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CARING FOR COLLECTIONS

STRATEGIES FOR CONSERVATION,
MAINTENANCE AND DOCUMENTATION

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A report on an American Association of Museums project

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Museums serve a critical role in our society by preserving and interpreting our culture and heritage. We were pleased and honored, therefore, to be able to support the American Association of Museums in the conduct of this significant study regarding the conservation, maintenance, and documentation of collections, and we believe that the recommendations in this report should be of significant value as the museum community develops its strategies and continues its efforts to manage invaluable collections.

We applaud the initiative and intelligence of the AAM in inaugurating this study and the thoughtful and dedicated work of the colloquium participants and chairs.

Donald Gibson

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Statement of the Chairmen



The care of collections is the primary responsibility of all museums. As repositories of our national heritage, museums are responsible for preserving and maintaining the collections, and capturing and transmitting knowledge about them. The level of care of these objects must be increased now in order to ensure their existence in the future. Greater attention must be paid to permanent collections, whether they are on public display or in storage. Many are threatened by unsafe conditions and endangered by inadequately controlled environments.

As the stewards of these collections, museums must also provide information about the objects in them. Without the ability to manage the documentation of collections, we can articulate very little about their meaning toward an understanding of ourselves and the world in which we live.

While the series of colloquiums that led to the development of this report focused on collections essential to the study of the humanities, the resulting recommendations have broad implications for the entire museum community. The report is the result of discussions by museum professionals in many disciplines who share the responsibility for the well-being of museum objects.

The priorities developed by this cross-section of the museum community will nurture and enhance the level and quality of collections care. They are as follows:

- Improve environmental conditions for collections
- Inventory, register and catalog objects to achieve documentary control of collections
- Conserve objects within collections

- **Expand knowledge through in-depth research on collections**
- **Enhance public understanding of museum collections through the dissemination of information about them**

As the chairmen of the colloquiums we encourage the museum community and its supporters to assume full responsibility for the obligations imposed by the possession of its collections. Previous achievements in conserving and cataloging of the collections must, therefore, be intensified, and the resulting information must be made more widely available. Although this appears to be an overwhelming task characterized by its ongoing nature, there are measures that can be undertaken. Now is the time to initiate the task.

Our goals can be achieved by the cooperative efforts that can only come from a national commitment.

We would like to thank Susan J. Bandes of the AAM who served as director for this project. Her responsibilities included organizing the colloquiums and synthesizing the findings presented in this report.

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I

Introduction



Museums are the guardians of significant collections of objects and material essential to the study of the humanities. They serve the public not only through exhibitions and other programs but also through the preservation of the primary resources of the nation's heritage.

Museums, like libraries, are of functional value to society to the extent that they are used to increase man's knowledge through scholarly activities, exhibitions or other programs that contribute to and encourage public enlightenment. Without a strong commitment to improved collections care and expanded scholarly research on these collections, museums will be increasingly unable to provide programs of value to those they seek to serve. Moreover, they will be unable to meet their obligations to future generations.

The American Association of Museums' Commission on Museums for a New Century has concluded that, taken as a whole, the museum collections of our nation represent a unique and irreplaceable national resource. Museums, as stewards of this treasure, have not fully lived up to their responsibility to provide adequately for the care of their holdings. In fact, the activities of collections maintenance, collections management and conservation have taken a back seat to other more visible activities as museums struggled over the last two decades to meet increasing operating costs and demands for effective public programs. The Commission on Museums for a New Century has recommended that a substantial and sustained effort be made to improve this situation, beginning with a renewal of the commitment by the museum community itself to the care, maintenance and organization of its collections. Such a commitment is the essential first step if these collections are to serve present and future generations.

Without abandoning existing programs, museums must expand their priorities in order to provide a balance between the demands of public programming and collections care, accessibility and scholarly research. With determination and perseverance on the part of directors, governing boards and museum professionals, advances in collections care and accessibility can be as dramatic and beneficial as the progress museums have made in the quality of their exhibitions and other programs for the public.

Collections maintenance, collections management and conservation are among the most demanding functions for all museums; they are also the least visible to those outside the museum. Many of our country's major museums are housed in aging structures, without adequate storage or exhibition facilities. Often these buildings have insufficient environmental controls and security. In addition to these capital needs, general operating costs for personnel, supplies, services and especially energy have increased dramatically.

While some major collections are adequately cataloged and organized, most are in need of massive reorganization. Many small museums are without even a basic inventory. Almost all museums need to make an increased commitment to a comprehensive collections management program involving inventorying, cataloging, photographing and storing collections data in some retrievable form. The adequate organization of collections and the full documentation of the associated information on provenance, related research, technical analyses and exhibition history are key to gaining intellectual control of these irreplaceable resources.

Museum objects of all types require as much conservation care and treatment as do library books and manuscripts, yet the public is not nearly so aware of these needs. Because of the great number of objects in museums, the variety of materials involved—pottery, metal, wood, stone, fiber, feathers, textiles—and the variations in resources each museum can devote to its collection, the problems are diverse. Nevertheless, neither the diversity nor the scale of the problems in conservation should be viewed as insurmountable barriers or as excuses for inaction.

Greater public awareness and understanding of the importance and magnitude of these challenges that museums face are essential to the success of the effort to improve the condition and usefulness of museum collections. It is especially important that the message reach community, business and government leaders. During the past two decades businesses, foundations and federal agencies have provided nationwide leadership to improve public programs, helping to fund both permanent and temporary exhibitions and education programs for schoolchildren and the adult

public. Federal agencies, especially the National Endowment for the Humanities, have been at the forefront of this effort, contributing immeasurably to the ability of museums to meet society's increasing demands for public service.

Recently there has been a new emphasis at the federal level on collection and conservation needs. The National Endowment for the Humanities and the Institute of Museum Services have initiated funding programs and the National Endowment for the Arts has strengthened its ongoing commitment in this area. In addition, the Humanities Endowment has accepted a leadership responsibility for addressing collections needs by supporting this project. Through a series of five colloquiums organized by the American Association of Museums, the initial steps have been taken toward reviewing and expanding the museum community's priorities for collections care and documentation. (See app. A.) The results of the discussions of a cross-section of museum professionals are represented in this report. One of the project's most important goals is to provide the museum community with a sense of the needs, concerns and priorities for preserving and managing collections of all types. Another goal is to nurture the awareness and commitment to collections care in all areas of funding and to reach conclusions that will be useful in planning and guiding support by private organizations and public agencies.

The report complements another AAM project on collections care and conservation. In February 1984, a major information-gathering effort authorized by the Congress was begun under contract to the Institute of Museum Services as part of the institute's new grant program for collections conservation. The AAM, in cooperation with the National Institute for Conservation (NIC) and the American Institute for Conservation (AIC), is conducting a study of the current state of conservation in museums of all kinds. Two major surveys will provide quantitative information concerning conservation needs in museums and the adequacy of conservation training, personnel and services to meet those needs. Related research projects will provide overviews of public and private sector support for collections related activities and public programming about conservation and collections management. The IMS study, together with this NEH project, will constitute a detailed look at the scope of the conservation and documentation problems facing the nation's museums.

The following report contains recommendations for discussion and development of both long- and short-term goals for the overall welfare of the nation's museum collections. It provides specific details on those museum collections of greatest relevance to the study of the humanities

and is intended to increase awareness within the profession of the responsibilities of museums toward the objects in their care, to instill a sense of what needs to be done, to define the priorities for assuring the continued existence of collections in the future, and to provide concrete suggestions for public and private support to help meet the challenges.

The first section of the five-part report discusses the nature of humanities collections of art, history, archeology and ethnography, their commonality and diversity. The second addresses the accessibility of these collections to the scholarly community and to the public. The third defines the conservation and ongoing preservation needs of these collections, and section four outlines the need to document collections. Priorities, recommendations and strategies for their implementation are presented in the fifth and final section.

II

The Nature of Humanities Collections in America's Museums



The nation's museums house unique resources for the study and advancement of the humanities. Art, history, ethnography and archeology collections are found in a variety of institutions in every part of our country. To ensure the existence of these cultural treasures in the future, their preservation and documentation must be addressed now. The inevitable limitations of space and resources in museums force those committed to these institutions to raise questions of what to collect and what to save at what cost.

While the collections are diverse, they face similar problems of care, and it is the sheer magnitude of these problems and past neglect of the objects that must be squarely faced and corrected now. There is a great disparity in the level of care and management of these collections, depending less on the type of museum than on the kinds of objects it houses, the intended use of these objects and the size of the institution. In general, large institutions are more aware of conservation needs and know better where to seek help for problems with their collections.

