recreation and entertainment. Although local historical societies should be careful not to let these two helpers eclipse the primary goal, visiting a history museum can be a healthy diversion. At many museums, visitors get to try their hands at certain parts of historical processes by using either reproductions or expendable artifacts from the “educational collection.” Such interpretation can be seen as recreational. Other visitors are treated to dramatic vignettes, rides in old wagons and trains, and video documentaries; they are entertained. But such experiences must still tell people something about the past. Educational enrichment must always be first, or local history museums will reduce themselves to historically oriented campgrounds or theme parks.

To keep education at the forefront, keep four things in mind when planning an interpretive

### It Starts with Audiences

We should always identify or define the audience for our interpretive programs. For many small organizations, particularly in their formative stages, audience identification may be an afterthought. So, how do we define our audiences? For most historical organizations with geographically defined or place based missions, the audience includes all the people who reside in our geographic service area, not to mention those who are only visiting. It is no longer feasible, especially for those of us funded by government sources, to serve a small slice of the community—for example, those whose ancestors have lived here for four or five generations. Even organizations with missions defined by subject (for example, the history of aviation, fishing, railroads, farming) recognize the need to serve more than “buffs” already knowledgeable about the subject matter.

activity: what a story is, how people learn, the potency of interpretation, and basic customer service principles. These guiding principles will keep an interpretive program on target.

What is a story? There are many definitions. One narrative theory called structural-affect,<sup>2</sup> maintains that the goal must be meaningful to the audience, that the audience develops empathy for the protagonist, and that the outcome holds a surprise for the audience. When using the structural-affect model for historical interpretation, the difference is that, rather than a surprise, we impart a human truth at the end. For example, an interpreter

[1] Quoted in Elizabeth Weil, “Every Leader Tells a Story,” *FastCompany* 15 (June/July, 1998): 38.

[2] Peter Orton, at IBM’s T. J. Watson Research Center, [http://www.research.ibm.com/knowsoc/ideas\\_featurestructure.html](http://www.research.ibm.com/knowsoc/ideas_featurestructure.html).

pretending to be a spectator at a vintage baseball game approached modern spectators, saying, “I’m sure this game looks a little different from what you’re used to, but I assure you that this is an improvement to what you all played as children.” He went on to relate briefly how the rules used in 1860 either codified or altered earlier practice. In doing so he imparted the truth that human beings are constantly tinkering with things, hoping for a better result.

People learn in a variety of ways. However, scientists who study how people learn say we generally learn using our culture and prior knowledge as a platform. We take in new facts, such as antique baseball rules, through a variety of media to assist in problem solving and reasoning to draw conclusions and comparisons with things we already know, such as modern baseball rules. These new facts should spark our natural curiosity. We respond well to structure. If our visitors know the goals of the program, they will be ready to learn.<sup>3</sup>

Using the structural-affect model and understanding that people use what they are already familiar with, the interpreter can make translations with what might be termed “The Three C’s of Interpretation.” That is, compare and contrast in context. Once we establish the context of the past, we can make comparisons and contrasts with our own situations, as in the example of the “laptop chalkboards” or our familiarity with the rules of the ball game. Context enables us to understand that those who lived before were products of their own time and place just as we today are products of ours. When visitors understand context, contrast and comparison can convey a meaningful history.

Humor can be as useful as it can be troublesome. Used well, it can help further a lesson, drive home a point, and reassure an audience. One reenactor, costumed as a Civil War soldier, used humor to his benefit. He was talking to a class of school children, comparing and contrasting his historical situation with theirs. Just like the children, he had to obey two things that he wished he didn’t: time and teachers. His “teachers” were officers who had gone to a special school and received a special piece of paper called a commission. He had to obey time too, because his “teachers” wanted things in good order. In essence, this grown man was being treated like a child. He then wryly commented for the adults present, “Guess that’s why they call us Infant – tree.” The pun helped at least the adults to remember that being in the army is like being a kid in school.

Historical interpretation and comic strips have a lot in common: both are potent combinations of ideas and illustrations. Cartoonist Berke Breathed, in his introduction to *Classics of Western Literature: Bloom County 1986-1989*, explained what makes stories work for comics. Rather than surprise the audience, a good story relates a

basic human truth—the truth of anxiety seen in *Peanuts* character Charlie Brown, for instance.<sup>4</sup> When interpreting history to the public, it is important to connect them to the past on a basic level; doing so builds empathy with human truth, enriching the mind and spirit.

Just as some local history programs allow recreation and entertainment to eclipse the primary goal of education, others allow artifacts either to become the story themselves or to be more important than a human story. According to cartoonist Bill Watterson, in his anthology *The Calvin and Hobbes Tenth Anniversary Book*, great ideas save boring illustrations better than great illustrations saving boring ideas. This is true for local history organizations as well. An artifact without a story or an interesting idea is not particularly educational. Many historical society collections contain the same items as the historical collection down the road. To someone who has heard about the general use of a sadiron, even the best surviving example of a sadiron will no longer be interesting. Who used this sadiron, and what was that person’s significance to your mission? Every artifact was used or made by a human being: it’s the human story that is interesting, not some obscure tool a modern person doesn’t use or recognize. The fact that some other person used the object makes translation of the story possible and meaningful. Objects must support the story you are telling.<sup>5</sup>

At a former state capitol building, the only two people on one tour admitted to the guide they both worked at another historic site. The guide had no stories to tell on his hour-long tour, just explanations of how curious artifacts were used. Instead of orchestrating a conversation about significant proceedings, grand architecture, interesting politicians, and important legislation, this guide knew only about the artifacts. When his visitors already knew about the artifacts, his tour was compromised and less meaningful. Perhaps because of limited training he did not know that objects could help him tell stories about the special community he was living in; and, therefore he was not able to provide a very good customer service experience. Few visitors know the meaningful local stories that we know, even if they live in our area—so it is best to take advantage of what makes our places special to live in.

The final key to effective interpretation is good customer service. We must pay attention to the interests of our visitors by telling meaningful stories, making sure not to fatigue them mentally with breathless depth or fatigue them physically with no chance to take it all in. Be kind and helpful. Take time to get to know them so you can kindle curiosity with the supremely interesting human stories you have to tell. As Watterson suggests, as long as you have the opportunity to speak to someone, you might as well say something useful.

[3] John D. Bransford, Ann L. Brown, and Rodney R. Cocking, editors. *How People Learn: Brain Mind, Experience, and School*. Committee on Developments in the Science of Learning. Commission on Behavioral and Social Sciences and Education. National Research Council. (Washington, D.C.: National Academy Press, 1999). <http://www.nap.edu/html/howpeople1/ch1.html>.

[4] Berke Breathed, *Classics of Western Literature: Bloom County 1986-1989* (Boston, MA: Little Brown & Company, 1990): two. Bill Watterson, *The Calvin and Hobbes Tenth Anniversary Book* (Kansas City, MO: Andrews & McNeel, 1995): 6.

[5] Watterson, 32. See also, Hilde S. Hein, *The Museum in Transition: A Philosophical Perspective* (Washington, D.C.: Smithsonian Institution Press, 2000), particularly chapter 4, “Transcending the Object.”

Being kind and helpful will lead you to what one interpreter summed up as “Know all, tell some.” One guide with a theatrical background saw the story she was paid to tell as being like lines in a play. She would not let visitors leave until she had concluded her “performance.” You can fatigue audiences with an exhaustive narrative. Withholding less crucial parts of the story can be a kindness. Visitors often sense when something is missing, and if their curiosity is aroused and they are so inclined, they will ask. Another interpreter described this activity as “digging holes.” Dig enough holes, and curiosity will trap the visitor in one of them. They will have to ask a question to get out.

Good customer service at our history museums means getting to know our guests even minimally so we do not bore them with things they already know. We must learn where our guests are coming from, if we expect to build on their knowledge. It means not putting up barriers to their experience. We must describe the experience ahead so the visitor is prepared to overcome challenges like stairs, long walks, no working restrooms, no water, unusual temperatures or light levels, and so on. In short, customer service is the consideration of human needs. By considering our guests’ needs, we show that we are fully engaged in their experience.

These four ideas—what a story is, how people learn, the potency of interpretation, and basic customer service skills—kept firmly in mind can produce enjoyable, high-quality interpretive educational opportunities. They can be applied to all kinds of interpretation. They drive curiosity by using the powerful combination of ideas plus good illustrations.

## **INTERPRETATION’S MANY FACES: VEHICLES OF INTERPRETATION AT LOCAL HISTORY MUSEUMS**

Local historical organizations tell their stories in a wide array of interpretive media. We tell stories in museum exhibitions, in public programs conducted at historic sites and house museums, in programs conducted offsite in the community, and through other media, such as publications, where our interaction with an audience is indirect.

Choosing themes or subjects for interpretation should start with mission. It is certainly acceptable to do interpretive programs that go beyond an organization’s mission, but the mission should be the primary screen for program selection. Geographically based his-

torical organizations should have no problem knowing where to start, but it is important to take the time and effort to identify the historical themes that tell the story of your area. List the broad themes that help people understand the forces that have made your area what it is today. Your themes may have much in common with those of other areas in your region, but there will surely be some variations unique to your area.

Expand the list of historical themes by writing brief narratives about each one. Connect them with a timeline that includes specific people, places, and events. Then add lists of resources that you could use to develop interpretive programs. These will range from manuscripts and government records to oral histories, artifacts, and books. The information you collect about your historical themes should be dynamic. That is, you should always be adding new material and you should review the themes in light of new historical research.

While developing a list of historical themes is an essential part of planning interpretive programs, another way is to identify more universal themes that

can become a framework to connect the history of your area. Think of the big themes that apply to everyone: families, making a living, health, bereavement, and so on. Historian Joseph Amato calls on local historians to look into other themes, some so common that we don’t think about them, for instance the senses.<sup>6</sup> How have the sounds and smells of a community changed over time? Amato would also have local historians study and interpret the emotional history of their communities through topics like anger and madness.

According to the National Park Service, themes connect tangible objects with intangible concepts and universals. For further information please see the NPS Web site for the online booklet *History in the National Park Service: Themes & Concepts*. [www.cr.nps.gov/history/hisnps/NPSThinking/themes\\_concepts.htm](http://www.cr.nps.gov/history/hisnps/NPSThinking/themes_concepts.htm)

### **Museum Exhibitions.**

It is not easy to create an effective exhibition. Unlike other forms of interpretation, which can be tailored to different audiences, museum exhibitions need to work with multiple audiences. They can only do so if they are well planned and executed.

The first step is to recognize that exhibitions are more than displays. A display of neatly arranged and categorized farm or fishing implements with a few labels does not tell a story. Even an arrangement of items in a recreated domestic setting, such as a 19th-century kitchen, does not tell much of a story. Neither technique does anything to engage museum visitors. National Park Service historian Freeman Tilden told us

### **Themes for Interpretive Programs**

Given the wide range of human activity, historical organizations have no shortage of topics from which to choose. Of course, some stories lend themselves better to one interpretive medium than others. Some stories can be told well by an exhibition, for instance, but not in a walking tour.

[6] Joseph Amato, *Rethinking Home: A Case for Writing Local History*, (Berkeley, CA: University of California Press, 2002): 60. For another approach to developing historical themes, see Tom McKay, “Choosing a Local History Topic: Beginning With Concepts,” in *Exchange*, newsletter of the Wisconsin Historical Society’s Office of Local History Volume 24, Number 7 (January/February 1982). Available online: <http://www.wisconsinhistory.org/localhistory/articles/concepts.htm>.

nearly 50 years ago: information is not interpretation.<sup>7</sup> Tilden defined interpretation as revelation based on information. Barbara Franco, the director of The Historical Society of Washington D.C., explains that museum exhibitions ought to create memorable experiences.<sup>8</sup> When we plan an exhibition, we need to be conscious not just of what a visitor will see, but of what the visitor will do. Dan Spock, head of the Exhibits department at the Minnesota Historical Society, elaborates: “Exhibits are a mode of communication, but this process is primarily non-verbal, minimally textual, works more in the ‘gut’ than in the ‘mind’ and is inherently a two-way street, a kind of dialogue of meaning-making between visitor and museum.”<sup>9</sup>

Spock also recognizes that visitors bring a variety of knowledge, experience, and associations with them to the exhibition. Visitors use these things during a museum visit to create new experiences in a “personalized synthesis.” He feels that the story is the most common and natural way to move “the personal meaning into the social sphere, into the world of other people where it can be shared and understood.” Good exhibitions enable these kinds of experiences.

Isn't all of this impossible for the small historical organization with limited resources? Not necessarily. Even the smallest organization can do excellent exhibitions that address multiple audiences. Of course, it all starts with a clear goal. What is the exhibit about? What story does it tell? What are the primary messages you want visitors to take away after they have seen the exhibit?

Two key words to keep in mind while doing this are layering and interactivity. Layering recognizes that visitors will experience a museum exhibition in a variety of ways. We are all familiar with people who hurry through an exhibition and take very little time to read interpretive panels. Others, however, will spend a great deal of time and read everything. Most people are somewhere in the middle. The process of designing and fabricating exhibitions needs to consider all these visitor styles.

Visitors in a hurry need something to grab their attention. It might be large artifacts that are visually compelling. Or, spatial design can capture attention by drawing the eye to a particular area. These speedy visitors need to see exhibit headings in very large type size if we expect them to understand the message we are trying to convey.

Other visitors, those who might take more time for the exhibition, can be stimulated with other techniques. They are more likely to look at more museum objects, photographs and documents. They may also read text blocks and labels. To be effective, labels or text panels need relation to actual things in the exhibition. Too often, smaller museums retain labels for items after changing their exhibit. Also, be succinct because most visitors will not read lengthy descriptions.

Some visitors, of course, will take much more time.

We can engage them at even higher levels. They are more likely to want to share what they learn with others if they are in a group. They are the visitors who would sit down at tables with reading materials that allow them to explore more content. And they are more likely to interact with employees or volunteers who do demonstrations or portray historic characters.

Interactivity refers to techniques in which visitors are no longer passive but can take an active role in an exhibition. Interactivity is not just a passing fad. We know from numerous studies of learning development that people of all ages remember much more about an experience if they participate actively, as opposed to simply reading, seeing, or hearing something. In museum exhibitions, interactives can be simple or complicated. Most smaller organizations lack the resources to design, fabricate, and maintain complicated interactives, so it is best to use tried and true techniques. Things that work well include allowing people to handle reproductions or artifacts from the educational collections, role playing, games and puzzles, simulations of work situations, and mastering crafts and tools through “make it, take it” programs.

Spock says learning works best when it is informal. Exhibition visitors learn more when they are active participants and not preached to by an authority. Planners of good history exhibitions need to understand visitors' prior knowledge with a particular subject and use it to engage them. Spock suggests using stories of human experience common enough to be familiar to today's visitors, emphasizing the voices of real people from the past. He also advocates exhibitions representing the diversity of peoples, communities and roles to engage visitors' empathy and emotion. Spock does not avoid controversial issues in exhibitions, but presents clear, balanced accounts that do not impose one viewpoint over another. He believes visitors are perfectly able to decide for themselves, even allowing issues with contemporary parallels or implications to come to the foreground. Lastly, exhibits are to be welcoming, aesthetically pleasing, comfortable, and accessible to all.