According to the 1979 *Museum Program Survey* undertaken by the National Center for Education Statistics for the Institute of Museum Services, more than half of the 4,400 museums in the United States that responded to the survey are history museums; 14 percent are art museums. Anthropological collections, composed of ethnographic and archeological objects, are found in a variety of museums ranging from art, history and natural history institutions to parks. The majority of institutions with anthropological collections are concentrated in the Midwest, Mountain Plains and West, and many of the 50 largest and most comprehensive of these collections are closely associated with anthropology departments in universities.

Historical Collections

History museums and historic houses, sites and societies account for more than half of the nation's small museums. The size and scope of their collections as well as their local, regional or national significance may vary widely. All too often they are marked by curatorial and conservation neglect, a result of inadequate budgets and the lack of adequately trained personnel who can provide professional care.

Part of the problem is in the kinds of material the history museum collects. Often the collections consist of utilitarian objects that have little monetary value. They include paper-based material such as newspapers, correspondence and other records of historical value, as well as photographs and negatives. Textiles, paintings, sculpture and even archeological and ethnographic material also find their way into historical collections.

History museums are increasingly engaged in collecting in the area of contemporary culture and in completing period holdings. Yet many are collecting more than is probably needed, feasible or practical, especially considering the storage space and future care these objects require.

Although some history collections are housed in what are considered traditional museum facilities, many are in historic houses and living history settings. In addition to the objects in their collections, these institutions have buildings that are themselves often in dire need of maintenance and preservation.

Anthropological Collections

Anthropological collections are characterized by vast quantities of diverse and fragile objects ranging from stone tools and potsherds to feathers and other especially perishable materials; organic and inorganic substances are often combined in a single specimen. For the most part, these collections are research oriented, and, in the case of systematic anthropological collections, the total collection is more important than the individual objects.

Ethnographic collections are relatively stable in terms of size but have been seriously affected by heavy demand for their use in the past few years. They are often the only remaining evidences of lost cultures, even of the recent past. Many museums face growing legal and ethical responsibilities in connection with these collections, and museum staffs are becoming sensitive to the traditions and concerns of ethnic groups in using, preserving and documenting ceremonial objects and human remains.

Archeological collections are similar to history collections in the quantity and variety of material they contain and in their constant expansion. While history collections continue to grow at enormous rates as 20th-century materials are collected, archeological collections continue to expand dramatically with material collected in this country as a result of federally mandated excavations to save significant sites. Unlike history and art museums, which may debate the significance of objects for accessioning or deaccessioning, many archeology collections are under congressional mandates to excavate, collect and retain the objects. These legal requirements cause a literal flood of objects and information into the large repository museums. In addition, historical and underwater archeology projects create unusual problems in storage, curation and conservation. These huge and constantly growing collections are creating problems of great magnitude for the museums that accept responsibility for them.

Art Collections

Art collections are characterized by the uniqueness of the objects, which are selected for their esthetic quality. These collections will not, in most cases, increase as rapidly as other types of collections because of the more selective process of acquiring new objects, the limited number of objects of desirable quality and their high market value. Nevertheless, collections shift as tastes and scholarship change, and recent years have seen the growth of collections of modern art, photographs and the decorative arts.

In the past, the high value of art objects distinguished art from other types of collections, and while in many instances this still holds true, the situation is changing. Recently the market value of ethnographic artifacts, textiles and the decorative arts has soared, and no matter what type of museum setting they are found in, they are often regarded as objects of fine art. In addition, the demand for their use in exhibitions is on the rise, and borrowing occurs across disciplinary boundaries. Thus some of the traditional distinctions between collections are disappearing.

III

The Use of Collections



The level of accessibility and usefulness of a collection depends upon not only the mission of a museum, the size of the institution and the physical condition of the objects but also the organization of the collection, the documentation on the works and the demands of the museum audience.

The museum audience ranges from the general visitor to the most sophisticated curator and other scholars. The casual visitor in search of diversion makes few special demands upon the museum; his or her curiosity is often satisfied by the objects on permanent view or in special and temporary exhibitions. The next level of visitors includes amateur historians, laymen with a keen interest in a period of history or culture, artists and students, as well as schoolchildren. This group, which has been growing in recent years, often requires more individualized service from the institution. The small percentage of museum users who are curators and scholars place significant burdens on the staff because their research requires access to collections that may be in storage or in print rooms. In addition, they also need access to detailed information about the collections. Security considerations, the location of objects and their condition, as well as the availability of museum personnel to accommodate the requests of scholars are factors that may severely limit the accessibility of collections for research.

The Accessibility of Ethnographic Collections

In the ethnographic and archeological fields, the larger, better-known collections are subject to more requests for access to materials than smaller collections, creating a potential for greater loss as a result of greater use and handling. Collection sharing is becoming one way of using these materials, often involving the transportation of whole collections

from one institution to another for study or exhibition purposes. In the past, particularly in the ethnographic field, smaller institutions and Native American groups were apt to give their collections to larger ones for safekeeping, but this situation is changing despite the fact that the small organizations are often ill equipped to care for their holdings.

The Accessibility of History Collections

In general, smaller history museums tend to display most of their holdings while larger ones have more extensive storage areas as well as carefully developed priorities for the use of objects on display, in visible storage and in limited public access areas. History museums, on the whole, have fewer special exhibitions and loans than other types of museums, and the rules for loans are less stringent than they are for art museums.

In the past, academic historians have not been particularly object oriented, using museum collections less than art historians, anthropologists or archeologists for research and publication purposes. But the recent burgeoning of interest in material culture and folklife studies has blurred the boundaries between academic and curatorial interests and has already led to increased use of historical collections, a trend that is expected to continue.

The Accessibility of Art Collections

The accessibility of art collections depends upon the museum's mission. While one museum may be concerned primarily with education, another might concentrate upon its exhibition program. Generally speaking, art holdings are formally or informally divided into primary and secondary collections. Primary collections are those on exhibit and include the museum's masterpieces. Secondary or study collections, usually found in storage, are relatively inaccessible to the general public.

The use of art collections has increased in recent years with the frequent organization of special exhibitions using objects from permanent holdings and other institutions. Each loan or exhibition entails curatorial research into the artist, object or period. In addition to increased use of art objects for exhibition-related research, the resulting exhibitions are often organized to travel around the country, exposing them to the hazards of transportation and increased handling.

Accessibility of Information on Collections

The same audience that views collections of objects in museums also seeks information about them. Labels and brochures often give the general public basic information, while museum staff and other scholars use the more detailed records. Information sharing, research, publications, exhibitions and interactive devices such as slides, films and demonstrations disseminate the information further.

Researchers, of course, need access to museum files for specific information about the works or collections they are studying. In general, access should be as available to qualified users as is consistent with legal and ethical restrictions, with every effort being made to keep such restrictions to a minimum.

The ability to use a collection is governed not only by the museum's control of the overall conditions of exhibition and collections maintenance but also by adequate collections management. Inventorying—knowing the number of objects and where they are in the museum—is the essential first step to accessibility, and it is surprising and dismaying that many of the nation's museums lack even this basic information. Additional detailed information such as provenance and exhibition history may be of interest to the museum curator, conservator and researcher and contributes further to the use of the objects. The lack of such catalog information, particularly for archeological and historical collections, reduces their usefulness dramatically.

The actual utility of the information, especially in research, depends ultimately upon the organization and quality of the information. Accordingly, the ease with which information can be retrieved affects its potential for research. The recent trend toward the automation of records, enabling museums to gather information scattered throughout the institution and upgrade it as it is computerized, points to a future in which collections will become richer sources for scholarship. At the present, however, relatively few museums have computerized documentation records. Moreover, few subjects are cross-indexed by institution, and although the location of significant holdings is generally well known, comparable material at other institutions is often hard to locate. Information sharing among museums throughout the country, similar to the library information systems that can locate all the books anywhere in the country on a certain subject, is an ultimate goal.

IV

Conserving Collections



The conservation of collections takes place on four different levels. The first level treats collections as a whole to maintain them in an unchanging state by providing controlled environments and adequate housing for the objects, either in individual display cases or entire storage facilities. The second level is object preservation, which has as its primary goal the prevention and retardation of further deterioration or damage to the object. The third level is actual conservation restoration: action taken to return a deteriorated or damaged artifact as nearly as is feasible to its original form, design, color and function. This process may alter the outward appearance of the object. The fourth level is in-depth scientific research and technical examination of the object. (See app B.) The first two levels stretch conservation funding the farthest and affect the largest number of objects; trained technicians under the supervision of conservators can often carry out these activities. The last two levels, usually reserved for works of particular importance, are costly and time consuming and require the expertise of professionally trained conservators.

Collections Maintenance

The general approach to conservation differs in each of the specific collections under discussion, but no matter what the type of object, the first step in caring for collections is the proper maintenance of their environments in storage and on exhibition. These environmental conditions need to be optimal in order to stabilize the holdings and upgrade the level of collections care.