### **Public Programs in Our Museums.**

Public programs generally are history programs with some kind of human interaction. Every local history organization does public programming in some way. Perhaps the most common public programs are guided tours with a docent.

Researchers who study how people learn tell us that most people's tolerance for listening is limited to eight minutes. Many docents are aware of this and make sure they do not spend any longer than eight minutes at any one station. They also notice obvious body language from visitors who begin shifting their weight to relieve tired legs. When visitors are physically uncomfortable, they cannot listen as well.

[7] Freeman Tilden, *Interpreting Our Heritage*, revised edition (Nashville, TN: AASLH, 1967): 9.

[8] Barbara Franco. “What's New in Exhibits?” *Cultural Resource Management*, No. 5, (2000). National Park Service <http://crm.cr.nps.gov/archive/23-05/23-05-14.pdf>.

[9] Dan Spock, presentation titled “Exhibits: More than Displays” at workshops for Minnesota's Historical Organizations, spring 2002.

Costumed interpreters lead a growing number of guided programs. There are many variants, from strict first person, where the interpreter never strays from a certain time period, to third person that does not necessarily even need costumes. Small organizations might need to rely on community members who have developed a program well suited for its audience. Often reenactors, living historians, thespians, and interpreters are passionate about their subject and willing to provide programs at little or no cost. However, the organization should not allow just any program to happen. These sorts of programs require planning and evaluation too.

As with every other program, when you bring in someone from outside your staff or regular volunteers, it is wise to write out what you expect from, and what you will provide to the costumed interpreter. Be aware that costumed interpretation has its own language, so acquaint yourself with basic terminology. There are different kinds of costumed interpreters:

- reenactors are the basic hobbyists for whom enthusiasm knows no bounds;
- living historians study and document things often to extreme minutiae;
- thespians can give powerful and memorable performances; and,
- professional history interpreters generally value education above all.

None is necessarily better than another, but consider what each type can do for you. Each type has its pitfalls, as well. The reenactor may be enthusiastic, but can he relate well to the public? Is he well versed in his subject? The living historian, sometimes referred to as 'hardcore,' can lose sight of the broader educational message because she is far too interested in the type of stitches and the number of stitches per inch in her garments. The thespian, while powerful and memorable, may not easily interact with your audience while running the course of the 'script.' A professional history interpreter, while primarily an educator, may be willing to sacrifice some small parts of accuracy for the greater educational good.

Also be aware that the method a costumed interpreter uses may or may not be appropriate. Tom Sanders' excellent article on interpretation points out, "First person in its purest form does have some drawbacks." Cultural differences, willingness to 'play the game,' limitations of the time period or of social class being enacted, and so on sometimes get in the way of the educational goals we set for programs.<sup>10</sup> Of course, thinking about method applies to all our programs.

Costumed interpreters often function at historic sites, historic house museums, and "pioneer/historical villages." Historical environments are often the best places for costumed interpreters to work. Visitors can easily walk with their predecessors, feel like them, and even begin to imagine themselves living as their forebearers did. Here visitors can readily learn about the lives and motivations of people in the past. Of course,

such environments also present other challenges such as adequate staffing, proper maintenance, a consistent message, staff morale, training and discipline, and the cost of clothing, reproductions, and other consumables.

Other public programs use onsite interpretation just like docents and costumed guides. Many local history organizations have regularly scheduled meetings at which there is usually some kind of program, often a guest speaker. Slide shows, documentaries, lectures, sing-a-longs, facilitated sharing sessions, book readings, and other such programs are vehicles for telling some important story of your community.

### **Public Programs in the Community.**

Local historical organizations offer many public programs off site. These programs include tours guided by brochures or a recreational activity guided by a historian.

Many small history museums partner with local heritage preservation organizations to produce walking tours of historic downtowns. Likewise, countywide historical museums develop driving tours of historic places in their region or create historical marker systems which, when coupled with a brochure, tell a story about a much larger area. Even more broadly, multiple historical museums may create a theme tour, such as a tour of historic sites related to children's authors.

Recreational opportunities led by a historian are increasingly popular, and history museums are responding. Tour groups might ride bicycles down a path converted from an old railroad line, or through multiple historic areas in larger towns that would be impossible to cover on foot. Some specialized walking tours require a guide, especially those focusing on faint traces of historic sites long razed. In areas with snow, a historian might accompany groups on snowmobiles, snowshoes, or cross-country skis past familiar historic sites that evoke a different feeling and association than they would in the summer. Enos Mills was a tireless advocate in the 1910s for National Parks and the learning opportunities afforded in them. His many books and magazine articles are still good advice for modern guides, whether they are leading groups through pastoral or urban wildernesses. The popularity of site-specific tours today is much the same as it was in Mills' day: people are too busy to stop and consider what they are speeding past.

Cemetery walks are a popular combination of walking tours and costumed guides. Here, after extensive biographical research, volunteers and staff sometimes portray former residents who return to life near their headstones and present a brief story to tour groups. Sometimes a historian leads a cemetery walk. The tour might encounter any number of "ghosts" or markers, but they all relate to some overall theme. To that end many cemetery walks will feature themes like women activists in the community, victims of major natural disasters, railroad workers and their families, and the community's military veterans.

A combination of recreation and history occurs at

[10] Tom Sanders. "Thoughts on Effective Living History: Interpretive Suggestions," *Midwest Open Air Museums Magazine*, v. 11, n. 1 (Spring 1990): 10.

recreated “bat and ball” games. Interpreters, volunteers and the general public play “base ball,” rounders, cricket, and other versions of ball games—often in appropriate reproduced apparel, but always by the historically documented rules. While the public or demonstrators who participate may have fun and learn about the game, not many sponsoring institutions take the time to make the story of the game relevant to the public watching the event. These types of games make translating history easier because baseball is such a common experience for so many Americans.

Requiring visitors to participate is one way to ensure both a memorable and actual learning experience. A unique combination of outdoor recreation and historical experience is found at Connor Prairie, a historic site near Fishers, Indiana. They decided to address a highly sensitive subject, namely African American slavery. The program is “Follow the North Star,” and requires all the visitors to participate in the program as a group of runaway slaves. It is a somewhat physical program covering a lot of ground at night, where they meet various historical interpreters, from slave hunters to abolitionists and Quakers. Through first hand experience, visitors learn what it was like to be a runaway slave in the mid-nineteenth century.

At one Canadian museum that presented a lesson on the War of 1812, guests were randomly handed note cards on which were written quotations from original participants. The lesson focuses on an academic mystery: who held the cannons at Lundy’s Lane on July 25, 1814, and when? With the aid of a narrator, each participant stepped forward to “testify” to what was seen that night. At the end of the program, the narrator asked visitors to solve the mystery and concluded by briefly describing the academic debate. The point of the program is not only to show a past human activity, but also to show how those events still affect people today. The visitors developed empathy for multiple protagonists through individual points of view.

All public programs should carefully consider educational goals. History organizations must make sure all their programs meet the mission in some way and are evaluated to see whether the program furthers its mission. Evaluation does not have to be complex, just conducted methodically to produce meaningful feedback in guiding the future of the program.

#### **Publications and Other Indirect Programs**

One of the most common ways that local historical organizations tell stories is through research, writing and publication. Unlike the other interpretive programs discussed, publications do not require someone to visit the museum or historic site or register for a program. Much of what has been said about other interpretive vehicles applies. Just be careful to note that publications have a different impact than a temporary museum exhibition or a costumed portrayal at a historic site.

Publications are more widely accessible both geographically and temporally.

Whether books or essays, publications differ in another way from other interpretive programs. The historical writer has a fundamental responsibility to tell the reader how she knows what she writes. This means telling the reader about primary and secondary historical sources and making it clear how they are used.

Local history publications also allow for the retelling of history when new information is available. Although reprinting an old history might be a fine project, a better one—although much more difficult and time consuming—would be to undertake new histories, which, in the words of Carol Kammen, “change what needs to be altered and challenge what needs to be questioned.”<sup>11</sup>

In recent years, historical organizations have begun to undertake other forms of interpretive programs such as the production of curricular material for schools and now interpretive programs on Web sites. At this time, larger organizations are mostly producing such programs, but in the future they will likely become common in smaller local organizations as well. These programs require solid planning, maintenance, and evaluation just like any other interpretive program. Additionally curricula require collaboration with the teachers whom you intend to use it.

#### **CONCLUSION: WE CAN ALWAYS DO BETTER**

Local historians know their work is never done. Just planning, researching and implementing an interpretive program is not the end. All programs need to be evaluated, and then adjusted to improve or discontinue them if need be. Large historical organizations regularly evaluate projects, but smaller organizations without the same resources can do the same. In fact, increasingly, government, foundation and corporate funders demand that evaluation be a component of every program.

Done well, interpretation helps audiences connect with the past in personal ways by drawing on first-person accounts of human activity. The best interpretive programs are well organized, based on sound historical research, and have clear objectives. They are tailored to diverse audiences and ways of learning. While keeping education at the forefront, they let audiences draw their own conclusions about the past. With interpretive programs, we play the ancient and honorable role of storyteller. When we tell stories well, no matter whether our organization is large or small, we know we are carrying out our mission.

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[11] Carol Kammen. *On Doing Local History: Reflections on What Local Historians Do, Why, and What it Means*. (Nashville, TN: American Association for State and Local History, 1986): 38.



## BIBLIOGRAPHY

- Alderson, William T., and Shirley Payne Low. *Interpretation of Historic Sites*. Nashville: American Association for State and Local History, 1985.
- Amato, Joseph. *Rethinking Home: A Case for Writing local History*. Berkeley, CA: University of California Press, 2002.
- Ames, Kenneth L., Barbara Franco, and L. Thomas Frye, Eds. *Ideas and Images: Developing Interpretive History Exhibits*. American Association for State and Local History, 1992.
- Baker, Charles L. "Planning Exhibits: From Concept to Opening," American Association for State and Local History Technical Leaflet #137, 1981.
- Brochu, Lisa, and Tim Merriman. *Personal Interpretation: Connecting Your Audience to Heritage Resources*. Fort Collins, CO: InterPress, 2002.
- Coda, James C. "Planning and Creating Effective Exhibits on a Limited Budget," Ohio Historical Society *Local History Notebook*, Part I (July/August, 1994), [www.ohiohistory.org/resource/oahsm/notebook/julaug1994.html](http://www.ohiohistory.org/resource/oahsm/notebook/julaug1994.html); Part II (September/October, 1994) [www.ohiohistory.org/resource/oahsm/notebook/sepoct1994.html](http://www.ohiohistory.org/resource/oahsm/notebook/sepoct1994.html).
- Collins, Rives, and Pamela J. Cooper. *The Power of Story: Teaching Through Storytelling*, 2nd edition. Allyn and Bacon, 1997.
- Ernst, Kathleen. "Conquering Burnout: A supervisor's approach to dealing with interpreter burnout," *Midwest Open Air Museums Magazine* 9/1 (Spring 1988).
- Ernst, Kathleen. "Conquering Burnout: An interpreter's approach and advice for fighting burnout," *Midwest Open Air Museums Magazine* 9/2 (Summer 1988).
- Gordy, Christopher D. "The Complex Field of Living History: Through the Eyes of its Students," *Midwest Open Air Museums Magazine* 18/2 (1997): 6-11.
- Hein, George E., and Mary Alexander. *Museums: Places of Learning*. American Association of Museums Education Committee, 1998.
- Mackintosh, Barry. *Interpretation in the National Park Service: A Historical Perspective*. Washington DC: History Division, National Park Service, US Department of the Interior, 1986. Online version of the book: [www.cr.nps.gov/history/online\\_books/mackintosh2/index.htm](http://www.cr.nps.gov/history/online_books/mackintosh2/index.htm)
- McKay, Tom. "Exhibiting Wisconsin's Local Heritage", a series of articles in *Exchange*, newsletter of the Wisconsin Historical Society's Office of Local History, available online at [www.wisconsinhistory.org/localhistory/exhibit\\_plan.htm](http://www.wisconsinhistory.org/localhistory/exhibit_plan.htm).
- Midwest Open Air Museums Magazine*. Published since February 1980, it has many articles on interpretive approaches to various aspects of history.
- Mills, Enos. *Adventures of a Nature Guide and Essays in Interpretation*. Friendship, Wisconsin: New Past Press, 1920.
- National Park Service. *History in the National Park Service: Themes & Concepts, 1993*. [www.cr.nps.gov/history/hisnps/NPSThinking/themes\\_concepts.htm](http://www.cr.nps.gov/history/hisnps/NPSThinking/themes_concepts.htm)
- Robinson, Cynthia, and Gretchen S. Sorin, *Going Public: Community Program and Project Ideas for Historical Organizations*. Bay State Historical League, 1999.
- Rosenzweig, Roy, and David Thelen. *The Presence of the Past: Popular Uses of History in American Life*. Columbia University Press, 1998.
- Roth, Stacy F. *Past into Present: Effective Techniques for First-Person Historical Interpretation*. Raleigh, NC: University of North Carolina Press, 1998.
- Sanders, Thomas. "Thoughts on Effective Interpretation," *Midwest Open Air Museums Magazine* 11/1 (Spring 1990): 10-11, 21.
- Thomson, Ron. *A Different Path for Historic Walking Tours*. AASLH Technical Leaflet #194, 1996.
- Tilden, Freeman. *Interpreting Our Heritage*. Chapel Hill, North Carolina: University of North Carolina Press, 1957.
- Trapp, Suzanne. *Signs, Trails, and Wayside Exhibits: Connecting People and Places*. University of Wisconsin - Stevens Point Foundation Press, 1994.

# HISTORY NEWS

# TECHNICAL LEAFLET

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FOR STATE AND LOCAL HISTORY

## Developing Effective Educational Programs

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**BY DEANNA J. KERRIGAN**

Developing educational programs for visitors of all ages is a key mission component of many historical organizations. But how can we make them effective experiences that touch the lives of visitors and bring them back for more? This Technical Leaflet examines ways to plan and develop educational programs that are effective in relating information to participants and leave them with a better appreciation for history.

## IDENTIFYING AUDIENCE NEEDS

Educational programs are often designed because they serve our needs—to promote an exhibition, share new research, or target a coveted audience. Designing effective and meaningful programs, however, requires an understanding of audience needs, expectations, and

attitude about learning. If we cannot make our services relevant to the lives of our visitors, we cannot compete with the vast range of leisure-time opportunities.

Below is a general chart for beginning an audience needs-assessment. Note that these needs and characteristics are very general and do not reflect the diversity of life experiences for all visitors:

Audience	Needs	Characteristics
<b>Pre-school</b>	<ul style="list-style-type: none"> <li>structure</li> <li>direction</li> <li>variety</li> <li>opportunities to touch</li> <li>strong visuals</li> <li>mobility</li> <li>exhibits their size</li> <li>trained staff</li> </ul>	<ul style="list-style-type: none"> <li>short attention span</li> <li>short physically</li> <li>no pre-conceived notions of museums</li> <li>like to touch</li> <li>excited</li> </ul>
<b>School groups</b>	<ul style="list-style-type: none"> <li>direction</li> <li>guidance</li> <li>interactivity</li> <li>motivation</li> <li>information in context to experiences</li> <li>variety of skills</li> </ul>	<ul style="list-style-type: none"> <li>short attention span</li> <li>may consider history boring</li> <li>varying reading abilities</li> <li>like to ask questions</li> <li>division of interest by gender</li> </ul>
<b>Multi-generational</b>	<ul style="list-style-type: none"> <li>need orientation to space</li> <li>creature comforts</li> <li>more space</li> <li>activities to choose from</li> <li>opportunities for family learning</li> </ul>	<ul style="list-style-type: none"> <li>busy/rushed for time</li> <li>variety of age levels</li> <li>variety of interests</li> <li>emphasis on children</li> <li>“vacation mentality”</li> </ul>
<b>Adults</b>	<ul style="list-style-type: none"> <li>opportunity to socialize</li> <li>more in-depth information</li> <li>respect</li> <li>volunteer opportunities</li> </ul>	<ul style="list-style-type: none"> <li>genuine interest</li> <li>intellectual</li> <li>may perceive museums as elitist</li> <li>busy/rushed for time</li> </ul>
<b>Senior groups</b>	<ul style="list-style-type: none"> <li>creature comforts</li> <li>sensitivity to needs</li> <li>respect for knowledge</li> <li>opportunity to share knowledge</li> <li>volunteer opportunities</li> <li>accessible spaces and material</li> <li>opportunities to socialize</li> </ul>	<ul style="list-style-type: none"> <li>may have decreased stamina</li> <li>may have mobility impairments</li> <li>pre-conceived notions of experience</li> <li>more leisure time</li> <li>large segment of the population</li> <li>larger life context</li> </ul>
<b>Special needs</b>	<ul style="list-style-type: none"> <li>accessible facilities</li> <li>accessible exhibits</li> <li>well-trained staff</li> <li>need to feel welcome</li> <li>opportunities for group and individual learning</li> </ul>	<ul style="list-style-type: none"> <li>often feel unwelcome in museums</li> <li>variety of age levels</li> <li>variety of interests</li> </ul>

This list is a beginning point for staff to better understand audience needs. Nothing can take the place of feedback and formative evaluation information from

target audience groups. This kind of focus-group approach is essential in identifying those issues specific to your region or site.

## IDENTIFYING INSTITUTIONAL RESOURCES

In developing programs that are compelling, exciting, and effective, staff needs to closely examine the resources and opportunities of the institution and identify what makes them unique. These institutional resources can include:

- **staff experience**
- **volunteer expertise**
- **historical collections**
- **space**
- **funding**
- **community organizations**
- **research**
- **institutional mission**

The goal in examining institutional resources is to identify those unique ways the organization can tie into audience needs and create something that is both educational and relevant—something that addresses the needs of both the organization and the visitor.

### EXAMPLE

A museum strives to attract visitors in the 25-45 age range for a series of Sunday afternoon programs, but

despite the popular topic, attendance is low. Finally a participant approaches staff with the comment, “I would like to attend more of these programs, but finding a baby-sitter is almost impossible.”

### HOW WOULD YOU RESPOND?

This museum responded by offering free educational programs for children of registered participants. During one program focusing on scholarly research in regional pottery, children learned how to create their own pots, spent time in the gallery, and interviewed some potters and their children. Following the adult conference, children invited adults to an “exhibition” of their work. The result? An increase in attendance, an expanded audience, and grateful parents.

### EXERCISE

Take a few moments to examine your organization’s public programming in light of your audience needs, your organization’s resources, and the learning styles which follow this exercise. Do you find that most programs fall within one or two main styles? How can you diversify the learning styles addressed by your organization’s programming?

## PROGRAM PLANNING CHECKLIST

### Intellectual Planning

1. Program chair: \_\_\_\_\_
2. Application to mission statement: \_\_\_\_\_  
\_\_\_\_\_
3. Target audience(s): \_\_\_\_\_  
\_\_\_\_\_
4. Audience needs addressed: \_\_\_\_\_  
\_\_\_\_\_
5. Program goal: \_\_\_\_\_  
\_\_\_\_\_
6. Potential community collaborators: \_\_\_\_\_

### Institutional Planning

7. Community partners and contact names: \_\_\_\_\_  
\_\_\_\_\_
8. Confirmed sponsors and contact names: \_\_\_\_\_  
\_\_\_\_\_
9. Program date: \_\_\_\_\_ Time: \_\_\_\_\_
10. Program location: \_\_\_\_\_

11. Fee charged:  Y  N \$ \_\_\_\_\_

12. Registration deadline: \_\_\_\_\_

### Logistics Planning

13. Speakers identified and confirmed \_\_\_\_\_

14. Supplies identified and ordered \_\_\_\_\_

15. Date for program confirmed \_\_\_\_\_

16. Access to space confirmed \_\_\_\_\_

17. Publicity materials out \_\_\_\_\_

18. Press release out (2 weeks prior) \_\_\_\_\_

### Equipment Checklist

- |  |   |
|--|---|
| <input type="checkbox"/> Tents                 | <input type="checkbox"/> Extra security   |
| <input type="checkbox"/> Sound system          | <input type="checkbox"/> Signage          |
| <input type="checkbox"/> Slide projector       | <input type="checkbox"/> Risers/stage     |
| <input type="checkbox"/> Overhead projector    | <input type="checkbox"/> Chairs           |
| <input type="checkbox"/> LCD projector         | <input type="checkbox"/> Catering service |
| <input type="checkbox"/> TV/VCR                | <input type="checkbox"/> Room Layout      |
| <input type="checkbox"/> Microphone and podium |   |



Room Layout

### Program Evaluation

1. Name of evaluator: \_\_\_\_\_

2. Attendance for program: \_\_\_\_\_

3. Total institution cost: \$ \_\_\_\_\_

4. Total institution cost per person: \$ \_\_\_\_\_

5. Registration fee collected: \$ \_\_\_\_\_

6. Total Revenue: \$ \_\_\_\_\_

7. Did this program meet the original goals?  Y  N

Why or why not? \_\_\_\_\_

8. Did this program meet audience needs?  Y  N

Why or why not? \_\_\_\_\_

9. Where did the publicity appear? \_\_\_\_\_

Attach copies.

10. Would you suggest doing this program again?  Y  N

Why or why not? \_\_\_\_\_

11. Additional comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

## UNDERSTANDING LEARNING THEORY

The popularity of learning theories come and go, but some constants do remain. We recognize that in many ways children learn differently from adults. We understand that people retain more information when they can relate it to something familiar. We recognize that adult learners have a need to share their experiences with others. And yet, more often than not, we tend not to recognize that individual learners (whether adult or child) can have dramatically different ways of processing and accessing information.

These varied learning styles or “multiple intelligences” as they are named by noted educator Howard Gardner, unlock a wealth of information about how our learning personalities guide our experiences.

Gardner has identified eight learning styles that provide historical organizations rich opportunities to expand programming and make learning experience more inclusive. It is his conclusion that all individuals have all of these personalities, although we each have dominant learning styles that overshadow the others.

Here is a brief synopsis of the eight intelligences or learning styles.

### 1. Linguistic Intelligence

Highly verbal people who enjoy writing, reading and have good memories for places, dates, and trivia. These are the label readers and adults who enjoy interacting with others during a tour.

### 2. Logical-mathematical Intelligence

Can compute math problems quickly in their heads, enjoy logic, and take pleasure in playing strategy games such as chess and risk. Generally, they enjoy solving problems and analyzing historical data, such as statistics.

### 3. Spatial Intelligence

These individuals have good visual memory, can easily read maps, charts, and diagrams. They take pleasure in films, slides, and photographs, and feel more comfortable when they understand the layout of a building (or exhibit) and their relation to it.

### 4. Musical Intelligence

Musically talented people who enjoy playing instruments, remember melodies easily, and concentrate

better when music is playing. May in some ways be related to logical-mathematical intelligence.

### 5. Bodily-Kinesthetic Intelligence

Individuals who perform well in competitive sports, like to engage in physical activities, and learn better when mobility is not restrained. May also demonstrate skill in crafts and artwork (body as extension of the mind).

### 6. Interpersonal Intelligence

Very social individuals who enjoy learning with other people and are less comfortable in solitude. These individuals may be more apt to join group tours or become interpreters.

### 7. Intrapersonal Intelligence

Independent individuals who like to be alone to pursue projects and have a great deal of initiative. As visitors, they may be less comfortable in group tours, preferring self-guided opportunities and reflection time.

### 8. Natural Intelligence

These individuals have a keen understanding of natural systems, the way ecosystems in nature work, and are comfortable connecting information to a larger overall vision. They are more inclined to enjoy experiential exhibitions rather than those “behind glass”.

The goal in examining institutional resources is to identify those unique ways the organization can tie into audience needs and create something that is both educational and relevant—something that addresses the needs of both the organization and the visitor.

## HELPING VISITORS LEARN

Most of us wonder how much knowledge visitors to our historical societies and museums acquire through our programs. We wish we could surprise them with a quiz six months after a visit

with us to find out what kinds of information they retain and at what level. Of course, this is not something we are usually able to do. Often, we use exit evaluations instead which, while valid, test only short-term memory and not the long-term learning about which we wonder. Helping visitors learn at our sites involves more than revising tours and offering intensive programs. It requires us to assist them in making connections between the material evidence we care for (collections), the stories we draw from them (exhibitions and public programs), and their own experiences. Below are some suggestions for beginning this process.

### Understanding the motivation to learn.

The statement that “visitors learn best when engaged and motivated to learn” sounds overly simple. And yet, many of us spend more time training “front line” staff (interpreters, guides, museum teachers) to give succinct, scripted presentations rather than encouraging them to understand our visitors’ motivations for choosing us as a learning destination. In this instance, motivation means more than passing interest in a topic—it relates to an individual’s active choice to participate in an activity or program and their continued drive to learn more. Why do people choose certain types of programs over others? Why is it that an exhibition the staff considers to be a “filler” can bring in more visitors than one planned for years?

Current research reveals that an individual’s motivation for learning is related to many aspects of their life, including previous experience with educational situations (including childhood museum experiences) and the need for information to address a particular problem. Asking visitors questions about what brings them to our organization is a necessary first step in helping them learn. By understanding why visitors make a conscious choice to participate in our programs, we can ensure that our programs are addressing their needs and their motivations.

### Linking learning to prior knowledge.

Everyone who learns begins the process by relating new information to that which is already familiar. This tendency to make connections between our past experiences, current knowledge, and new information is not unique to humans, but it presents interpreters of the human experience with a wonderful gift—and a challenge. Both the gift and the challenge are the same—how to tell the stories of our community’s history in a way that draws on the prior understandings of our visitors.

With children, this tends to be easier because we have an understanding of their school curriculum, the towns, cities, or counties they hail from, and information provided by teachers or group leaders. Adults have more diverse experiences, interests, and careers, and may not be as willing to share their experiences with others. There are, however, some broader human experiences common among most adults. For example,

although our memories of childhood differ, we do remember being children. Although the illnesses we have faced are varied, we have all experienced being ill and the subsequent cultural and social traditions of healing. In linking historical information to the lives of our visitors, we provide them with a deeper understanding of the historical information and significantly increase the retention of what they learn.

### Making learning active.

Most historical organizations offer active learning experiences for children. But when it comes to adult learners, we tend to rely on traditional passive formats that rarely provide opportunities to manipulate information, either intellectually or physically. In this respect, exhibitions are often more active than traditional adult programs, using high- and low-tech manipulatives that encourage visitors to assess what they have learned, put this knowledge into a personal context, and physically reinforce intellectual information.

Creating active educational programs for adults and children can involve allowing more time for discussion and questioning. We are often so eager to impart information that questioning is relegated to hasty asides or breaks during a program. Active learning may include providing participants with opportunities to connect physically to history. For example, developing adult programs based on our current concepts of “hands-on” programs or combining passive (lecture) and active (workshop) formats. Historic sites have caught on to this, offering a wide variety of experiential programs for adults as well as children.

Developing programs that help participants learn is essential to implementing an organization’s mission. Providing this assistance is critical in not only in engaging our audiences, but in ensuring that our research and our message is retained long after the program is over.

### SEEKING PROGRAM SPONSORSHIP

For larger or long-term programs, outside funding may be required. Outside funding may come in the form of grants, foundation monies, in-kind sponsorships, and cash sponsorships. Generally, a combination of all of these is preferable to relying on one solution, but for long-term programs, sponsorships can be the

**Helping visitors learn at our sites involves more than revising tours and offering intensive programs. It requires us to assist them in making connections between the material evidence we care for (collections), the stories we draw from them (exhibitions and public programs), and their own experiences.**

best bet as foundations and government grants are not likely to fund programs long term.

Remember that seeking sponsorships is building relationships. It may take several visits before a business understands who you are and what you are doing. Think of potential sponsors as your allies in the next ten or twenty years.

## GENERAL TYPES OF PROGRAM FUNDING

### Public Grants

These grants have been the mainstay of program and exhibit support for the past thirty years. Although they are increasingly more difficult to receive, they generally place a priority on scholarship, teamwork, and community involvement. This type of funding is best perceived as “seed money” since very few public grants will fund a project for more than a few years. Generally, they will pay for speakers, printed materials, some publicity, supplies, meeting expenses, and exhibit fabrication costs.

They do not generally fund staff salaries (except consultants), capitol campaigns, food for receptions, purchasing equipment, and they may or may not pay for indirect cost (the overhead expense to keep your site operating during the project).

### Private Foundation Funds

Private foundations include everything from corporate philanthropic organizations to family-based grant agencies. They vary widely in regards to grant sizes, requirements, application procedures, and funding priorities. Private foundations tend to have very specific funding areas and many will not accept unsolicited applications. Although this may seem daunting and will require more initial groundwork for applicants, they tend to be more open about what they will fund in relation to project expenses. The best bet for approaching private foundations is to request guidelines in advance and contact the organizations about your specific project. Applicants may have to make several initial contacts before receiving approval. They tend to be very interested in getting to know applicants and their organizations before agreeing to grant proposals.

### In-Kind Sponsorships

This type of assistance provides goods or services to an organization in lieu of cash. Such services can include publicity, legal services, accounting, design work, printing, materials and supplies, catering, or ticket sales management. Contributing businesses provide these services as a way to give back to their community and in some instances receive a tax break for their donations. When approaching businesses about in-kind services, program managers should have a very clear idea about what they are doing and why as well as how the business will be helping the overall community

through their donation. Plan on having written contracts handy so both parties will understand what to expect and when. These sponsorship relationships can be long-term and build positive, healthy relationships between historical organizations and area businesses.