Unfortunately, the conditions in which the majority of the nation's collections are stored—ethnographic and archeological collections in particular—compound conservation problems. Inadequate storage and

exhibition space; the lack of specially designed containers for individual objects; insufficient temperature, humidity and pollution controls; shortages of appropriate shelving and cabinet equipment; and insufficient protection from harmful light have led to a crisis in the maintenance of collections. Contributing to the problem are difficulties in obtaining funding for preservation and equipment, a widespread failure to consider conservation in the design of museum facilities and the instability of the objects themselves. Maintenance and conservation problems are enormous and will steadily increase as more objects are added to collections.

Conservation of Art Objects

Art objects typically receive the third and fourth levels of conservation, the complex object treatment that has as its objective to approximate as closely as possible the object's original condition. Because of the importance as well as visibility of the primary collections in art museums, they rank high on the priority list for conservation attention and consequently the masterpieces tend to be in very good to excellent condition. The secondary (storage) collections usually receive a lower level of conservation care than is needed. Works of art on paper are the exception to this generalization; they typically are not and should not be on permanent or extended view because of their fragility. Nevertheless, a significant portion of graphics collections have received some level of preservation treatment.

In art museums generally, paintings, sculpture and works on paper are given precedence for care while textiles and the decorative arts receive much less attention. It is also true, however, that the needs of objects in the permanent collections are often superseded by conservation demands of special exhibitions.

Conservation of Anthropological Collections

The conservation of archeological and ethnographic objects is a fledgling specialty. In general, because only a small portion of these collections will ever be displayed, the priority in their treatment is to stabilize groups of artifacts to prevent further deterioration rather than to restore specific objects to their original conditions or prepare them cosmetically for exhibition. Because these collections tend to be research oriented, the goal in treatment is to retain the accumulated history on the object. The mere act of cleaning an excavated object may, for example, destroy evidence of great value for research.

The physical facilities housing these particular collections are insufficient, and knowledge about animal and pest control as well as the biological deterioration of objects is inadequate. At present, these are unsolved problems. Not enough is known about the hazards fumigants to the health of the museum staff, let alone to objects in the collections. Unfortunately, many museums use these chemicals indiscriminately. Although there is some literature available about their proper use, this information, together with discussions about environment and storage controls, must be disseminated more widely to make dialogue possible on a national level.

Conservation of History Collections

History museums of all sizes face tremendous problems in caring for and safeguarding their collections. Often, large collections of newspapers and books printed on highly acidic wood-pulp paper are deteriorating very rapidly. The extensive holdings of photographs, nitrate and glass-plate negatives also pose unique and potentially dangerous problems. Unlike the approach to conserving objects in art museums, some collections of historical materials can be reformatted, duplicated or replaced unless the original item justifies conservation measures.

The lack of curatorial and conservation expertise is especially critical in the smaller institutions where budget and staff size make it unlikely that these problems will be remedied at the institutional level. Theoretically, the needed expertise could be sought at a regional conservation laboratory, but at present only one of these centers provides both conservation and curatorial advice. The problem is compounded by the fact that very few regional laboratories in the country are equipped to deal with the problems of large paper, photographic and textile collections. As with ethnographic and archeological collections, the approach to the conservation of historical objects differs from those appropriate for the fine arts. It should emphasize the preservation of objects—the stabilization of their current state—as well as mass treatments.

Often the buildings that house these collections are of historic significance and require architectural conservation. Their open, uncontrolled environments, the size and complexity of sites and structures and considerations of future maintenance make conservation methods appropriate for other types of collections impractical for historic structures. Frequently compromises must be made between the integrity of the historic building and its adaptive use.

At history museums and historic sites volunteers are a source of possible assistance in the area of preservation—helping to maintain conditions as

they are. People skilled in carpentry, masonry, plastering, blacksmithing and even lacemaking, sewing or weaving can provide valuable help if they receive training in historically correct techniques and the proper handling of objects. Several state historical organizations as well as individual museums have active training programs for such volunteers.

Conservation Personnel, Training and Facilities

There are four general categories of conservation treatment services: freelance professional conservators, in-house facilities, in-house facilities that also provide services to others and regional conservation laboratories. Despite the fact that the field of conservation is growing, the many needs of America's collections cannot be met by existing conservation personnel or facilities. Only the largest museums have in-house facilities and more than one conservator on staff; most small institutions have no conservation facilities. Because equipping, running and staffing a conservation laboratory is expensive, few small museums can afford their own facilities. Nor do they probably need them since conservation expertise should be available elsewhere from cooperative conservation laboratories, large museums and private consultants.

Cooperative conservation laboratories and large museum laboratories have significantly assisted in providing the mechanisms for distributing broad interdisciplinary advice, education and training. Over the past decade, 11 regional conservation centers have been created to fill a portion of this need. There is strong support for these laboratories, as well as the recognition that in their diversity and individuality they serve very important functions for the museum community. A majority of these laboratories treat fine arts objects; only a few treat anthropological or historical objects. In their infancy, regional laboratories were strongly supported by the National Endowment for the Arts. Now, however, federal support for the laboratories has been reduced just as the expectations for their services have steadily increased. These centers, now solidly established, are beginning to develop endowments but have not found funding for this purpose forthcoming. (See app. C.)

The current tendency of conservators toward specialization has meant that a staff conservator may not have the knowledge to treat the diversity of media represented in a given collection. There is a need for practitioners with more general training in a variety of materials and the ability to recognize when a particular problem requires a specialist. At the same time, it is evident that more and better trained conservators are needed

particularly in previously undeveloped fields, such as ethnographic and archeological conservation.

The conservation field has begun to take measures to address this situation. In the National Institute for Conservation's forthcoming *Report on Ethnographic and Archeological Conservation*, ethnographic and archeological conservators have targeted several major areas of concern including education, information exchange, facilities and basic research. The long-term goal is the establishment of a specialized training program specifically focused on ethnographic and archeological conservation. Short-term goals include upgrading existing training programs to include at a minimum an introduction to ethnographic and archeological treatments.

The Collections Technician

The lengthy process of training new conservators indicates that the need for additional members in the field will not be met for some time. For now, a solution must be sought within the present framework of the museum by strengthening and expanding the capabilities of the available staff. A paraprofessional group of collections technicians can be trained to handle the lowest levels of conservation—routine collections maintenance activities normally either completely neglected or done by conservators—freeing the conservator to carry out activities that require special expertise and training. Tasks such as routine environmental control monitoring, daily surveying of exhibition areas, matting, framing and preparing preliminary condition reports can be handled by a paraprofessional trained in conservation awareness and supervised by a conservator.

Scientific Research

Scientific research is another area of conservation in need of expansion. Conservators, curators and other scholars have recognized that scientific analysis in conservation contributes significantly to the interpretation and understanding of artifacts and techniques. As several National Conservation Advisory Council (NCAC, now NIC) publications have pointed out, conservators need more and better access to analytical facilities and information. In California, the J. Paul Getty Trust is currently exploring ways to share information about conservation treatments through a computerized system. Known as the Conservation Information Project, this is one step toward making information available. (See app. D.)

There is a basic shortage of conservation scientists to perform these analyses and do additional research. According to a survey of scientific

research centers recently undertaken by the NIC, there are fewer than 12 scientific centers in the country. At the three museums that employ a conservation scientist, more often than not the day-to-day routine analyses needed to answer questions relevant to a conservation treatment or to authenticity preempt the scientist's long-range research on conservation materials.

In developing its Conservation Institute, the Getty Trust is seeking a solution to some of the need for basic research in the conservation field. The institute will direct the majority of its time to research, choosing broad, rather than object-specific topics for investigation. Its first research topic is coatings of objects and will include analyses of the chemical and physical properties of coating materials. It will also consider the requirements of esthetic values, applicability, reversibility and compatibility of coatings and the objects to which they are applied. More coordinated long-term research projects with potential benefit to the conservation community as a whole are needed, and scientific resources outside the conservation field should be tapped. For example, when material scientists conduct destructive sampling of ethnographic or archeological objects, the results of their research should be provided to conservators who may find the information useful.

In order to improve conservation and collections maintenance in museums, it is imperative that we raise the level of awareness of the problems within the museum community and among the general public. Only the training and education of additional professionals and scientists and an increase in the number of facilities will provide the future care needed to conserve the nation's collections.

V

Documenting Collections



The information about objects in museums is as important a resource as the objects themselves, and the documentation—the recording and preserving of the context of the objects—is a primary activity of museums and a major responsibility of museum management. Documentation is a means of organizing and achieving comprehensive control of an entire collection rather than merely its parts.

Documentation involves all records and information generated by the museum. The amount of material retained depends on the scope and mission of the individual museum, the full understanding of the purpose of the museum, the nature of its collections and the ways in which they are used. It is clear that, without documentation, the museum has a limited story to tell.

Documentation, like conservation, is many layered. The basic information that locates and identifies an object is found in the inventory, the core collections management data unique to the object but relatively uniform for all objects. Beyond this, registration information includes records of the object's acquisition, its condition and disposition. A further level consists of catalog information, which gives full scholarly detail about the object, for example, provenance, medium or materials, publications or references, and more explicit curatorial descriptions and analyses.

Information may be drawn from many different sources within the museum and may include institutional correspondence, field notes and financial records that provide information on the original value of the objects, published as well as unpublished manuscripts, minutes from board and committee meetings, information recorded on film and tape as well as on paper. In addition, attributions, the authorship of evidentiary material, and knowledge and information about objects deaccessioned from the collection should be retained.

While the open-ended nature of documentation, especially for rapidly growing collections, precludes the possibility of complete records, better and more complete information still remains the goal of all museums. The effort to improve information beyond the core data must begin now.

In addition to textual information, visual images are an important part of artifact documentation. These may include photographs, slides, films and microfilms that can be used to avoid unnecessary handling of the object itself. Rapid technological advances in videodisc, digitized and holographic imagery may offer new methods of documentation in the near future. In general, while many museums have basic inventory data and too few have adequate catalog information, an even smaller number have complete photographic records of their holdings.

Documentation is essential to the value of artifacts in ethnographic and archeological collections and is often more important than the object itself. Unfortunately, there is at present a woeful lack of organized information and access to it despite the fact that pertinent archival material often exists. Too often the information has not been collated. For many older collections, the collected artifacts and scant records from sites that have disappeared are the only resources remaining for the reconstruction and understanding of earlier cultures. Many original identifications, however, are inaccurate. A major need now for ethnographic and archeological collections is to work methodically through the backlog of material and bring it to a minimal level of documentation.

Most art museums have some form of inventory and consistently register objects according to the procedures outlined in Dorothy H. Dudley's and Irma B. Wilkinson's *Museum Registration Methods*. There is no systematic approach, however, to the more complete cataloging of collections, although catalog information is often expanded as a result of research for special exhibitions and loans. Visual records for most of these collections are likewise incomplete. In addition, often as a result of conservation treatment and analyses, physical documentary material is generated; frames, painting supports and old labels that have been removed from the object become part of the documentation records and should be retained.

As in the area of conservation, the lack of curatorial or professional expertise is especially critical for smaller history collections. Many of these museums do not have adequate or up-to-date catalogs, let alone inventories. The American Association for State and Local History (AASLH) has an active consultancy program to advise small institutions in the areas of collections maintenance, collections management and conservation. The Association of Indiana Museums has conducted a statewide computerized

inventory of its collections, and several other states such as Illinois, Minnesota and Texas have taken preliminary steps to locate historical resources and explore the possibility of inventories that may eventually tie into a national or regional effort.

As they amass 20th-century materials, many history museums are duplicating the efforts of neighboring collections. One way to avoid such duplication is to register objects on an impermanent status within the institution and subject them to periodic review. Regional or national inventories would be particularly useful in coordinating the collection of historical material, helping to avoid its costly duplication and contending with the future implications of storage and preservation. Collections sharing on a regional or statewide basis is also logical. Objects could be distributed to those institutions that could best use them, and their placement in new contexts might increase their interpretive value.

In many ways the cooperative programs of American libraries can serve as models for the museum community. But the success of these programs depends upon control of information through automated inventories. The Folklife Center of the Library of Congress offers another model for inventory projects. This is a major effort at the national level to catalog the intangible elements of American society.

Successful documentation requires the commitment of the museum's leadership and a coordinated effort by all information-producing units of the museum. In addition, there must be a systematic and comprehensive approach to the compilation and storage of information on the collection, and an efficient and cost-effective capability to retrieve information selectively. A carefully defined policy of file maintenance and records management must be developed, incorporating all applicable standards for data including, for example, professional registration standards and national and international standards for machine-readable data exchange.

Although the increasing importance and sophistication of the new skills required by automation have brought about a change in the role of the registrar and collections manager, the registrar has not yet achieved an equal footing with other museum professionals. Unlike conservators, who have established training programs, there are few opportunities for registrars to acquire the specific training needed or to share with each other their experiences in grappling with documentation and computerization projects. This is an area of high priority for the museum community, to remedy the situation more continuing education courses and additional sessions at annual and regional meetings (organized by the Registrars Committee of the AAM) are needed, and synopses of successful projects should be distributed.

Documentation and Technology

Museums are legally and ethically obligated to have control of basic collections management information. The computer revolution of the past 15 years has brought major changes in the way this information is processed and managed. Yet the issue of what information is needed and where to find it is separate from the question of its computerization. Whether or not a museum decides to automate its documentation records, the same basic principles apply: the architecture or structure of an information system must be based on logical principles, permit access to all categories of information, provide flexibility to meet new and changing conditions and be applicable in management, interpretive and research uses of the collections.

An assessment of a museum's records, a step necessary before the decision to automate them, will provide a clear idea of what is needed in the design of a software system. Frequently museums bypass this step and, in so doing, become the unwitting victims of their own lack of preparation and knowledge about data systems. Too often they adopt a system that does not meet their needs.

There is an acknowledged need to heighten the museum community's awareness of computer technology and for museums to take responsibility for determining what they need and desire from this technology to achieve better museum management. But museums must also realize that automation does not solve problems inherent in the documentation. Sometimes it creates additional ones. Yet computerization does offer many new opportunities to museums that cannot be ignored and can, in fact, become part of the solution to documentation control. As a tool, computers can bring together information on objects scattered throughout the museum. They force an evaluation of the state of information on a collection, help clarify information and demand rigorous consistency of the records. In choosing a system, the museum must consider both growth potential and use in collections research and management.

Museums entered the computer age in the 1960s with the creation of several programs for collections management that were intended to be nationwide. Among these efforts were GRIPHOS, developed by a group of New York museums, and SELGEM, the Smithsonian Institution's program. Although both are still in use, aspects of the systems that did not meet institutional needs have led to their modification by users. There is at present a great deal of activity in the museum computer field at the institutional level, although few efforts are coordinated or well publicized. Many institutions are in the process of computerizing their inventories.

Whether these efforts are successful or not, there is a need for museums to share their experiences in order to save time, money and effort.

Currently, two major collaborative projects are under way in the art community. One is being developed for four medium-sized "donor" museums by the Art Museum Association of America. It is a three-part computer program for museum accounting, membership and collections management. The system will eventually be sold or distributed to other museums. The other project, underwritten by the Getty Trust, is an information-sharing network. Termed the Museum Prototype, it is an experimental program involving eight institutions ranging from the largest art museums in the country to smaller university galleries. These museums are collaborating to develop a standard vocabulary for the description of art objects with the ultimate goal of creating a research tool for curators and other scholars. (See app. D.)

Other fields, notably anthropology, are less concerned at the present with the lengthy and costly process of creating a single standard terminology. They are more interested in concentrating on the control of collections at the institutional and regional level, and many museums have had considerable success. On the whole, the entire museum community recognizes the need to open further the avenues of communication among institutions and to take advantage of software programs already developed for collections management.

VI

Priorities for Collections Care



The goal of the museum community should be to achieve a collective rededication of America's museums to the improved care and increased use of collections that are, in fact, a major national resource. This can be best accomplished by addressing the following priorities for collections care, management and use:

- Improve environmental conditions for collections
- Inventory, register and catalog objects to achieve documentary control of collections
- Conserve objects within collections
- Expand knowledge through in-depth research on collections
- Enhance public understanding of museum collections through the dissemination of information about them

The priorities and recommendations set forth here reflect the conviction that the nation's permanent collections are finite and nonrenewable resources and that the nation has an obligation to care for them and provide support for their welfare. Ways are suggested to make these collections more accessible now while ensuring that they will be preserved for the use of future generations.

The five priorities are intended to encourage an expansion rather than change the current commitments of the nation's museums. The overarching goals are to preserve and maintain the collections and to capture and transmit knowledge about them. The priorities are interrelated and must be approached and addressed simultaneously. Better physical environments are necessary to stabilize the conditions of objects. Successful

collections management is a step toward establishing institutional commitments for care and access and will lead logically to the development of priorities for the conservation of specific objects, the expansion of research on collections and a renewed awareness of the need to safeguard these national treasures. For each priority, long- and short-term projects may be undertaken by individual museums as well as cooperative efforts supported by the entire museum community. All depend upon the allocation of personnel and resources at each museum, the commitments by individual or cooperating institutions at the local, regional and national levels and the dedication of funds by private and public sector supporters of the museum world.