### Cash Sponsorship

Some businesses will contribute cash for particular programs or events, often in exchange for publicity through the event. Although amounts vary widely, requests for cash sponsorship are generally more successful for larger events and programs with a broad public appeal. For example, a new series of teacher materials or a festival may be more appealing than a small summer camp class. Again, approach businesses with a very clear understanding of the program, its goals, and how the funds will be used to contribute to the event. In this case, keeping a paper trail of what is expected and when is crucial.

**Developing programs that help participants learn is essential to implementing an organization's mission. Providing this assistance is critical in not only in engaging our audiences, but in ensuring that our research and our message is retained long after the program is over.**

## TIPS FOR BUILDING PROGRAM SPONSORSHIP

1. Know what you want, why, and who in your community can provide it.
2. Begin with the media (we often think of them last) by inviting a local television station, radio station, or newspaper (or all three) to be your “official media sponsor” for the program. Develop a relationship with local writers, learn what they are interested in, what format photos they want and where they see your site's event appearing in their media. You can provide them with access to speakers, performers, or demonstrators for exclusive interviews and advertising on printed materials.
3. Once media sponsorship is confirmed, it will be much easier to attract other local sponsors as they



can receive free advertising in local markets through the media. Other perks may include free tickets, invitations to a special pre-program luncheon, or reception with the speaker(s).

4. Deliver what you promise and make sure all sponsors feel appreciated.
5. Send thank you letters to all sponsors, no matter how small their contribution.

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## **ADDITIONAL READING**

Dierking, Lynn D. "The Family Museum Experience: Implications from Research," *Journal of Museum Education*, Spring-Summer 1989.

Eisner, Elliot W. and Stephen M. Dobbs, "Museum Education in Twenty American Art Museums." *Museum News*, December 1986.

Collins, Zipporah W. *Museums, Adults, and the Humanities: A Guide for Educational Programming* (Washington, D.C.: American Association for Museums, 1981).

Gardner, Howard. *Art Education and Human Development* (Los Angeles: The J. Paul Getty Trust, 1990).

\_\_\_\_\_. *Frames of Mind: The Theory of Multiple Intelligences* (New York: Basic Books, Inc., 1983).

Greene, Maxine. *Releasing the Imagination: Essays on Education, the Arts, and Social Change* (San Francisco: Jossey-Bass, Inc., 1995).

Rayner, Sue and Judith D. Speidel, "Learning Theories and History Museums." *History News*, July-August 1987.

Shuh, John H. "Teaching Yourself to Teach with Objects." *Journal of Education*, Volume 7, Number 4.

Stimpson, C.R. *The Humanities and the Idea of Excellence*. (New York: American Council of Learned Societies, 1984).

## Caring for Family Treasures: A Basic How-to from Storage to Donation

By Anne A. Salter

*This leaflet is suitable for distribution to donors, members, interested parties, and others seeking information on how to care for their family treasures. Within its content are the answers to many frequently asked questions that are answered daily by museum, archives, and library professionals.*

T

he responsibility of “clearing out the past” can be daunting. Whether you are faced with an entire household of keepsakes or several boxes, the task is both an emotionally draining and time consuming operation. Depending on the circumstances, you can expect the process to take as much as a year. Knowing how to make the process work to your advantage will make it an easier, challenging, and rewarding event.

It is important to maintain perspective. It took years if not generations to accumulate items. You cannot expect to sort them carefully or properly in a week. Invest some time into this process and the benefits will outweigh the aggravations.

The guidelines in this leaflet are designed to make your task easier, provide key information to assist you in avoiding errors, and encourage you to examine your “collection” carefully and thoroughly for your family’s future interest as well as the interest of the general public.

Here are quick and easy steps for organizing and sorting large collections to help you get started. Later, information on the donation process is also included. Whatever your situation, make sure you give yourself time to do the job right.

## STEP 1 DIVIDE AND CONQUER

Most collections will fall clearly into these three areas. It will be easier to evaluate your materials if you separate them into these basic categories:

- Papers, Books
- Photographs and visuals
- Objects

## STEP 2 EVALUATION

Two types of value exist in collections—historical and monetary. The popular television series *Antiques Roadshow* has made the public aware of the monetary value of materials. The same awareness has not been placed, however, on the historical value. Historical value is something's ability to improve the understanding of a period of time and its culture. Historical value means a non-monetary value of items with historical significance either now or in the future.

For a monetary value, find an appraiser. Appraisers are often able to provide expertise on an assortment of items. Local museums or historical societies may have a list of referrals. Find book or map dealers listed in the yellow pages and contact them. Always ask for references. A third option is to go to a flea market and ask dealers for referrals.

## STEP 3 DONATION

Donating items to a local museum or historical society is not only a valid option but often it is an act of altruism. Such institutions are able to continue providing quality research libraries and excellent museum collections because of willing donors. Many are not able to purchase items. You may find that making an out-right gift and taking a tax deduction is more lucrative than selling. Make sure you consult a tax expert before making this final assumption.

In any event, it is helpful for all involved to know some basics. These include the value of the item—appraised and market—and the provenance of the item.

### What is the monetary value of an item?

You should have your items appraised before you



Typical items found in a personal collection.

consider donation. This provides the donor with knowledge of the appraised, not the market, value of the materials, and also assists the receiving institution. Remember that the market value and the appraised value are often quite different. To obtain an idea of the market value, go to flea markets and see what prices are on similar items.

Avoid asking an institution how much they would offer for an item. You should already have a price based on your knowledge of the item's appraised value and the market value. Do your homework and be well informed before you make a donation.

### Provenance means “where the item came from.”

Provide as much information as you can on each item. This ensures that the receiver has documentation and history for future researchers. For example, if you know that the item belonged to your great-grandmother, provide her name, her children's names, and her parent's names and where they lived. Include some information on how she used or enjoyed the item. If you know where it was made, that is very useful information as well. Be as specific as you can, with names, locations, dates, and creators when available.

## STEP 4 KEEPING AND CARING FOR ITEMS

Deciding to keep vintage materials is a major decision requiring specific maintenance. Storage, care, and handling are considerations. Consider if donation is a better option by asking the question, “Will the collection be broken up or lost at a later date if not donated now?” Many families divide papers, correspondence, or pictures among siblings, thus destroying the continuity of materials. The best use may be to donate them in their entirety to an interested institution. Such a gift ensures that the materials remain as a collection.

### Care and handling basics

If you decide to retain the collection, consider keeping it together and providing the proper care and housing that it would have received if it had gone to a professional institution including:

- Storage in a proper atmosphere
- Storage in acid-free containers
- Adequate documentation
- Reproduction for display purposes

### Storage in a proper atmosphere

All items should be properly stored in a controlled environment. Avoid attics and basements or any rooms that are damp or have overhead pipes capable of breaking and flooding.

All images courtesy of Tom Narney



**Helpful items for storage and monitoring the environment—an array of acid free containers and folders; a mask to minimize mold and dust contact; plastic paper clips; pencil; and temperature/humidity reader.**

The best environment is one that does not go above fifty percent or below forty-five percent humidity for most mixed collections. Temperatures should not go above seventy or below sixty-eight degrees for the same reasons.

### Storage in acid-free containers

Several companies sell acid free products. They range in size and style from tissue paper to oversize boxes. Plan to invest in these products to ensure that your collection is well housed. Three companies in particular with a wide range of products are the Hollinger Corporation, University Products, and Conservation Resources.

### Adequate Documentation

For each item in your collection, especially photographs, try to document it as thoroughly as possible. Provide names, dates, and events when possible. Avoid writing on backs of photographs. Either photocopy the original and write on the copy or create a log that coordinates information on paper to a penciled number on the back of the photo. Always use pencil on photos and write lightly. Ink will eventually bleed through, causing damage. So will stickers. Photocopying will not damage pictures unless you repeatedly expose the photo to the process. Carefully handle all items that are photocopied and avoid letting someone else copy them for you unless they are a professional archivist, librarian, or curator.

### Reproduction for Display Purposes

Many families like to display their photos. Direct sunlight on photographs can slowly destroy them, causing fading and cracking. The best solution is to have copies made and display these. Another solution is to have the photos properly framed by a professional framer who provides services to a museum or archives.

## GETTING ORGANIZED

You are ready to begin sorting and storing—what next?

### The Element of Three

To keep the process of clearing an estate or household simple, apply these three activities:

- Overview
- Sorting
- Inventory

Within that process, separate items into three categories:

- Papers
- Photographs or visuals
- Objects

Most collections will fall clearly into these three areas. You can create your own inventory check list by using the samples provided for you in this leaflet.

### The Overview

You need a clear picture of the entire situation. Three basics are:

- Location
- Situation
- Condition

Knowing the location, situation, and condition for items in your care will assist you in a variety of ways. To simplify the process, consider that you are going to complete three basic steps. While conducting this exercise, draw yourself a grid such as the one below.

### *Step 1: Locations and Item Types*

Examine the general locations in which your items are housed. Go to the basement and make a list of what you find. Do the same for the attic, closets, and the rooms in the house. Remember to apply the element of three—papers, photographs, and objects. Be specific with object types. For example, list objects as furniture, clothing, jewelry, and breakables. Keep it simple.

Location	Item type	Situation	Condition	Action
Basement	Photographs Books Papers	Water heater	Temp./Humd.	Relocate
Attic	Furniture Books Papers	Extremes of temperature	Pest infested	Relocate
Closets	Clothes Books Papers Photos	Plastic bags	Potential disaster	Remove plastic
Rooms	All three types	Direct sunlight	Light damage	Close drapes



**Step 2:**  
***Assess the Conditions***

At least four conditions are threatening to items. Note threatening conditions for each item when appropriate.

- Water—potential disasters or mold and mildew
- Light—fading and brittleness
- Temperature/Humidity—mold and mildew
- Pests—eat/infest items

Location	Item type	Condition
Basement	Photographs Books	Temp./Humd.
Attic	Furniture Books	Pest infested
Closets	Clothes Books Papers Photos	Potential disaster
Rooms	All types of items	Light damage

**Step 3: Observing Situations**

Application of the following basic information will save you time and energy in the long run and help you pinpoint the most important areas in need of immediate attention.

**Storage**

The way in which materials are packed can often be an issue. For example, many people believe it is wise to put items in plastic bags. Unfortunately, this practice can be more harmful than helpful. Plastic bags have the potential for setting up a small ecological center that creates bacteria, mold, or dampness leading to other problems. Avoid placing items in plastic bags and if items are already in these, remove them as soon as possible.

**Potential Disaster**

Are items stored in direct sunlight? Is the temperature and humidity in the room extreme? Where are the items located in relation to radiators, floor vents, overhead lighting? Are they under leaking pipes? Is there evidence of pest infestation, mold, or mildew that might affect adjacent materials?

If you can answer yes to any of the questions above in relation to your collections, seek immediate solutions. Close drapes to eliminate sunlight; move infested materials away from the collection; relocate items away from potential water leaks; turn on the air conditioner.

By this time, you have gathered data that is helping to establish your total overview. Your chart should resemble the one on the right.

**WHERE DO I BEGIN?**

Once you have surveyed your house and created your overview report, you are ready to take the plunge. The rule of thumb is to begin in a spot where items are most vulnerable.

Depending on your choice, go to the section that matches your selection:

***The Basement***

**Environment**

Items stored in basements are often subject to mold and mildew. They are subject to water damage in a basement primarily from two sources: ground water entering the basement from outside and leaks from inside pipes or water heaters.

**Storage**

If you have to store items in a basement temporarily, here are some precautions you can take. First make sure that items are not resting on the basement floor. Avoiding this situation can help to prevent water damage. Use wood pallets covered with plastic. They will keep the items off the floor and the plastic will keep the items from resting directly on a wooden surface. Wooden surfaces contain acid which may migrate into materials and cause damage.

Next, consider the containers. During this phase, it is best not to invest in any high cost archival materials. These materials are only being stored temporarily—one year or less. Instead, find sturdy packing boxes with the ability to close the top. Wrap items in acid-free tissue paper because cardboard boxes are also a source of acid migration. Avoid using any type of plastic enclosures. Plastic sets up a microenvironment, much like a terrarium, that can create further damage.

**Location**

Next, decide where in the basement you can store your items away from water heaters and overhead pipes. If you cannot avoid an overhead pipe, invest in a good tarp to cover the boxes. This will help prevent a total soak-through in case of a leak. Never store anything of value near a water heater. It can be not only a source of water leaks, but also a risk for fire. Finally, check on your items weekly to evaluate the situation. Have a plan “B” for where to move materials in case of problems.

Location	Item type	Condition	Situation
Basement	Photographs Books	Temp./Humd.	Water heater
Attic	Furniture Books	Pest infested	Extremes of temperature
Closets	Clothes Books Papers Photos	Potential disaster	Plastic bags
Rooms	All types of items	Light damage	Direct sunlight



An example of a too heavily packed box. It is too heavy to carry, overloaded and cannot have a top, and the books are piled too high.



The incorrect way to store books, on their text block.



How to properly store books, spine down, in a box.

## *The Attic*

### Environment

The attic in many ways is the opposite of the basement. Instead of mold and mildew, your items are subject to heat and low humidity. This type of environment is especially punishing to photographs. Low humidity dries the chemicals used to stabilize photos—the gelatins. Prolonged storage in an attic can cause photos to crack and dry out. The same is true for wood-based items, especially furniture with veneers.

As with basements, try to limit the time items will be stored in an attic. Consider other risks such as animal intrusions—squirrels, raccoons, and insects.

### Storage

Despite containers and their make-up, many rodents can chew through and begin eating your materials. Use what resources are available to you to make your attic pest free. Try to find possible areas of intrusion and have them sealed. Have a pest control company advise you on how to keep insect destruction at a minimum.

### Location

The same principles apply with attic storage as with basement. Keep items off the floor, away from pipes, chimneys, or leaks and keep them in closed containers. If you have photographs in your collection, do not store them in the attic.

## *The Closet*

### Environment

Closets have the luxury of being located in the house proper where air-conditioning and heating create a more stable environment, preferable to attics and basements.

### Storage

Avoid storing heavily packed boxes on overhead shelves. Pulling an overloaded box down and dropping it or overloading it and moving it can permanently damage items. For any box, regardless of storage space, avoid packing it beyond your capacity to easily pick it up and move it. This is especially true for storing

books. Use more boxes and avoid creating fewer, heavier boxes that you cannot easily move. Keep items stored on shelving and off the floor. Avoid storing them under areas where you know pipes are concealed. The same rules apply as for the attic and basement—keep items off the floor, keep them in boxes that have lids, away from pipes and leaks, and never in plastic bags.

### Location

Of the three environments—basement, attic, and closet—the closet appears the most benign. Yet it is fraught with problems, often unobserved. Pipes concealed in ceilings and walls are often the source of much heartbreak for treasures stored in closets. During harsh winters when pipes freeze and break they often create water damage, especially in areas such as closets that may be positioned on an outside wall. Make sure you know the situation before you store items in closets.