Strategies for the Improvement of Collections Recommendations for Action

- I. Collections Maintenance to Enhance the Physical Environments of Collections
 - *Establish and widely disseminate minimal environment standards* for collections in storage and exhibition areas.
 - *Upgrade environmental conditions* in existing facilities to meet standards and implement an ongoing program to maintain and improve them.
 - *Undertake periodic condition and curatorial surveys* of collections.
 - *Encourage research* on improved storage facilities and specialized equipment, and disseminate this information widely.
 - *Provide for information sharing* and specialized training in collections maintenance.

- II. Collections Management and Documentation to Gain Control of Collections
 - *Improve documentation* through comprehensive inventories that will help achieve the minimum level of collections control and accessibility.
 - *Expand in-depth research on collections* on an ongoing basis to upgrade catalog information and increase knowledge on collections.
 - *Encourage systematic photography* of collections as an essential part of documentation.

- *Take greater advantage of computer technology* in collections management and promote the development of cooperative information systems that share common or compatible vocabularies.
- *Upgrade the education of museum professionals* responsible for collections management and expand training programs in this area. Encourage information sharing on a regional, national and international basis.

III. Conservation of Collections

- *Establish priorities and commit personnel* and financial resources to implement programs for the treatment of collections.
- *Expand the use of collections technicians* whose responsibility it is to assist in the basic maintenance of collections. Develop guidelines and initiate new programs for their training.
- *Expand financial support for existing regional conservation laboratories* so that they can continue their clearinghouse, training and public service functions.
- *Expand educational efforts* in conservation with special attention to underdeveloped specialties such as conservation science and ethnographic and archeological conservation.
- *Expand scientific research* on conservation techniques, materials and problems. Special attention should be given to encouraging collaborative efforts among conservation laboratories, universities, museums and private industry.
- *Develop networks* and promote the sharing of resources among institutions and conservators.
- *Improve channels of communication* between conservators and other museum professionals.

IV. Enhanced Public Understanding of the Use and Care of Collections

- *Increase public awareness* of the needs of collections by encouraging a conservation component in exhibitions, publications and public programs.
- *Increase awareness among museum professionals* of conservation and documentation problems.
- *Develop long-range plans for collections.* Museum directors and governing boards, together with the curatorial, conservation and

registration staffs, should develop these plans and include in them the commitment of ongoing institutional support to address the conservation and documentation needs of the collection.

- *Expand the role of conservation and documentation specialists* in decision making and policy development, especially in areas of acquisitions, exhibitions, loans and other collections-related issues.
- *Develop and maintain comprehensive information* about the condition, accessibility and safety of the nation's museum collections in order to provide periodic evaluations of current needs and conditions.

Implementation of the Recommendations

To implement the recommendations for collections maintenance, collections management and conservation, the first step for a museum is to assess current conditions and review its mission and the way it uses its collections. To attain the ultimate goal of preventing the further deterioration of the objects, condition and curatorial surveys must precede the initiation of specific programs.

Different institutions face different levels of need. On the whole, smaller museums need self-study programs and consultation and survey grants to secure basic curatorial and conservation advice in developing priorities. Larger institutions are, for the most part, farther ahead in the area of collections welfare. Although they may also need collections surveys, conservation treatments are more likely to be in order. A tiered approach to the implementation of recommendations is, therefore, desirable.

Conservation and documentation are two sides of the same coin, and those responsible for these functions must work closely together to assure the well-being of collections. Increased museum staff cooperation among curators, conservators and registrars will lead to greater benefits for collections as a whole. Museums with curators and conservators on staff must encourage collaboration and the exchange of information among them to enhance performance in their areas of responsibility. If, as is often the case in small history museums, there is not a curator on staff, consultancy programs can help the existing staff achieve the minimal level of curatorial control. Curatorial expertise needs to be disseminated in the same way and at the same time as conservation advice. In general, the professionalism of the personnel responsible for both conservation and collections management must be upgraded. Education and training pro-

grams, additional publications and increased communications among conservators, registrars and collections managers will help achieve this goal.

I. Recommendations for Collections Maintenance

Two goals for humanities collections are the well-being of the greatest number of objects and their increased accessibility. If a survey of the condition of a collection reveals that conservation problems are extensive, the conservation and curatorial staffs, working together with the museum's administration, should develop and then carefully work out a plan for the methodical treatment of the holdings. The approach should emphasize general rather than specific solutions: total environmental conditions, for example, rather than object treatment. Conservators and curators must have a say in the design of museum environments to ensure that they are appropriate for the materials they house and will contribute to the stabilization of the condition and security of the objects. Minimal environmental standards for collections must be established and widely publicized, and all museum professionals must work together to ensure that borrowing institutions uphold the standards of maintenance appropriate to the objects being loaned.

Without giving short shrift to the care of the primary collections, museums must take steps to prevent the deterioration of secondary collections in storage. In general, the physical condition of objects as well as space limitations in exhibition areas are frequently cited as the reasons why objects remain in storage. By treating objects in storage and rotating them with those on display, a greater portion of the permanent collections will be made available.

For art collections, if the lack of exhibition space has forced portions of the collection to remain in storage, alternative exhibition designs should be considered. The Philadelphia Museum of Art, for example; offers the Johnson study collection: auxiliary galleries with densely packed study collections adjacent to the main exhibition spaces. The Metropolitan Museum of Art, which recently implemented the visible storage concept in its Egyptian wing, demonstrates another possible approach. Special small exhibitions of works drawn from the permanent collection may afford museum staff the opportunity to conserve works from the secondary collection and improve the quality of their documentation. In addition to upgrading the level of care of these objects, exhibitions drawn from the collections focus the museum goer's attention on works not usually seen

and encourage the viewer to think about those works in new ways.

Storage areas are also in need of significant improvement. One approach to the problem involves different types of care based on the character of the collections, ranging from dead storage to active research. In addition, for ethnographic and archeological collections, grouping together objects of similar materials from several discrete collections would allow for the design of controlled conditions proper for the substance of the artifacts. In order for these approaches to work, however, collections must be adequately documented and inventoried, easily located and fully cross-referenced. Surveys must be undertaken periodically, and museum environments must be closely monitored. Organization and maintenance are mutually dependent museum functions, and both require increased attention and education.

II. Recommendations for Collections Management and Documentation

Documentation must be thought of and treated in the same manner as objects in the collection. It must be collected, preserved and interpreted. As collections grow and research continues to increase our knowledge, documentation also expands. It requires a long-term commitment and regular upgrading and refinement. As with the objects themselves, there must also be concern for the physical safety of the documentation and its properly controlled environment. For security and safekeeping, there should be duplicate copies of the documents and a policy for the conservation of the records should be developed.

To gain control of its collections, a museum must first assess the state of its records and their location within the museum. It must analyze the needs of registrars, conservators, conservation scientists, administrators, curators and other researchers. A physical inventory of the collection should follow, affording the opportunity to go back to the object to verify, cross-reference and add information. This is also the time at which a manual outlining procedures for inventories, loans and accessions should be prepared.

After these steps are taken, the museum will be in a position to judge whether automation will be appropriate for its collection and to decide on the design of a software system. The use of computer technology is encouraged. Efforts to computerize should be coordinated and made compatible wherever possible.

Documentation requires professional competence that must be en-

hanced by continuing education and training programs for museum staff members. For educational experiences to be valuable, they must be of sufficient length to provide actual training and they must reach a cross-section of museum professionals, trustees and administrators. The approach taken by the American Law Institute-American Bar Association (ALI-ABA) in its conferences on legal problems of museum administration is admirable. The conferences are cosponsored by the Smithsonian Institution and the American Association of Museums. Although the focus of these three-day conferences changes, the format of general discussions and specific technical information sessions remains the same each year. The sessions attract lawyers, museum trustees, registrars, directors (primarily of small institutions) and other administrators. Extensive study materials support and sustain the content of the conference. This type of continuing education program that reaches a cross-disciplinary audience can serve as a model for efforts in the area of documentation.

On another level, there is a need for educational programs that promote in-depth study of selected topics in documentation including museum automation. More internships and visiting specialist programs should be established. For information sharing, increased interchange between registrars and other museum professionals should be encouraged.

At present there is no mechanism for the ongoing dissemination of information about computerization and documentation projects or for bringing together interested groups of museum personnel and museum computer specialists. Several formal and informal groups that function as clearinghouses already exist, such as the Museum Computer Network, founded in 1976. MCN began as a way to bring together institutions using GRIPHOS, although in recent years it has expanded and is no longer tied to a single software system. Another example is the loosely formed alliance of anthropology museums in the Southwest that use SELGEM. Although important, the efforts of these groups reach a relatively small audience and do not create awareness among the uninitiated.

There is a need for coordination at the national level to provide a focus for and keep track of individual, state and regional efforts. While the conservation field has a national organization—the National Institute for Conservation—to coordinate such efforts, the documentation field does not. Such a national organization could be responsible for organizing educational workshops for museum professionals and for sponsoring outreach programs and publications, including newsletters.