## *The Garage*

Garages are often used for storage. Like basements and attics, the conditions are very poor for storage of paper-based collections, fabrics, and photos. Use the following rule of thumb if you must use a garage:

- Keep items off the floor.
- Use shelving that is wide enough to accommodate materials.
- Avoid areas with a potential for leaks.
- Make sure boxes have lids.
- Once items are on shelves, cover entire shelving unit with a tarp for extra protection.
- Remember that garages are often a security risk if not locked properly.
- Paint, fertilizer, gasoline, and other items with fumes are harmful to your treasures.

In general when storing items in any space, it is a good rule of thumb to observe the following:

- Keep items out of direct sunlight.
- Use blinds and drapes to minimize sunlight.
- Keep air conditioning and heating at a constant temperature and avoid fluctuations in the relative humidity.

- Keep items dusted.
- Vacuum the room regularly to avoid dust build up on items.
- Use facsimiles of rare items for displaying photos and letters.

## INVESTING IN YOUR COLLECTIONS

Once you have decided to keep items, the next step is investing in their long-term storage and maintenance. The most basic investment is proper containers. The type of container is important, as is the size of the container in proportion to the item. There are many resources available today that produce excellent quality products. These are listed in the resource section of the leaflet.

## GROUND RULES FOR STORAGE

Several basic rules apply when storing materials in acid-free containers. Follow these rules for the best results.

**Always use quality products.** Do not buy materials from non-archival vendors claiming to sell archival materials. Archival vendors are plentiful these days. You can choose from a number, including Hollinger, University Products, and others. Light Impressions specializes in photo products but also carries a number of items for paper- and fabric-based collections. Obtain catalogs from various vendors and shop for the best prices. Call and ask vendors if they will custom cut folders. This can save time and money.

**Buy in bulk and save money.** Find out if the vendor will sell you products in rolls. That is also an economical way to go if you have a large collection. Find a friend who is interested in buying similar products and buy in bulk. Often the more you buy, the lower the price per item.

**Always fit your folder to the container, not the item.** When storing materials in flat boxes or flat files, always cut the folder to fit the container, and not the item. This avoids items slipping inside the box container or being covered up by larger items. Uniform size allows for easy leafing through material, streamlines removal, and causes less wear and tear on materials. For example, if you are storing an oversized map, do not cut the folder to fit the map, cut it to fit the map box in which it will be stored. Label folders with the opening facing you so you can easily remove an item without having to pull out the entire folder. This is helpful with map cases and flat files.

**Use tops when available.** This will allow you to keep dust away from your collections and keep them as clean as possible. Adjust shelves, if necessary, to allow for tops on record center boxes. Failure to use box tops can result in items being vulnerable to water damage and dust.

### Store items properly (as previously outlined).

Proper storage has already been discussed. A few more suggestions to consider are these:

- Do not store items on top of each other unless protected by tops.
- Do not overload storage boxes.
- Do not allow boxes to overhang shelves. They can be tipped off or bumped into causing damage to the items within.

## PREPARING FOR LONG-TERM STORAGE

Items must have certain maintenance performed on them before they are stored. Remove paper clips and rubber bands.

Unrolling or unfolding items is paramount. You may have to flatten the materials first. This is easily accomplished with care and patience. Before starting, however, it is best to take the item to a local museum, archives, or library and get the opinion of a trained archivist or curator about the best method to use and instructions. Depending on the type of item and its condition, flattening can be accomplished through the use of archival weights or through rehydrating in a humidity chamber. However, both processes must be done carefully to avoid cracking the item, particularly with brittle photos and documents. The process can take weeks.

Simple weights can be made by using bricks wrapped in newspaper and acid-free paper. A simple humidity chamber can also be built in the home. Read some of the literature on preservation and conservation of archival materials for suggestions.

### Selecting Containers

Most paper-based collections fit well into the standard letter or legal size archival boxes. Use matching folders and fill boxes enough so the items are in an upright position, but do not over load the box. Avoid having folders slump down in a box. This situation will damage your materials and cause creasing and folding.

Always label folders in pencil. This provides an opportunity to re-cycle folders for other purposes and avoids damage from inks.



An example of how oversized items should be stored unfolded, flat, and in a proper size box that doesn't cause any creasing or pressure on the edges.



Invest in a steel-based map or flat file if your collection contains large maps or prints. Wood is attractive, but not conducive to storage of materials. This investment will provide not only the proper flat storage for these items; it will add some additional fireproofing for the collection. Avoid wooden-based storage files or those with a painted surface that has not been properly baked. If the flat file has any odor to it, do not buy it.

Congratulations. You have made the investment of a lifetime in your life's times; its photographs, letters, documents, and keepsakes. Your family history is an on-going process and proper care will ensure that family treasures can be handed down to the next generation or serve as a resource in an institution dedicated to preserving cultural heritage. Your investment in doing it right will never depreciate.

## SOURCES OF INFORMATION

### Conservation Online

[palimpsest.stanford.edu](http://palimpsest.stanford.edu)

### Northeast Document Conservation Center (NEDCC)

100 Brickstone Square  
Andover, MA 01810-1494  
978-470-1010  
Fax: 978-475-6021  
E-mail: [nedcc@nedcc.org](mailto:nedcc@nedcc.org)

### Image Permanence Institute (IPI)

Rochester Institute of Technology  
70 Lomb Memorial Drive  
Rochester, NY 14623-5604 USA  
585-475-5199 phone  
585-475-7230 fax  
email: [ipiwww@rit.edu](mailto:ipiwww@rit.edu)  
[www.rit.edu/%7E661www1/sub\\_pages/8contact.htm](http://www.rit.edu/%7E661www1/sub_pages/8contact.htm)

### The Conservation Center for Art and Historic Artifacts (CCAHA)

[www.ccaha.org](http://www.ccaha.org)

## SOURCES OF ARCHIVAL/MUSEUM SUPPLIES

### The Hollinger Corporation

[www.hollingercorp.com](http://www.hollingercorp.com)  
800-634-0491

### University Products

[www.universityproducts.com](http://www.universityproducts.com)  
800-336-4847

### Conservation Resources International

[www.conservationresources.com](http://www.conservationresources.com)  
800-634-6932

### Light Impressions

[www.lightimpressionsdirect.com](http://www.lightimpressionsdirect.com)  
800-828-6216

## OTHER SOURCES

### American Association for State and Local History

[www.aaslh.org](http://www.aaslh.org)

### American Association of Museums

[www.aam-us.org](http://www.aam-us.org)

### American Society of Appraisers

[www.appraisers.org](http://www.appraisers.org)

### Appraisers Association of America

[www.appraisersassoc.org](http://www.appraisersassoc.org)

### Society of American Archivists

[www.archivists.org](http://www.archivists.org)

Buchanan, Sally and Mia Esserman. "Preservation Perspectives: Staff and User Education." *Wilson Library Bulletin* 69 (October 1994):63-64.

Darling, Pamela W. and Wesley Boomgaarden, compilers. *Preservation Planning Program: Resource Notebook*. Expanded ed. Washington, D.C.: Association for Research Libraries Office of Management Studies, 1987.

Fox, Lisa L. *A Core Collection in Preservation*. Chicago: Association for Library Collections and Technical Services/Southeastern Library Network (SOLINET, Atlanta), 2nd ed., 1996.

Mibach, Lisa. *Collections Care: What to Do When You Can't Afford to Do Anything*. Oberlin, Ohio: Mibach & Associates, Collector conservation (also AASLH Technical Leaflet #198).

Morrow, Carolyn Clark. *The Preservation Challenge: A Guide to Preserving Library Materials*. White Plains, N.Y.: Knowledge Industry Publication, Inc., 1983.

Ogden, Sherelyn, ed. *Preservation of Library and Archival Materials: A Manual*. Andover, MA: Northeast Document Conservation Center, 3rd rev. ed., 1999.

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## Computerizing Your Collections Records

by Jan S. Ballard  
Sara Phinney Kelley  
Valerie A. Metzler  
and Barbara L. Schafer

### INTRODUCTION

**C**omputerizing your collections records is something every museum, library, historical society, archives, or manuscript repository should do in the 21st century, but not on a whim. Automation requires a lot of homework and a lot of thought from beginning to end. This technical leaflet is meant to lead you through the decision-making steps that will eventually give you all the information you ever wanted to know about your collections at your fingertips.

The authors are all associated with historical organizations—two with museum collections and two with archival collections—but have tried to make the information included here as broadly applicable as possible. Every institution has unique collections and information needs, so you will have to adapt steps based on your needs, size, and available resources. It will be up to you to decide which steps apply to you—and on what scale.

This technical leaflet is broadly divided into three sections: Planning, Choosing Software and Hardware, and Data Entry. These topics are interrelated but roughly follow each other in the automation process.

## PLANNING

The most important piece of advice we can give is to plan on paper before you ever look at software! You can learn a great deal about your collections, your records, and your collections management process that will help you choose a software system. This information will also help you implement your automation efficiently.

### Understand Your Collections

In preparation, you will need to keep several key elements in mind. First, consider your institution's overall mission. Are you a museum or a library or an archives or all or none of these? What do you collect? What do you collect primarily? This last point may be particularly relevant for your archival collections. If your institution's stated purpose is to collect objects or artifacts, you may not have a separate archival collection. For example, a museum may keep a group of wedding expense receipts associated with a wedding gown in its collection. The primary user of the receipts would be the museum's curator or collection manager who may need the receipts for research or an exhibit. Such manuscripts may properly be cataloged with the gown as documentary artifacts or they may be kept with the gown's documentation files. However, if your purpose is to collect the original papers or records of individuals, organizations, or families, you would have a separate archival collection, or manuscripts repository, that would be managed according to archival principles. Most historical societies fall into both categories and would catalog each type of collection according to the professional guidelines applied to that particular collection.

Second, remember what constitutes your collections. Three-dimensional objects? Framed works on paper? Manuscripts and documents? Photographs? Library books? Natural history specimens? Some or all of these? Collections management considerations are very different for each type of collection and will

greatly affect your automation project. The information you collect, and how you retrieve it, for each type of collection is also different.

Consider, too, the institution's collecting mission or scope. If you find yourself listing "country of origin," and your museum's mission is exclusively American art and decorative arts, what does this say about your institution's collection? Do you need to do some work on your collection itself in addition to your collections records? Having that information in an easily retrievable format might help you flag objects that do not fulfill your mission.

### Identify Database Fields

Once you understand how you approach your collections you are ready to decide how to organize the information. The first step is to brainstorm. Make a list of everything you might ever possibly want to know about an item or a record group in your collections. This list will eventually become the fields for your database(s). Ask other staff and volunteers what they might want to know. Think about what your users want to know, whether they are visitors to your galleries, schoolchildren on a museum tour, genealogists in your library, scholarly researchers, or newspaper reporters. Ask them, too. You'll be amazed—and often surprised—by what they tell you. Make sure you also think about what kinds of uses the information will ultimately have. This might include exhibit labels, exhibition catalogs, catalog cards, docent training materials, teacher guides, grant requests, finding aids, and board reports. The list is endless, and different for every institution.

Figure 1 is a sample brainstorm, taken from combined lists at workshops we presented. The participants came from a wide variety of institutions so the lists were appropriately varied. Please don't use this list as gospel, but as a jumpstart for your own brainstorming. You can look at your existing paper or computer records for ideas, too. Your list should reflect your own institution's needs; you may have some fields that no other museum would ever use or need. For example, the historic house museum operated by the Centre County Historical Society is interpreted to the period of the Thompson family. One of the fields in its collections records is a notation about association with that family. "Thompson" is not a field you would find in other institutions' records.

### Develop Protocols

Once you have decided what fields to include in your database, you will need to decide in what format the information or data will be entered into each field. To accomplish this you will need to develop protocols to maintain consistency during automation. Consistency is critical to data entry. Without it you will never reach

the full potential of your computer software.

Identify fields that need to be under authority control. Authority control standardizes vocabulary by establishing a list of preset choices for a particular field. The most common fields under authority control are object name, record type, classification, local reference field, materials, process (by which the artifact is made), maker or records generator, place made, donor name, and acquisition type. Authority control is important because it allows items related to each other to be easily retrieved when searching. For example, you might want to find collections donated by Mrs. Joan June Schmo over the years. The variants on her name may be Mrs. Joan J. Schmo, Mrs. Joe Schmo, and Mrs. Joan June Schmo. Authority control will indicate which of the variants should be used so one search will provide you with the answer.

Identify vocabularies to be used for authority controlled fields. Two types of vocabularies exist: pre-existing standardized vocabularies like *Nomenclature* or the *Art and Architecture Thesaurus*; and in-house vocabularies. Some computer software may already have authority vocabularies built in. These have already been standardized, defined and comprehensively developed. These vocabularies make your database vocabulary compatible with many other institutions'. Other standardized vocabularies include *Thesaurus of Geographic Names* and the *Union List of Artist Names*.

In-house vocabularies will need to be developed for such fields as donor name, site location, institutional department or type of collection, and any local reference fields. Work with in-house curatorial and library staff as well as local libraries and historical organizations to develop local subject terms. When designing an in-house vocabulary, decide on a standard format for making choices. Someone needs to be designated

to keep the list current and check regularly for errors. Develop an approval process for additions to the vocabulary list.

Identify fields that need to have content form-standardized, and develop standardizations. The institution needs to decide how it will consistently record abbreviations, names, dates, and measuring formats. The most common standardized fields are dimension, maker,

place made, object location, donor name, credit line, and all date fields.

For archives, it is suggested that you catalog with *Archives, Personal Papers and Manuscripts* (APPM), regardless of whether your system is based on MARC (Machine Readable Catalog). The APPM manual is indispensable for consistently describing titles (particularly on the many collections for which no title appears on the materials), dates (especially guesstimates), and volume. For example, you are cataloguing a small needlework picture made by Elsie Threads, dated August 1, 1865. The variants of the date are August 1, 1865; 1 August 1865 (the European/military convention that many archivists prefer); Aug. 1, 1865; 08/01/65;

08/01/1865; 01/08/1865; 1865/08/01. You will need to decide which variant will be used for all dates.

Develop a method to handle unnumbered artifacts. Many institutions already have a system in place for handling unnumbered artifacts. If yours does not, you might consider developing such a system. As you process the collections you will find objects with records, unnumbered objects with no records, and records with no objects. Once you have a sufficient number of records entered the database can help reconcile unclaimed collection records with their objects or collection. Reconciliation must be done carefully and be fully documented.

As you develop your protocols, you should consider what type of metadata standards you want your software to have. Metadata is the structure of the comput-

Figure 1: Sample Field Brainstorm

Accession number	Manufacturer
Control number	Author
Previous number	Creator
Record group number	Maker's mark/signature
Object term	Place of origin
Common name	Publisher
Title	Date
Nomenclature classification, category, category number	Date span/range of dates
Donor	Format
Donor information	Materials
Credit line	Associated objects or collections
Date of receipt	Condition
Date of accession	Damage report
Type of accession	Conservation needs
Proof of accession	Conservation history
Physical location	Exhibit history
Temporary location	Exhibit flags/possible exhibit uses
Folder name	References or bibliography
Provenance (this has slightly different meanings in archives and museums; make sure you know which you mean)	Photograph of item?
Historical note	Published references
Description	Subjects (this can be a more specific list, if desired)
Archival level	Appraisal
Colors	Type of appraisal
Size/dimensions	Appraiser name
Volume	Appraisal date
Frame information	Name of initial cataloger
Maker	Date of initial cataloging
	Name/date of update in computer

erized fields. Organizations such as the Getty Information Institute have been working on creating standards across professions. Examples of metadata standards are MARC and Dublin Core. Metadata can be quite confusing but there are published and Internet sources to help. For history museums with an archive or library collection, MARC should be considered. Use of MARC facilitates the exchange of information among manuscript repositories as well as with national bibliographic utilities, making your collections accessible to the public.