The Canadian Heritage Inventory Network (CHIN) provides a variety of levels of monetary support and outreach programs for museum documen-

tation. (See app. E.) For example, CHIN provides consultants in the area of collections management to help institutions develop priorities for their holdings, for surveys of data, improvements in documentation and reduction of the backlog of underutilized archival material. Funds for equipment are also available. The Canadian example suggests categories that are applicable to the needs of museums of this country and would be especially valuable to small and middle-sized institutions.

III. Recommendations for the Conservation of Collections

The conservation field itself must realize its responsibility for enhancing its reputation by increasing the visibility of conservation and the priority for care. Conservators should play a greater role in museum activities like accessions and work to make conservation a component of the accessions budget. They should insist that when exhibitions are prepared, costs for technical examination and conservation research be included and the results of the research be widely disseminated. At the federal level conservators have recently been included on grant review panels. In addition, conservators have played a role in the newly instituted second phase of the AAM's Museum Assessment Program (MAP II), which focuses specifically upon surveys of the conservation and collections needs of museums.

More opportunities are needed for refresher and retraining courses for practicing conservators and for sharing information among conservators. Additional research and publications, especially in the scientific field, should be encouraged.

The larger conservation laboratories and cooperative centers must play a greater role in educating other museum professionals by offering more workshops and internships and by teaching formal courses at the university level. Nonprofit cooperative conservation centers are already very active in the areas of education for museum professionals and the public, promoting conservation and prevention awareness. They have found it difficult to fund such programs, however. Increased support must be available for the outreach and consulting activities of these laboratories.

At present, the Northeast is well served by regional conservation laboratories but other areas of the country, especially the West, are not. Moreover, the majority of the existing laboratories treat fine arts objects while other specialties are underrepresented. The solution is not necessarily to send objects across the country to be treated or to recommend the development of many new centers. In fact, *Conservation Treatment Facilities in the United States*, published by NCAC in 1980, pointed out that no single type

of facility can meet all of the nation's conservation needs. The key to increased access to conservation services is to strengthen existing laboratories prior to creating new ones and to encourage more collaborative arrangements that allow flexibility on the state or local level for the institutions concerned. Either formal or informal consortiums—a type of networking of individuals and institutions—could develop based upon the cooperating institutions' strengths and needs. Moreover, the nation's largest institutions should all have conservation facilities that could provide services and surveys to small local museums as well.

As a solution to the present dearth of conservators in general, the use of paraprofessionals should be viewed as a strategy for sharing collections maintenance responsibility within the museum and for making better and more economical use of available museum staff. Larger museums and cooperative conservation facilities should take the responsibility for training these technicians and developing guidelines for their education and supervision. Nevertheless, the paraprofessional, while offering valuable assistance, cannot be a substitute for professionally trained conservators. There remains a need to train more conservators as well as conservation scientists.

Whatever the level of conservation museums may plan or attempt, the number of objects in the nation's collections in need of conservation far exceeds the current capacity of the conservation profession to care for them. The current priority, therefore, should be to address the stabilization of conditions and prevent further deterioration. Museums must develop their own priorities for the care of collections. They must commit themselves to care for objects whether they are newly acquired or already part of the permanent collection.

Considering the large number of history collections without adequate staff, the best way to disseminate the necessary advice and to reach as broad an audience as possible is through collaborative programs. In some states these efforts have been very successful; the historical societies of New York, Minnesota, Ohio and Nebraska each have active programs providing consultation and treatment to museums within their areas. Similar efforts, such as the laboratory currently being developed by the Pennsylvania Historical and Museum Commission, should be encouraged and duplicated in other states. Because of the limited number of conservators who treat historical objects and the need to make their expertise broadly available, conservation surveys and workshops for nonconservators to raise the level of preservation awareness are high priorities.

For archeological collections, a step toward reaching a nationwide level

of curation and conservation has been taken with the publication of the Interior Department's standards and guidelines for the curation and protection of archeological and historic resources. These must be more widely publicized in simplified language. In addition, archeological objects at the excavation site have special requirements. There is a need for guidelines for the care of collections at these sites and to establish short courses to educate field archeologists in prevention techniques. With proper care of objects at the excavation site, problems upon entry into the museum would be minimized. Basic research projects in archeology should include a conservation component, and there should be an increased awareness of conservation in competitive contract archeology.

IV. Recommendations for Increasing Awareness of the Needs of Collections

The entire museum community must make a commitment to work together to increase the awareness and dedication of America's museums to the care and use of our collections. It is also incumbent upon the museum community to increase public awareness of conservation. If the recent campaign to save the Statue of Liberty are indicative of the public's interest and willingness to support conservation projects, then the museum community must capitalize on it. In general, conservation can be made a greater focus of exhibitions, publications and other public programming, increasing public awareness of what it is, what it entails and what can be learned from it. Museums should be encouraged to make the drama of conservation and the unseen functions of the museum more visible. The open conservatorium at the Oakland Museum, programs such as "adopt a work of art" and "before and after" exhibitions, are examples of efforts in this area, as is the recent exhibition at the National Gallery of Art using photographic reproductions of the restoration of Leonardo da Vinci's *Last Supper*. These endeavors need to become more widespread.

Conclusion

The recognition on the part of federal funding agencies that conservation is an area of need and obligation is encouraging, but it must be extended to include support for collections management. At the same time it is apparent that the current infusion of federal dollars must be matched by long-term institutional commitments of time, effort, personnel and funds, and by private sector support. It behooves the museum community to expand the source of support for collections welfare to match the ongoing nature of the problems.

Appendix A

AAM and the Collections Needs Project

The American Association of Museums (AAM) has served museums and museum professionals for more than 75 years. Its membership of 8,700 represents a cross-section of the museum community and includes museums of art, history and science, museums with living collections, as well as trustees, directors and staffs of these diverse institutions. Through publications, professional meetings and advocacy at the national level, the association seeks to provide a forum for the discussion of common museum issues and concerns and to articulate to those outside the museum world the value and uniqueness of the contributions that museums make to individuals, their communities and the nation as a whole.

The association has a strong commitment to promote professional standards of programming and operations in museums. The Accreditation Program, the Museum Assessment Program and AAM publications seek to define and promote standards of operation and ethical conduct within institutions and among directors, trustees and professional staff.

In its efforts to encourage serious self-evaluation in museums and planning for the many and rapid changes American society will undergo in the decades ahead, the AAM two years ago established the Commission on Museums for a New Century. The commission has examined and discussed the roles and responsibilities of museums as the preservers of our cultural and natural heritage and as educational institutions. Its discussions on collections-related concerns gave rise to this project, funded by a grant from the National Endowment for the Humanities.

The NEH Colloquiums: Background to the Project and the Participants

The American Association of Museums, funded by a grant from the National Endowment for the Humanities, organized a series of five colloquiums on the subject of collections needs and conservation. The AAM has recognized that the vast resources museum collections represent to the humanities are inhibited from full service to society by the limited capacity of museums to organize their collections in ways meaningful for research, by the fragile condition of many collections and by the lack of a coherent statement of widely accepted priorities for the management and preserva-

tion of collections. By bringing together museum professionals responsible for policy decisions as well as conservation and documentation, the colloquiums focused on the welfare of collections. Participants reviewed the current status of collections, assessed the areas of greatest need and recommended strategies to help stabilize and improve the conditions of collections.

Membership of the advisory committee to the project was as follows:

Arthur Beale, Director, Center for Conservation and Technical Studies, Fogg Art Museum, Harvard University; chairman of the council and board of the National Institute for Conservation; chairman, conservation colloquium

Roland Force, Director, Museum of the American Indian; chairman, documentation colloquium

Russell Fridley, Director, Minnesota Historical Society; chairman, history colloquium

Pieter Meyers, President, American Institute for Conservation

James M. Smith, Director, Henry Francis DuPont Winterthur Museum; chairman, AAM-IMS project on conservation

Raymond Thompson, Director, Arizona State Museum, University of Arizona; chairman, ethnography and archeology colloquium

Evan Turner, Director, Cleveland Museum of Art; chairman, art colloquium

In the colloquiums, participants discussed specific types of humanities collections including those related to ethnography and archeology, art and history. The agendas for the last two meetings, on documentation and conservation, were developed following the earlier sessions and built upon those discussions. In order to ensure continuity in the discussions, the chairmen attended sessions in addition to their own.

The dates and locations of the five colloquiums are as follows:

History: January 23-24, 1984, Lowie Museum, University of California, Berkeley, California

Ethnography and Archeology: February 6-7, 1984, Arizona State Museum, University of Arizona, Tucson, Arizona

Art: February 13-14, 1984, Franklin Institute Science Museum and Philadelphia Museum of Art, Philadelphia, Pennsylvania

Documentation: March 23-24, 1984, National Trust for Historic Preservation, Washington, D.C.