### Identify Database Structure

Once you have identified the type of collections you have—keeping in mind that often the information gathered is different for each—you have two choices for how that information is recorded into a database(s). One choice is to have one complete database of everything. In that case, you should carefully define your fields and just leave blank the fields that do not pertain to a particular collection. This has advantages, especially for public searches of your collections, although it may make for an unwieldy database. The other method is to maintain a separate database for each type of collection. That

makes recordkeeping easy and can reduce confusion about what to record. If you choose separate databases, check to see how the software you choose interchanges information between databases. Most collections software packages use a relational database system, which is recommended. This means that each type of collection is recorded in a separate database but information in common fields are linked. So, when donor information is entered into an archival record in the archival database it can be easily retrieved and placed into donor fields in the object database. All the databases will use the same authority control lists and can usually allow a universal search. In a non-relational database no fields are linked and the database information cannot be interchanged. This can cost you time because each time donor information is needed in a different database it has to be typed in, and each database will have to be searched separately when seeking information. The method you choose depends on your institution's collections, needs, and resources.

### How Will You Use the Information?

You're almost ready to choose the software. First, however, think again about those end-users. What kinds

of reports do you want to be able to generate? Do you want them to come directly from the database, or will you want to be able to tweak them each time? This is a good time to have another brainstorm session. Figure 2 is a list of possible reports for your consideration. Again, this list will be distinctive for your institution. You may want to prioritize your final list to make sure that the software you are considering can generate the reports you find most necessary. For example, if you want catalog cards, you should make certain that the system generates and prints both shelf-list cards and subject card sets. Since manuscript-cataloging entries tend to be longer than those for library books, the system should be able to produce several cards per record.

Secondly, consider who will be using the system. If you have trained computer staff working with your automated system, you can probably do more than if your data entry volunteers have never touched a keyboard before. If the person who is expected to provide support for the software has a fear of computer manuals, take this into consideration when choosing the software. You should also think about whether to make some of your data available to the public. For example, do you want your donor information available? Public access to computer-based

retrieval allows researchers and visitors to undertake more comprehensive and sophisticated searches. Such a system would need to have a user-friendly interface and provide different levels of access and security for staff and the public. Researchers will need to be able to keep and develop their search results on screen, no matter how lengthy or complex the search becomes, and be able to print their results. Finally, consider the requirements and possibilities of your catalog being placed on the World Wide Web. If this might be desirable now or in the future, make sure the software you choose has straight-to-the-Web capability.

Figure 2: Sample Reports Brainstorm

Deed of gift	Exhibit list
Thank-you letter	Exhibit labels
Loan form	Shelf list
Donor lists	Catalog cards
Box/contents list	Room list
Scope of collections notes	Inventory
End-of-year gift list	Subject indices
Condition report	Insurance information

retrieval allows researchers and visitors to undertake more comprehensive and sophisticated searches. Such a system would need to have a user-friendly interface and provide different levels of access and security for staff and the public. Researchers will need to be able to keep and develop their search results on screen, no matter how lengthy or complex the search becomes, and be able to print their results. Finally, consider the requirements and possibilities of your catalog being placed on the World Wide Web. If this might be desirable now or in the future, make sure the software you choose has straight-to-the-Web capability.

## CHOOSING SOFTWARE AND HARDWARE

OK, now you can start software shopping. Choosing your software and your hardware are interrelated with making decisions about your collections and collections management. As each software program is a little different, you can find one—or make one—that fits your needs very closely, but you need to do some thinking about your collections before you know what those

needs are. And, if possible, you should choose your software before your hardware. If the program you like best works on a Macintosh, Unix, or Windows platform, your computer must have that operating system. If you already have a computer, or one is being donated to you, your choices may be a little more limited. Just make sure that once you choose your software program, that the computer you buy will be powerful enough to run it. Have at least twice the memory and hard disk space you think you need.

A good way to investigate software is to order the vendor's demonstration disc and try it out yourself. Check with institutions which have collections and staff similar to yours. You might try your state museum association to see if they keep a list of institutions using different programs. You can also check professional listservs. Nothing beats a frank, hands-on discussion with a fellow professional whose priority is efficient management rather than a vendor whose priority is sales. While the vendor may be a wealth of information about the software, sometimes that much information can be overwhelming and intimidating. You need to feel free to ask the "stupid" questions, the personal questions.

If you are starting from scratch it is best to select your hardware on the basis of your favorite software. Coming up with the

favorite is all up to you. Every package currently available has its advantages and disadvantages, and there are questions you need to ask based on your particular institution. Is cost a priority? Do you need to put your records in MARC format or any other protocol? Do you need to have your database on an internal network? On the Internet? Does the software support the calendar date format you prefer? Is there room for free-form narrative? Is that narrative searchable? Can you enter repetitive information automatically? Can you import (transfer) existing computer records? Can you add fields or reports later? If you need or want a thumbnail image of your photographs or artwork on your database, will the software support images?

There are two types of software packages—collections software and off-the-shelf software. Some currently available collections packages are Minaret, PastPerfect, and Re:discovery. These come with authority control fields and some provide easy access to vocabularies such as *Nomenclature*. Another choice

is to customize an off-the-shelf database program. Perhaps you have to use software your institution's administrative office is using. Make sure that an adaptation of this software is actually as cost-effective as purchasing ready-made collections software. What may appear inexpensive now may end up costing long hours or may not be worth the trouble in terms of effectiveness. Unfortunately, a collections database made just for Macintosh computers is not available. One off-the-shelf database program that does work well for Macintosh users is FileMaker Pro. A package for Windows users to consider is Access. Meanwhile, ask the same questions about capabilities of your Macintosh or off-the-shelf PC software as above.

After you've purchased your software and hardware, install the software and begin working with it right away. The brainstorming work you've done is fresh in your mind, and your customer service contract is ticking. Those contracts for free help often last only a limited time so you should take advantage of it while you

can. Get their help while you're setting up your system. You will probably soon be on a first-name basis with customer service!

## DATA ENTRY

Once your system is set up the way you like it (or think you like it—you will make changes as you go), you can

begin entering your data. There are a number of ways to accomplish data entry, each with its own advantages and disadvantages depending on the current state of your collections management. Consistency in data entry is one thing that can be achieved no matter the size, expertise, or financial resources of a museum.

### Locate and Evaluate Existing Information

There are several methods for entering your data, depending on your current record keeping system. One method is to enter your data directly from existing paper records. Figure 3 lists some of the places you might find that data. Another option is to transfer already computerized records directly into the new program. Do you have old, useful computer records to import? Perhaps you've inherited an old computer catalog/finding aid. Is it useable or too idiosyncratic and cumbersome? You will need to talk with your new software company to find out if importing is possible, and if so, how. The third method is to enter directly from a visual examination of the col-

Figure 3: Places to find data

Catalog cards	Exhibit labels or catalogs
Catalog sheets	Proceedings
Deed of gift	Computer records
Thank-you letters	Past/Current
Inventory records	staff/volunteers
Shelf lists	Local historians
Appraisals	Oral histories
Newsletters	Dealers
Board or committee minutes	Collectors
Photographs	Reference materials
Condition/conservation reports	Archives

lections. You could also do a paper inventory and then enter that information. You'll be more likely to get a more accurate database if you can combine all three methods. A pre-existing record may contain wrong, out-of-date, or incomplete information. Previously automated data may also have been inaccurate, or may not transfer smoothly. A visual examination of the object can answer a lot of questions and verify the accuracy of the records.

Decide which information is accurate and which needs to be cleaned up. As you examine existing records you will learn who were good and bad cataloguers and researchers in the past. Some information may be incorrectly spelled or may be organized by old *Nomenclature* classifications. Do you have faith in the accuracy of your records? Keep a list of questionable catalogue data and investigate it as part of your routine. If you feel any data is incorrect, do not enter it into the database or enter it with a question mark. Do not keep the errors alive. If you feel data can be cleaned up, when will clean-up occur? Before, during, or after data entry?

Expect that some manuscripts will need to be reprocessed, and museum collections may need to be reclassified. In cases where the provenance of a manuscript collection has been lost, materials believed to have been created or collected by the same person or organization should be *carefully* grouped together. The cataloging record should clearly note that the collection was artificially created.

### **Test and Evaluate Procedures**

Decide how to begin the data entry phase. When choosing how to begin, several factors should be considered including your institution's mission, the collections that get the most use, the least used collections, or even what your next exhibit will be. Some institutions choose to enter all the information that can be gathered about an object or record group all at once. Some choose to input the information in several passes, especially if resources are limited.

There are advantages to the several-pass method. If you want to be able to use the system right away for collections management, you can enter the most basic data for the whole (or most of the) collection and then go back and enter the other supporting information. This would allow you to print a box list or find all the items of a particular material or classification even if you couldn't instantly look up maker, appraisal information, or proper names. If you have incomplete records, it wouldn't be possible to fill in all the fields. Enter what you can from each source and eventually you can fill in the blanks. Your data entry staff may not be familiar with the collections, with museum or archives terms, or your particular way of keeping records. The basic information—tracking numbers, location, source, basic description, and classification—can be made easy to

find and transcribe, often more so than subject, provenance, or condition information. Having the basic information available can also help you consolidate like materials from disparate storage locations.

To decide, consider what you want to achieve at this early stage of the process. Do you want help in exhibit preparation? Do you want to make a particular collection or collections immediately available for researchers? Do you hope to examine an unknown part of the collection? Some museums start with the most "unimportant" or least used collection in order to work the bugs out of the system. Whatever approach you use, begin where it is going to be the most helpful to your staff and project volunteers. This project may take several years and many hours. Seeing the positive outcome of computerization early in the project can help sustain morale during the long days.

The catalog record is the main data entry form. It contains fields that hold the descriptive, historical, and documentary information of an object. The person supervising the project should catalog at least ten different objects to test out the catalog record. Even though others may be doing the cataloging or the data entry, the supervisor will get a lot of questions and will need to understand the ins and outs of the process.

Develop a procedures manual. It should contain: 1) a listing of field names and what information should be contained in each one, including which fields are governed by authority control; 2) any adaptations or customizations of standard or default fields, such as changes to the MARC fields or redefinition of pre-assigned field names; 3) the standardization decisions that have been made for fields such as abbreviations, measurements, or dates; 4) decisions governing special circumstances (e.g., should medals and ribbons accessioned with a personal collection of military papers be cataloged in the museum's or archive's database?). Jot down rules and exceptions to rules as you go; don't keep them in your head.

Once the manual is written, select at least one other person to fill out the catalog record using the procedures manual. This will help evaluate how well the manual is written and what directions need to be clarified. Read over completed records to see if the data was entered as you expected. If not, you may need to make other changes to the manual. No matter how well you plan the catalog record and procedures manual, they will probably need to be updated several times during the project.

This project will probably be carried out by a combination of volunteers and staff who have varied experience working with museum or archival collections and computers. Make sure everyone—including the supervisor—is comfortable and happy with his or her assignment. Remember that people may enjoy an assignment but not be good at it. The supervisor will learn everyone's weaknesses and strengths and should adjust

assignments accordingly. Error-prone individuals should be replaced if they cannot improve. The supervisor will be able to divide project personnel into three categories:

- *Paper catalogers*—Individuals who are good at working with the objects but are not comfortable on the computer. They can record information onto a paper catalog sheet.
- *Data entry people*—People who are good at working on computers. They will enter the information into the database.
- *Computer catalogers*—They are good, comfortable with both aspects of the project, and are well trained in both cataloging and data entry.

Everyone can be so excited and anxious to begin the project that training can be rushed. Take the time to train correctly. Accuracy and consistency are keys to a successful computerization project. Make sure everyone knows why you are doing this project and why accuracy and consistency are important. Bad training will lead to time-consuming problems later.

Since many people may be working on the project at different times, you will need to develop a process for tracking the work. One simple way is to quickly inventory the box, shelving unit, or room before cataloging; items can be checked off as they are cataloged and entered into the system. If your data entry is being done directly from previously created paper records or computer records, you will need to develop some mechanism, such as a log sheet, for each person to record his or her progress through those records.

Throughout this project the supervisor will need to proofread and check all catalog records. This can be extremely time-consuming but is critical to the project. Certain fields will be critical access points into the collection when performing searches and will need to be closely checked. These fields include donor name, dates, object name, classification, place made, maker, and provenance. Fields such as description, condition, and conservation could be proofread. Authority-controlled fields will also need to be checked for errors periodically. Creating reports helps do this. The frequency depends on the amount of data being entered. The more data being entered, the more often the lists need to be checked.

Perform various searches and indexing to see if data is being entered correctly and if software is meeting expectations. This should be done throughout the process at various intervals, but it should definitely be done several times during the duration of your service contract. Problems should be solved immediately.

### Backup Your Database

This is probably the most critical piece of advice you will hear: BACK UP YOUR DATA! Establish a schedule for regular backups. The database(s) should be backed up at least weekly onto at least two different

diskettes, CDs, tapes, Zip disks, etc. One backup copy should be kept on-site and the other off-site. Always date the backup. Don't save the current backup over the previous backup just in case the current backup has been corrupted.

## CONCLUSION

After you have entered a large portion of your collection records, you will reach a plateau where fewer changes or additions need to be made to protocol, vocabularies, and procedures. Be aware, however, that updating will never stop completely because the database will never be static. As long as the institution is accepting new collections and researching its collections, the database will continually be edited. It is important to establish and follow procedures to update the database, the procedures manual, and vocabularies, while maintaining consistency. This truly is a never-ending job, but well worth the information you can now easily obtain from your database. *Good Luck!*

*This technical leaflet was adapted from "You Bought the Software—Now What?: Computerizing Your Collections Records," a workshop presented as part of an IMLS Professional Services Program grant to the Pennsylvania Federation of Museums and Historical Organizations, Rhonda Newton, Project Manager. The Institute of Museum and Library Services is a federal agency that fosters lifelong learning.*

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## RESOURCE LIST

American Library Association. *Anglo-American Cataloguing Rules*, 2nd ed., (AACR2). (Chicago, IL: American Library Association, 1988).

Baca, Murtha, ed. *Introduction to Metadata Pathways to Digital Information* (Los Angeles, CA: Getty Information Institute, 1984).

Bellardo, Lewis J. and Lady, Lynn. *A Glossary for archivists, manuscript curators, and records managers*. (Chicago, IL: Society of American Archivists, 1992).



Blackaby, James R., Green, Patricia, and the Nomenclature Committee. *The Revised Nomenclature for Museum Cataloging: A Revised and Expanded Version of Robert G. Chenhall's System for Classifying Man-Made Objects*. (Walnut Creek, CA: AltaMira Press, 1988).

Buck, Rebecca A. and Gilmore, Jean Allmore, eds. *The New Museum Registration Methods*. (Washington, DC: American Association of Museums, 1998).

Carmichael, David W. *Organizing Archival Records: A Practical Method of Arrangement and Description for Small Archives*. (Harrisburg, PA: Pennsylvania Historical and Museum Commission, 1993).

Ellis, Judith, ed. *Keeping Archives*. (Sydney, Australia: The Australian Society of Archivists, Inc., 1989).

Hensen, Steve L. *Archives, Personal Papers, and Manuscripts: A Cataloging Manual for Archival Repositories, Historical Societies, and Manuscript Libraries*. (APPM) (Chicago, IL: Society of American Archivists, 1989).

Hunter, Gregory S. *Developing and Maintaining Practical Archives*. (New York, NY: Neal-Schuman Publishers, Inc., 1997).

Lanzi, Elisa. *Introduction to Vocabularies Enhancing the Access to Cultural Heritage Information*. (Los Angeles, CA: Getty Information Institute, 1998).

Miller, Frederic M. *Arranging and Describing Archives and Manuscripts*. (Chicago, IL: Society of American Archivists, 1990).

Reibel, Daniel B. *Registration Methods for the Small Museum*, 3rd ed. (Walnut Creek, CA: AltaMira Press, 1997).

\_\_\_\_\_. "In Defense of Nomenclature on the Eve of its Twentieth Birthday," *Mid-Atlantic Association of Museums Courier*. (Newark, DE: Mid-Atlantic Association of Museums, September 1998), pp. 13-14.

Stuckert, Caroline M. *Cataloging from Scratch: A Manual of Cataloging Undocumented Collections in Small Museums*. (Havertown, PA: MACC Associates, Inc. 1991).

## Collections Care: What to Do When You Can't Afford To Do Anything

# W

BY LISA MIBACH

We're in hard times for museums. Although collections preservation is increasingly being seen as a national priority, and Federal funding programs which support collections care have increased, local funding has diminished drastically for many institutions, often with serious consequences both for museum staff and for collections care.

Hard times can mean hard choices. Perhaps the hardest choice facing museums now is finding ways to put money and staff energy into exhibits and public programs to keep attendance up, while still finding the time and money to take care of the collections which are the reason for the museum's existence.

When time is scarce, we have to find ways to use it to provide the greatest good for the collections as a whole. Improving collections care requires planning, inventiveness, commitment, and considerable effort; it is easy to fall prey to “displacement activities”, and find ourselves shining the silver, or taking home the christening dress to bleach and starch, because these activities give us a feeling of having accomplished something quickly.

## NEW LAMPS FOR OLD

It is true that some interpretive uses may require an “as-new” appearance: for example, a weapon in active military use was kept shiny because it was military practice to keep troops busy with cleaning and polishing (as well as keeping the weapons in reliable working order). However, most historic objects are valuable because of their age, and don’t need to look new. In most cases, the “condition of last use” or the appearance of “old but cared for” is more appropriate. Artifacts are actually non-written historical documents, and the specific history of the piece and the technological information contained in it can be destroyed by overzealous cleaning. In addition, most objects are not as strong as they once were, and cleaning methods appropriate for new things may cause deterioration: textiles fibers have been weakened by light and washing, and intergranular corrosion in metals may cause the object to crack if strong cleaners are used.

## SO WHERE DO WE BEGIN?

As in medicine, the first goal should be to “do no harm”: to prevent damage rather than trying to correct it, and to stabilize physical condition rather than to improve cosmetic appearance.

Some of what we do to prevent damage to collections does require money, for example for acid-free storage materials; but in most cases one can begin with materials obtained by contribution (that tax receipt is a powerful tool!), upgrading them as funds become available. Preferred materials will be discussed below, even though they may require supplementary funding, because knowing where you are going is an important part of starting.

The first step is to realize how many resources we do have, even if staff are in short supply. Most collections care projects can be broken down into smaller units which can be accomplished by groups of colleagues or by volunteers, although an overall Plan is necessary in order to develop smaller projects which will fit together in a meaningful way. Heritage institutions know, better than most, how people have coped in hard times past, and we can adapt those techniques to our needs today. For example, although the number of volunteers available to do storage upgrade projects has diminished, “barn-raising” provides a model for “storage parties”, in which staff from neighboring museums can help each other on a day when the museums are closed, to vacuum, dust, and re-house artifacts. This puts an encouraging dent in an otherwise overwhelming project, while pooling ideas and supplies, and maybe even having fun.

Supplies, too, can be had inexpensively: of course acid-free, archival quality boxes are best for storage, but if these cannot be acquired immediately, artifacts can be temporarily stored on paper-covered shelves under fitted dustcovers pieced together from old sheets; other objects can be placed carefully in labeled cardboard boxes, lined first with heavy polyethylene sheeting or aluminum foil, and then with well-washed white cotton bath towels or sheets donated by a local hotel. This is preferable to having things on the floor in an inaccessible heap, vulnerable to floods and insects.

Information comes least expensively of all: the appended bibliography provides the specific information you will need for the care of different types of materials, for preparing plans for emergency preparedness and for long range preventive upgrading, for regular collections maintenance, and for grant applications.

Many of these books and articles are available on loan from local heritage associations. Those useful for frequent reference might be funded by a grant or by an astute donor. Heritage associations also provide workshops, which may include specialty advice from a conservator or environmental engineer, or may focus on sharing successful ideas within the professional community. Either way, the networks of resources built at these workshops are an important addition to the technical information provided.

The Campbell Center, in Mt. Carroll, Illinois, provides an excellent course in the general care of collections, as well as courses focusing on the needs of special materials such as photographs. Write for a catalogue to: Mary Wood Lee, Director, Sawyer House, Campbell Center, Mt. Carroll, IL 61503 (815-244-1173).

It is most helpful to have the advice of a specialist who can point out problem areas and help to determine priorities to fit your situation. The Conservation Assessment Program, funded by the Institute of Museum and Library Services, of the National Institute for Conservation (3299 K St NW, Suite 403, Washington DC 20007; 202-625-1495) provides grants on a first come, first serve basis, which pay the fees for an on-site visit and report by a conservator, and by a preservation architect for historic buildings.

The American Institute for Conservation of Historic and Artistic Works (AIC), Suite 340, 1400 16th St NW, Washington, DC 20036, (202-232-6636) can provide a list of members (which includes interested Associates as well as Professional Associates and Fellows) by specialty and by geographical region. Specify the largest region possible (or none) as some specialties may be scarce outside the coastal areas.

## WHAT YOU CAN DO ON YOUR OWN

### The Building Structure

You can start with a careful inspection of the physical structure of your building, taking account of past problems (leaks, flooding basements). Important elements are the roof, gutters and downspouts (where do they drain? directly into the foundation?), cracks in the walls, moisture penetration from deteriorated mortar or

sandblasting, and the drainage on the site.

Eventually you may need the services of a structural engineer (one experienced with historic buildings, if your institution is in one) to advise on repair priorities and costs, but you can begin to assemble information and record changes that will justify the expenditure for professional help, and make the engineer's inspection quicker. If you do not have a written building maintenance plan, this is the time to develop one.

### Controlling the Environment

Mechanical systems to heat, ventilate, and cool the environment are desirable, if they are designed, to maintain a constant relative humidity, rather than only for human comfort, as in office systems. When museum standards are not taken into design consideration, office or residential systems may actually cause damage. A system compatible with collection needs may not cost much more; for this reason it is advisable to seek initial design advice from an engineer with experience in environmental controls in museums and historic houses.

### Microclimates

When it is not possible to control the environment in an entire building to museum standards, humidity-sensitive objects (for example, those made of organic materials) can be kept in enclosed spaces such as display cases or storage cabinets or boxes, where environmental changes can be controlled more easily. It is advisable to seek the advice of a conservator experienced in environmental issues to decide how best to adapt this concept for your institution.

### Humidity-Buffering Materials

Although extreme levels of relative humidity beyond recommended norms will permanently affect artifacts, by far the greatest damage is caused by sudden changes of more than 10 % within a few hours. If external changes can be slowed down before they reach the collections, damage will be minimized.

This can be achieved by enclosing or wrapping artifacts with humidity-buffering materials: silica gel is perhaps the best-known example, but natural organic materials such as paper, cloth, and cardboard, also absorb excess humidity and release it slowly, slowing the environmental changes around the artifact. (If we are not to replace one type of damage with another, it is essential that these materials be free of acids and other undesirable volatile materials either inherent or added during manufacture. For this reason, wood is not recommended as a buffering material.)

Examples of recommended humidity-buffering materials include acid-free tissue (preferably "non-buffered", which in this case means without the addition of alkaline substances to counteract acidity), washed linen or unbleached cotton muslin, washed old white sheets and towels, acid-free folder stock, acid-free mat board, and acid-free corrugated cardboard.

### "Box Within A Box" I

In designing a passive humidity-buffering microclimate (one which controls changes in relative humidity by means of its innate physical properties, rather than through the use of mechanical HVAC control systems), it is helpful to use the concept of "a box within a box". In this concept, one thinks of the building structure as the first "box", or protective enclosure, the storage room or gallery as the second "box", a display case or storage cabinet or dust-cover enclosed storage rack as the third, a storage box or container as the fourth, and humidity-buffering wrappings or case lining materials as the fifth. Each of these "boxes" is a line of defense against damaging environmental fluctuations.

When it is not possible to control the environment in an entire building to museum standards, humidity-sensitive objects can be kept in enclosed spaces such as display cases or storage cabinets or boxes, where environmental changes can be controlled more easily.

### Monitoring

A recording hygrothermograph is useful (and expensive, but grant-fundable) because it automatically records the amount and timing of the fluctuations in relative humidity which are of concern; the shape of the curves produced on the machine's chart can also be diagnostic to an HVAC engineer in determining the adequacy and condition of your equipment. Two sources are: Art Preservation Services, 253 East 78th Street, New York, NY 10021 (212-794-9234) or the four-speed unit #08368-60 from Cole Parmer (1-800-323-4340).

Each time a chart is changed, the machine should be checked for calibration with a battery operated psychrometer (equivalent to the Cole

Parmer model N-03312-20); the correct time, RH, and reasons for any unusual events (for example: "thunderstorm" or "school tour" or "rental wedding") should be noted on the chart.

The battery-operated psychrometer should also be used to make spot checks of individual areas (preferably noted on a photocopied floor-plan) in the same spot in the early morning, and again late in the afternoon, to determine the effect heat gain has on relative humidity, and to acquaint staff with areas of environmental extremes to avoid in designing exhibits. Anomalies may also indicate problems with the building structure which should be further investigated by a structural engineer.

## Storage

Good storage is secure, clean, dry, and insect-free, with a stable environment, and no internal pollutants.

The chemical stability of all the materials used around collection materials is of critical importance to the preservation of those objects. Although some inexpensive substitutes for specially manufactured archival materials can be used (for example, old washed white bath towels instead of silica gel as a humidity-buffering material), it is generally preferable to seek grant funding so that the work involved in a re-housing project need be done only once.

Until archival quality materials can be obtained, one may begin with careful use of inexpensive materials, with a barrier layer (Mylar Type D, or aluminum foil with a cotton cover, or Marvel-Seal #1311) between the objects and the acidic material, and then upgrade later on. However, in high relative humidities, acidic materials can be released as gaseous pollutants (noticeable from their odor) into the air surrounding the objects, so this situation should not be allowed to continue over the long term.

Examples of safe materials for storage:

- polyethylene (for example clear sheeting, some slide storage pages, or Dow Ethafoam—check with the manufacturer to get a product that has minimal manufacturing additives, such as “slip agents”; dry-cleaners’ bags are not recommended)
- polypropylene (for example Microfoam, or some slide storage pages)
- polystyrene (for example, clear storage boxes)
- polyester (for example as fiberfill, or Dupont virgin Mylar Type D sheet)

Examples of materials which should not be used:

- cardboard which is not manufactured to archival standards
- tissue paper which is not manufactured to archival standards
- felt or colored fabrics which have dyes or chemicals introduced during manufacture
- poly(vinyl chloride) (VINYL) whether as sheet material, photo enclosures, or solid pipe
- plywood, masonite, or fiberboard (some storage units may be retrofitted by sealing the exposed surfaces with a metal-polyethylene film material such as Marvel-Seal 1311)

Structural plywood panels trademarked by the American Plywood Association (APA) are reported to be made with phenol resin, not urea resin, which means that they will outgas little formaldehyde. However, the acidic gases from the wood itself must still be sealed with a barrier sheet; no liquid sealants are known as this time which have been proven in practice to be both effective and inexpensive.

As reported by Miles in *Wood Coatings for Display and Storage Cases* (see bibliography), neither shellac nor polyurethane is an effective barrier coating for wood or wood by-product materials used around collections materials, while oil-modified coatings (alkyd paints) actually cause corrosion. Two component epoxy

and some moisture-cure urethanes show promise, but tend to be expensive.

Hence the recommendation for the use of Marvel-Seal, since this is used in the construction industry as a vapor barrier, and it may be possible to obtain remnants from building projects.

The selection of storage furniture is complex, involving the evaluation of risk variables and the assistance of a conservator is recommended. For closed cabinets, avoid “baked enamel” coatings, as these are usually alkyd paints which can cause corrosion and possible textile fiber damage; select “powder coatings” instead. Open shelving should be of industrial strength; old units will probably have fewer volatiles than new shelving, so the solicitation of donated shelving from downsizing industries is recommended.

## STORAGE QUESTIONS YOU’VE RAISED ACID FREE BOXES

**Q.** *Should I use buffered boxes or not?*

**A.** Buffered paper materials have an alkaline substance added (usually calcium carbonate) to neutralize any residual acid from manufacturing, and to keep them from absorbing acid from the environment around them.

Concern has been raised that alkaline residues could possibly react with materials made from proteins (wool, hair, leather, some kinds of historic photographs). This a legitimate concern, but unfortunately the only boxes which are both acid-free and non-buffered also tend to be extremely expensive, and will probably be used only for extremely important artifacts. (Available from Conservation Resources, 1-800-634-6932.) The most reasonable solution seems to be to use the best quality box you can afford, and to store protein-based materials separately in acid-neutral materials; professional advice is recommended.

Please remember that acid-free tissue is not a barrier to acid migration: this requires Mylar D or Marvel-Seal.

**Q.** *How can I tell if the boxes have an alkaline buffer?*

**A.** Sometimes only with difficulty; look for the designation “pH 8.5” which indicates that alkaline material has been added; most suppliers of archival materials include a description of their manufacturing specifications somewhere in the catalogue, which you can find if you are persistent.