Conservation: April 3-4, 1984, Fogg Art Museum, Harvard University, Cambridge, Massachusetts

Participants in each colloquium were carefully selected to be representative of all areas of the museum community responsible for and affected by the topics under discussion. Conservators, conservation scientists,

museum directors, registrars, curators and other scholars were invited to take part in the sessions, and, in fact, the cross-disciplinary approach made these discussions unique and very profitable. Approximately 10 people took part in each session; all told, 54 people (not including the chairmen) participated in the colloquiums (see list of participants, pp.34).

Each day-and-a-half colloquium began with general discussions. Priorities and strategies were developed on the second day. Afterward the project director prepared a summary of the session, and participants were invited to submit additional thoughts on their subjects and to comment on the summary. The final advisory committee meeting took place on June 10, 1984, to review the report and the recommendations.

Through the discussions a consensus emerged concerning the problems faced by the nation's collections essential to the humanities. There was surprising consistency in the recommendations to improve the collections. This report summarizes the findings, recommends priorities and suggests courses of action to assure the continuity and accessibility of these collections in the future.

While these conclusions have implications for the entire museum field, many recommendations pertain specifically to humanities collections. A similar assessment of the needs of natural history and other collections that serve as basic resources for scientific research should be undertaken. Evaluation of this area was begun by Richard Ford in *Systematic Research Collections in Anthropology* (1977), but this study dealt with only a small part of the nation's scientific collections. This effort should be updated and expanded so that, together with this project, we will have a blueprint for the future care of all museum resources.

Participants in the HISTORY COLLOQUIUM Berkeley, California, January 23-24, 1984

Chairman:

Russell Fridley

Director, Minnesota Historical Society, St. Paul, Minn.

Participants:

Susan Anable

Collections Manager, National Trust for Historic Preservation, Washington, D.C.

Arthur Beale

Director, Center for Conservation and Technical Studies, Fogg Art Museum, Harvard University, Cambridge, Mass.

James Deetz

Director, Lowie Museum, University of California, Berkeley, Calif.

Thomas Frye

Curator of History, Oakland Museum, Oakland, Calif.

Thomas W. Leavitt

Director, Merrimack Valley Textile Museum, North Andover, Mass.

Ann Russell

Director, Northeast Document Conservation Center, Andover, Mass.

Theodore Sande Director, Western Reserve Historical Society, Cleveland, Ohio
Robert Stark Museum Administrator, Oregon Historical Society, Portland, Ore.

AAM Staff:

Susan J. Bandes Project Director
Maureen Robinson Legislative Coordinator

**Participants in the ARCHEOLOGY AND
ETHNOGRAPHY COLLOQUIUM
Tucson, Arizona, February 6-7, 1984**

Chairman:

Raymond Thompson Director, Arizona State Museum, University of Arizona, Tucson

Participants:

Craig C. Black Director, Natural History Museum of Los Angeles County, Los Angeles, Calif.
J. J. Brody Director, Maxwell Museum of Anthropology, University of New Mexico, Albuquerque, N. Mex.
Harold L. Dibble Assistant Curator, University Museum, University of Pennsylvania, Philadelphia, Pa.
Roland W. Force Director, Museum of the American Indian, New York, N.Y.
Ann Hitchcock Chief Curator, National Park Service, Washington, D.C.
Mary Elizabeth King Director, University Museum, New Mexico State University, Las Cruces, N. Mex.
Lea S. McChesney Administrator of Exhibitions, Peabody Museum, Harvard University, Cambridge, Mass.
Bettina Rafael Conservator, Southwest Conservation Laboratory, Santa Fe, N. Mex.
Terry Weisser Conservator, Walters Art Gallery, Baltimore, Md.

Observers:

Jann Gilmore Senior Program Officer, Office of Museum Programs, National Endowment for the Humanities, Washington, D.C.
Mary W. Greene Assistant Program Director, Anthropology Program, National Science Foundation, Washington, D.C.

AAM Staff:

Susan J. Bandes Project Director
Lawrence L. Reger Director

**Participants in the ART COLLOQUIUM
Philadelphia, Pennsylvania, February 13-14, 1984**

Chairman:

Evan Turner Director, Cleveland Museum of Art, Cleveland, Ohio

Participants:

Arthur Beale Director, Center for Conservation and Technical Studies, Fogg Art Museum, Harvard University, Cambridge, Mass.

Joel N. Bloom	Director, Franklin Institute Science Museum and Planetarium, Philadelphia, Pa.
Eleanor Fink	Chief, Office of Visual Resources, National Museum of American Art, Smithsonian Institution, Washington, D.C.
Irving Lavin	Institute for Advanced Study, Princeton University, Princeton, N.J.
William Leisher	Chief Conservator, Los Angeles County Museum of Art, Los Angeles, Calif.
Ann Lowenthal	Professor, Department of Art History, Barnard College/Columbia University, N.Y.
Harry Parker III	Director, Dallas Museum of Fine Arts, Dallas, Tex.
Joseph Rischel	Curator of European Painting, Philadelphia Museum of Art, Philadelphia, Pa.
Franklin Robinson	Director, Museum of Art, Rhode Island School of Design, Providence, R.I.
James M. Smith	Director, Henry Francis du Pont Winterthur Museum, Winterthur, Del.
Marilyn Weidner	Conservator, Conservation Center for Art and Historic Artifacts, Philadelphia, Pa.

Observers:

Jann Gilmore	Senior Program Officer, Office of Museum Programs, National Endowment for the Humanities, Washington, D.C.
Lawrence Rickert	Program Specialist, Museum Program, National Endowment for the Arts, Washington, D.C.
Barbara Schneider	Program Coordinator, Office of Museum Programs, National Museum Act, Washington, D.C.

AAM Staff:

Susan J. Bandes	Project Director
Lawrence L. Reger	Director

**Participants in the
DOCUMENTATION COLLOQUIUM
Washington, D.C., March 18-19, 1984**

Chairman:

Roland Force	Director, Museum of the American Indian, New York, N.Y.
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Participants:

Arthur Beale	Director, Center for Conservation and Technical Studies, Fogg Museum, Harvard University, Cambridge, Mass.
Gigi Dobbs	Senior Program Development Director, Art Museum Association, San Francisco, Calif.
Ronald Kley	Registrar/Curator, Maine State Museum, Augusta, Me.
Thomas Loy	Associate Curator, Collections Management Section, Archeology Division, British Columbia Provincial Museum, Victoria, B.C., Canada
Richard Lytle	Director, Office of Information Resources Management, Smithsonian Institution, Washington, D.C.

Phyllis Rabineau	Collections Manager of Anthropology, Field Museum, Chicago, Ill.
Lenore Sarasan	Computer Consultant, President, Willoughby Associates, Limited, Evanston, Ill.
Edward Sayre	Senior Chemist, Brookhaven National Laboratory, Upton, N.Y. and Senior Scientist, Museum of Fine Arts, Boston, Mass.
Marilyn Schmidt	Program Officer, J. Paul Getty Trust, Los Angeles, Calif.
James M. Smith	Director, Henry Francis Du Pont Winterthur Museum, Winterthur, Del.
Raymond Thompson	Director, Arizona State Museum, University of Arizona, Tuscon, Ariz.
Evan Turner	Director, Cleveland Museum of Art, Cleveland, Ohio.
Susan Weinberg	Assistant Administrator, Exhibitions Coordinator, Detroit Institute of Arts, Detroit, Mich.

Observers:

Susan Anable	Collections Manager, National Trust for Historic Preservation, Washington, D.C.
Jann Gilmore	Senior Program Officer, Office of Museum Programs, National Endowment for the Humanities, Washington, D.C.
Barbara Schneider	Program Coordinator, Office of Museum Programs, National Museum Act, Washington, D.C.
Jane Sledge	Canadian Heritage Information Network, Ottawa, Ontario, Canada

AAM Staff:

Susan J. Bandes	Project Director
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**Participants in the
CONSERVATION COLLOQUIUM
Cambridge, Massachusetts, April 3-4, 1984**

Chairman:

Arthur Beale	Director, Center for Conservation and Technical Studies, Fogg Art Museum, Harvard University, Cambridge, Mass.
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Participants:

Susan Boyd	Curator of Byzantine Art, Dumbarton Oaks, Washington, D.C.
Marigene Butler	Conservator, Philadelphia Museum of Art, Philadelphia, Pa.
Roland Force	Director, Museum of the American Indian, New York, N.Y.
Russell Fridley	Director, Minnesota Historical Society, St. Paul, Minn.
Gerald Hoepfner	Director, Williamstown Regional Art Conservator Laboratory, Williamstown, Mass.
Jane Hutchins	Conservator, Textile Conservation Center, Merrimack Valley, Mass.
Nancy McGary	Registrar, Whitney Museum of American Art, New York, N.Y.
Frank Preusser	Conservation Scientist, J. Paul Getty Conservation Institute, Los Angeles, Calif.
Carolyn Rose	Director, Anthropology Conservation Laboratory, Smithsonian Institution, Washington, D.C.
James M. Smith	Director, Henry Francis du Pont Winterthur Museum, Winterthur, Del.