**Q.** *What is the shelf life of acid-free boxes and tissue?*

**A.** This depends on the quality of the air around them. If the boxes are sealed in a powder-coated storage cabinet, in a room free of wood products, in an area with pollution-free air, you can expect years of life; on the other hand, a roll of acid-free tissue stored on a plywood shelf next to acidic cardboard boxes in a polluted urban environment may absorb acidic gases into the outer layers within a year.

**Q.** *To bag or not to bag?*

**A.** It depends what you are protecting your collection

from. If you are downwind from an iron foundry, or if you have recurring insect infestations, these may be considered greater hazards than contamination by plasticizers and manufacturing additives (see Williams, *Stable Materials for Use in Storage*), and the possibility of condensation during power failures.

If you can use archival quality polyethylene or polypropylene, you will reduce the hazard, and if you wrap the object first in acid-free tissue, you will avoid the danger of water staining from condensation, even though you lose visibility.

**Q.** *But plastic is plastic, right?*

**A.** Wrong. Many plastic materials may be manufactured with additives to facilitate handling (slip agents and anti-stats) or to extend shelf life. For example, some dry cleaners' bags were observed to turn white fabric yellow: this turned out to be due to BHT added to the polyethylene. It is preferable to choose archival quality from specialized suppliers, and leave the Baggies for lunches.

### **A Little Support**

When deciding on how to store or display an object, it is important to consider the "natural position of rest" of the object, in order to determine whether it needs some form of support or padding.

The "box" concept helped us to decide on how many enclosures are needed to protect the object from the environment, by conceptualizing from large to small. In order to design supports, we must reverse the process and think from the object out:

Does the object need padding to prevent abrasion or vibration?

Does it need a support to prevent sagging or to hold it in place?

Is a box or case needed for support or microclimate enclosure?

How big does the container need to be to contain the object and padding/support, without crowding or folding?

How will this container best fit in the cabinet or on the shelf to provide easy access?

### **Shedding Some Light...**

By now everyone should be able to chant in unison, "5-10-15 foot candles", so this topic will be left to the specialized discussions in the literature, except to note that one can see quite well at low levels, providing that the visitor has been led gradually from bright outside areas and windows to lower light levels, and that even, wall-washer illumination is used rather than bright spots and dark shadows. See the full discussion in Thomson, *The Museum Environment*, a copy of which should be in

every museum. The lux or footcandle light meter is a useful museum tool, as it is difficult to evaluate light levels by eye; inexpensive models may be obtained from Edmund Scientific Company (Lutron LX-101 Lux Meter), 101 E. Gloucester Pike, Barrington NJ 08007-1380 (609-547-8880); or from ExTech Instruments Corp (model AC 401025 Foot Candle/Lux Meter), 335 Bear Hill Road, Waltham MA 02154 (617-890-7440).

### **Handling**

A good resource, such as *The Care and Handling of Art Objects* by Marjorie Shelley, should be read by each person handling collections, since careless handling is the second greatest cause of damage to museum collections.

Receiving and workshop areas should be kept clear of obstructions, with clean padded tables for receipt and inspection of incoming material.

Mobile racks or shelving can be used in temporary storage areas to maximize use of space, prevent accidents, and help organize workflow. The wheeled chromed-wire racks used for restaurant food storage are excellent for this if the shelves are padded with a layer of microfoam. Zipped nylon dust covers are available, which provide a neat appearance, and protect from dust and curious fingers.

Cafeteria tray carts are more compact and useful for moving smaller items, and are acceptable as long as objects are not left on the plastic trays longer than a few days. Baker's carts with aluminum trays (to be padded with microfoam) offer slightly larger dimensions and materials which are chemically more stable. Many of these items can be donated or acquired from restaurants going out of business.

**Good storage is secure, clean, dry, and insect-free, with a stable environment, and no internal pollutants. The chemical stability of all the materials used around collection materials is of critical importance to the preservation of those objects.**

### **Pests**

Many museums have a history of problems with insects, moulds, and errant rodents and birds. Some have a regular pest control contract, but this is usually not a significant substitute for an integrated program of pest prevention.

In many places, staff prepare food and eat on the premises: this is a high-risk hazard, which can be minimized if all open food is kept in the refrigerator, and the preparation area is swept daily. It is also advisable to restrict the consumption of hospitality food to a reception space outside the galleries and away from storage areas.

### **Recommendations**

Assign food preparation area cleanup to individual staff members on a rotating basis to ensure that no food residues remain which could be attractive to insects.

Implement an integrated pest prevention program:

- Install “sticky traps” and monitor for insect specimens, especially in storage, as many insects avoid the light and are not visible unless deliberately sought.
- When collection areas are swept, debris should be collected and examined in strong light under magnification for evidence of insect activity such as cast skins, eggs, and larvae.
- Insect occurrences should be logged in a central place to learn what patterns of infestation may exist, and for treatment reference if necessary.
- A copy of *A Guide to Museum Pest Control* should be available for reference (see bibliography for ordering information).
- It is helpful to have an entomologist set up a reference box of museum pests (see *A Guide to Museum Pest Control*) and common non-pest insects to facilitate identification of logged specimens.
- Inspect roof areas for birds and bats, whose droppings harbor infestations, as well as being health hazards. A product called “Bird Tanglefoot” has been used to good effect in getting rid of nesting pigeons.
- The list of pesticides in *A Guide to Museum Pest Control* should be used to check any sprays or powders proposed by pest control contractors. Baseboard sprays usually have an oily base which should not be allowed to come into contact with museum objects.
- Incoming collection materials should be inspected and vacuumed to remove insect eggs in an isolated holding or preparation area before being placed in storage.

### Collections Maintenance

Dusting and custodial care are as important for collections in museums as they are for homes, although certain familiar materials and techniques may not be recommended for museum use. In general, oily “dust collectors” and sprayed polishes should not be used: clean lambswool dusters are preferred. All furnishings and boxes should be moved at least once a year to remove dust (all around, all surfaces), and to remove possible havens for insects.

A written maintenance schedule should be developed and should be rigorously followed. *The Manual of Housekeeping* by the National Trust of England discuss-

es all aspects of maintenance for most historic materials, and is very highly recommended (especially since we do not have an American equivalent), even though the English tone may take some interpretation. A video version is also available.

### Cleaning of Specific Materials

This is a lengthy topic, and cannot be covered adequately in this Technical Leaflet. The bibliography lists excellent books and handouts for most materials. Groups of museums may also wish to consider joining together to conduct regional (and grant-fundable)

workshops by conservators to teach specific techniques such as textile washing and repair, furniture maintenance, and metal cleaning and polishing.

### Recognizing Problems

The NY State Conservation Consultancy series, now issued by the Smithsonian Press as the book *Conservation Concerns* edited by Konstanze Bachmann, lists recommended storage techniques for various categories of materials, along with descriptions of how to recognize problems, and when to call a professional. All museums should have a copy. *Caring for Your Collections*, by the National Committee to Save America’s Cultural Collections, is also a useful resource.

## PLANNING: EMERGENCY PREPAREDNESS

### Safety

The Center for Safety in the Arts (212-227-6220) has an excellent series of inexpensive publications and training videotapes relevant to museum activities. Appropriate information sheets should be purchased and kept available to staff. Also see AASLH Technical Leaflet #183, “Disaster Planning for Cultural Institutions.”

### Emergency Preparedness Plans

These should be updated annually, and should contain the following:

- written schedules for maintenance of emergency systems and fire extinguishers, and for regular drills and tests of alarms;
- lists of staff responsibilities in emergencies;
- lists of supplies for recovery of the collections after fire or other disaster, the location of off-site recovery caches of these supplies;
- priority lists and locations for the most valuable collection items. (This list may be kept as a separate section with restricted distribution.)

Local emergency preparedness coordinators (fire,

Dusting and custodial care are as important for collections in museums as they are for homes, although certain familiar materials and techniques may not be recommended for museum use. All furnishings and boxes should be moved at least once a year to remove dust (all around, all surfaces), and to remove possible havens for insects.

city, county, state) should have copies of the plan, should be consulted during its development, and should be informed of the special nature of the building and its contents.

An excellent museum plan which can be used as a model is available from:

Robert Herskovitz  
Head, Conservation  
Minnesota Historical Society  
345 Kellogg Blvd. West  
St. Paul, MN 55102-1906

A template emergency plan, with lists of supplies, is available on paper and on MS DOS computer disk for about \$100 from Maines and Associates, 237 Langmuir Lab, Cornell Research Park, Ithaca, NY 14850 (607) 257-1969. This will give you a workable plan quickly; it can then be refined during the annual review.

### Long-Range Conservation Plan

Evaluate your collections carefully before taking conservation action. Survey the physical aspects of your museum to determine their impact on your collections. Identify projects for improvements in storage and display, and know which items in your collection are both significant and in need of conservation treatment. Thoughtfully prepare a prioritized long range conservation plan to guide your actions. Become familiar with proper techniques, tools, and materials which will help you to carry out the plan.

Finally, remember to update your Plan at least annually, and keep a list of the projects you have accomplished (with photographs!), so that on those dark days when it seems that you just can't do anything, you can look back and see how much you have in fact achieved.

## NOTES

<sup>1</sup> Dennis Piechota, of Object and Textile Conservation, 16 Central Street, Arlington MA 02174, first articulated this concept.

<sup>2</sup> This article was first suggested and published as Technical Insert #54 in 1991 by the Illinois Heritage Association; it was expanded and included in the Interiors Conference for Historic Buildings II (1993) at the request of the National Park Service.

## BIBLIOGRAPHY

### Care, Handling, and Maintenance

- Bachmann, Konstanze. *Conservation Concerns*. Smithsonian Institution Press, Washington, DC, 1992.
- Gillies, Teresa, and Neal Putt. *The ABCs of Collections Care*. Winnipeg, MN: Manitoba Heritage Conservation Service, rev. 1991. ISBN 0-9694423-1-9.
- MacLeish, A. Bruce. *The Care of Antiques and Historical Collections*. Nashville, TN: AltaMira Press and AASLH, 1985.
- National Committee to Save America's Cultural Collections. *Caring for Your Collections*. New York: Harry N. Abrams, Inc., 1992.
- National Institute for Conservation (NIC). *Collections Care: A Selected Bibliography*. Washington, DC: NIC, 1990.

- National Park Service. *National Park Service Handbook Part I: Museum Collections*. Rev. Ed. Washington, DC: NPS Curatorial Services Division. forthcoming.
- Sandworth, Hermione, and Stainton, Sheila. *The National Trust Manual of Housekeeping*. Harmondsworth, England: Penguin Books Ltd., 1986.

### Environment

Lafontaine, Raymond H. *Humidistatically Controlled Heating: A New Approach to Relative Humidity Control in Museums Closed for the Winter Season*. Journal of the International Institute for Conservation-Canadian Group 7, Nos. 1 & 2.

Thomson, Garry. *The Museum Environment*. 2nd Ed. London: Butterworth, 1986.

Weintraub, Steven, and Gordon O. Anson. "Technics: Natural Light in Museums: An Asset or a Threat? Museum Lighting." *Progressive Architecture* 5/90.

### Stable Materials

Hatchfield, Pamela, and Jane Carpenter. *Formaldehyde: How Great Is the Danger to Museum Collections?* Cambridge, MA: Center for Conservation and Technical Studies, Harvard University Art Museums, 1987.

Mibach, Lisa. *Good But Cheap: Safe Materials to Use in Storage*. Oberlin, OH: Mibach & Associates, 1990. Available from Conservation Associates, PO Box 430, Ashburnham, MA 01430; 508/827-1363.

Miles, Catherine E. *Wood Coatings for Display and Storage Cases*. Studies in Conservation 31 (1986), 114-124.

Williams, Scott. *Stable Materials for Storage, Display, and Packing*. Seminar: "Thinking Things Through", Intermuseum Conservation Association, Oberlin, OH, April 22-23, 1987.

### Storage

John Hilberry & Associates, Inc. *Museum Storage Design Checklist: An Outline Guide for the Museum Professional*. Detroit, MI: J. Hilberry and Associates, 1981. Available from Hilberry and Associates, 1452 Randolph St, Detroit MI 48226; 313/963-8074.

Lull, William P. and Garrison, M.A. "Planning and Design of Museum Storage Environments." *Registrar* 5, no. 2 (Spring 1988): 4-14.

### Pest Control

Parker, Thomas A. "Integrated Pest Management." Unpublished paper. Available from Pest Control Services, Inc., 14 E. Stratford Ave., Lansdowne PA 19050. 215/284-6249.

Peltz, Perri, and Rossol, Monona. *Safe Pest Control Procedures for Museum Collections*. New York: Center for Safety in the Arts, 5 Beekman St, NY, NY 10038. 212/227-6220.

Story, Keith O. *Approaches to Pest Management in Museums*. Washington, DC: Smithsonian Institution, 1985. Available from Conservation Analytical Laboratory, Museum Support Center, Smithsonian Institution, Suitland, MD 20746.



## Emergency Preparedness

Ballard, Mary. "Emergency Planning" in *Conservation Concerns*. Smithsonian Institution Press, Washington, DC 1992.

Barton, John P., and Johanna G. Wellheiser. *An Ounce of Prevention*. Toronto, ON : Toronto Area Archivists Group (1985). Available from: Toronto Area Archivists Group, PO Box 97, Station F, Toronto, Ontario M4Y 2L4 Canada.

Meister, Pamela, ed. 1991 *Disaster Preparedness Seminar Proceedings*. 1991 Southeastern Museums Conference. Available from American Association of Museums Bookstore.

## SPECIFIC MATERIALS

### Furniture

McGiffin, Robert F., Jr. *Furniture Care and Conservation*. Nashville, TN: AltaMira Press and AASLH, 1983.

### Paper and Photographs

Ellis, Margaret Holben. *The Care of Prints and Drawings*. Nashville, TN: AltaMira Press and AASLH, 1987.

### Photographs

Eastman Kodak Company. *Conservation of Photographs*. Kodak Special Guides, F-40. Rochester, NY: Eastman Kodak Company, 1986.

Reilly, James M. *Care and Identification of Nineteenth-Century Photographic Prints*. Rochester, NY: Eastman Kodak Company, 1986.

## TEXTILES

The following are available from the Canadian Conservation Institute:

Anionic Detergent. CCI Notes, 13/9 1990.

Applying Accession Numbers to Textiles. CCI Notes, 13/8 1988.

Flat Storage for Textiles. CCI Notes, 13/2 1986.

Hanging Storage for Textiles. CCI Notes, 13/5 1988.

Mounting Small, Light, Flat Textiles. CCI Notes, 13/6 1988.

Rolled Storage for Textiles. CCI Notes, 13/3 1988.

Stitches Used in Textile Conservation. CCI Notes, 13/10 1988.

Storage for Costume Accessories. CCI Notes, 13/12 1987.

Washing of Non-Coloured Textiles. CCI Notes, 13/7 1988.

Lambert, Anne M. *Storage of Textiles and Costumes: Guidelines for Decision Making*. Vancouver: University of British Columbia Museum of Anthropology, 1983. Available from NIC.

Beaudoin-Ross, J., and Burnham, E. *Recent Trends in Costume and Textile Storage*. Textile Conservation Newsletter Supplement: Spring 1990.

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