Raymond Thompson Director, Arizona State Museum, University of Arizona, Tucson, Ariz.
Evan Turner Director, Cleveland Museum of Art, Cleveland, Ohio

Observers:

Jann Gilmore Senior Program Officer, Museums Program, National Endowment
for the Humanities, Washington, D.C.

Susan Phillips Director, Institute of Museum Services, Washington, D.C.

George Seybolt President Emeritus and Honorary Trustee, Museum of Fine Arts,
Boston, Mass.

AAM Staff:

Susan J. Bandes Project Director

Lawrence L. Reger Director

Appendix B

Conservation Organizations

The National Institute for the Conservation of Cultural Property (NIC) grew out of the National Conservation Advisory Council (NCAC) established in 1973 to identify major national needs in conservation, to recommend a coordinated national plan and to consider the creation of a national institute for conservation. In 1982 NCAC disbanded and created the NIC. Membership in NIC is through election to the institute's council, and members include national organizations representing conservation professionals, conservation training and education programs, area conservation membership organizations, institutions with conservation treatment or research facilities and membership organizations, such as AAM, representing users of conservation information and services.

The professional organization for individuals trained in conservation is the American Institute for Conservation (AIC), established in 1959. This organization, with a membership of 2,200, has as its principal responsibilities the exchange, coordination and advancement of knowledge and the improvement of methods of art conservation and restoration. In defining standards in this field, it has published a code of ethics and standards of practice to which its members must subscribe and has established minimum professional requirements for acceptance into various membership categories.

The standard definition of conservation established by NIC in *Conservation of Cultural Property in the United States* (1976), includes "three explicit functions: examination, preservation and restoration. Examination is the preliminary procedure taken to determine the original structure and materials comprising an artifact and the extent of its deterioration, alteration and loss. Preservation is action taken to retard or prevent deterioration or damage in cultural properties by control of their environment and/or treatment of their structure in order to maintain them as nearly as possible in an unchanging state. Restoration is action taken to return a deteriorated or damaged artifact as nearly as is feasible to its original form, design, color and function with minimal further sacrifice of aesthetic and historic integrity."

Appendix C

Cooperative Conservation Centers

At present there are 11 regional conservation centers organized as non-profit conservation laboratories to provide conservation services and other public services to small and middle-sized nonprofit institutions such as museums, universities and historical societies that do not have their own conservation facilities. While the majority of the centers were established within the last 15 years, several, such as the Center for Conservation and Technical Studies at the Fogg Art Museum, have been in existence for at least 25 years. The size and scope of these institutions vary widely, as do their areas of specific expertise. In general, their main source of income is from fees or services contracted primarily by the membership of the laboratories. The staffs make on-site visits and work with members to establish long-range plans and recommend and undertake treatments for major objects.

Educational services are also a major function of these cooperative laboratories. They provide internships and training for conservators, training workshops and lectures for museum professionals other than conservators, as well as consultation to individuals. In addition, the laboratories often undertake research projects.

According to the NCAC study, *Conservation Treatment Facilities in the United States* (1980), the outstanding strength of the cooperatives is their ability to provide a higher level and diversity of conservation services than would be available to museums and other clients elsewhere. On the other hand, financial stability is the major concern of the laboratories. They face problems of inadequate cash flow, the high expense of acquiring and maintaining equipment and difficulties in obtaining grant support. In addition, many original member institutions have by now established their own facilities and no longer require the services of consultants. Moreover, the laboratories must contend with the widespread lack of a tradition for collections care or budget for conservation in many of the nation's museums.

In the fall of 1982, a majority of these centers established the Association of Cooperative Conservation Centers to provide a forum for addressing common concerns and facilitate the continued sharing of ideas.

The regional laboratories and their specialties are as follows:

Balboa Art Conservation Guild, San Diego, California: paintings, works on paper, sculpture
Center for Conservation and Technical Studies, Fogg Art Museum, Cambridge, Massachusetts: fine arts objects (paintings, objects, paper); analytical facilities
Conservation Center for Art and Historic Artifacts, Philadelphia, Pennsylvania: archival materials, paper
Intermuseum Conservation Association, Oberlin, Ohio: paper, paintings, furniture
New York State Office of Parks and Recreation, Collections Care Center, Peebles Island, Waterford, New York: conservation and curatorial staff, fine arts, ethnographic and historical objects
Northeast Document Conservation Center, Andover, Massachusetts: books, documents, paper, microfilming
Pacific Regional Conservation Center, Honolulu, Hawaii: paper, books, documents, paintings, ethnographic objects
Rocky Mountain Regional Conservation Center, Denver, Colorado: ethnographic objects, fine arts objects and sculpture
Textile Conservation Center, Merrimack Valley, Massachusetts: textiles
Upper Midwest Conservation Association, Minneapolis, Minnesota: paper, paintings, Oriental art
Williamstown Regional Art Conservation Laboratory, Inc., Williamstown, Massachusetts: fine arts objects (paintings, paper)

Appendix D

Programs of the Getty Trust

In 1982 the J. Paul Getty Trust received the proceeds of the estate of J. Paul Getty and embarked upon an ambitious program committed to collecting, preserving and exhibiting works of art and to making significant contributions to the national and international field of art history. With the extensive resources of the Getty Trust, programs are being developed that go beyond the reach of others and address needs previously unmet. Among the programs that have been initiated are a new Getty Museum, the Center for Education in the Arts, the Conservation Institute, the Center for the History of Art and the Humanities, and the Art History Information Program.

Of particular relevance to this study are the Conservation Institute and the Art History Information Program. The institute will combine scientific research and art historical and practical restoration considerations. It will address three areas of needs: advanced training in conservation theory and practice through colloquiums, seminars and mid-level fellowships for extended residencies at museums here and abroad; applied scientific research and basic analysis; and the collection and dissemination of information, including publications.

The third area of activities is the concern of the Conservation Information Project. Under the direction of Gerald Hoepfner, the project will be moved from its present location at the Williamstown Regional Art Conservation Laboratory to Los Angeles and consolidated with the institute's other activities. A computerized data system will provide comprehensive up-to-date bibliographic information for the conservation field in scientific and treatment-related areas. At present, project staff have begun to identify the range of information needs of the field.

The scientific research program of the Conservation Institute is also under way, headed by Frank Preusser. This laboratory will have two primary functions: to provide technical analytical services related to substantive conservation questions and to conduct research into specific conservation applications in areas that have so far been neglected. Research will be conducted both in-house and by contract; the first long-term project that has been selected is coatings. The training program will begin as soon as a director and program officers are appointed.

To improve international access to information in the history of art, the Art History Information Program hopes to develop a computerized information system that will include data bases of bibliographical, biographical, photographic and catalog information, as well as provenance and other data files related to art history.

Several existing data bases, such as RILA, Art and Archaeology Technical Abstracts and the Avery Index to Architectural Periodicals, have been taken over by the Getty Trust. Other pilot projects include the Museum Prototype, a cooperative computerization project of object records from eight American museums—the art museums of Princeton University and Dartmouth College, the Getty Museum, the Guggenheim Museum, the Metropolitan Museum of Art, the Museum of Fine Arts in Boston, the Museum of Modern Art and the National Gallery of Art. The Art and Architecture Thesaurus is another project that will develop a common subject-indexing language for the information program. Other projects forming the trial nucleus of the Art History Information Program are indexes to the Witt and Conway Libraries of the Courtauld Institutes in London, the photo archive of the Getty Center for the History of Art and the Humanities, the provenance index begun at the Getty Museum and the Census of Antique Works of Art Known to the Renaissance housed at the Warburg Institute in London and the Bibliotheca Hertziana in Rome. The Architectural Drawings Advisory Group, based at the National Gallery in Washington, is developing, with Getty support, a standard catalog record for architectural drawings.

Ultimately, the intent is that these components will develop into a research tool that will allow easy international access to any of the data bases, either on-line or in print.

Appendix E

Canadian Heritage Inventory Network

The Canadian Heritage Inventory Network (CHIN) is the successor to the Canadian National Museum's National Inventory Programme, which was created more than 10 years ago to inventory the country's diverse collections. The original goal of the program was to create an inventory of the cultural and scientific collections held in public institutions in Canada. The idea was central to the new national museum policy of decentralization of resources announced in 1972.

The plan was to provide access to information on the collections through computerized information retrieval of museum records and to make the information available to all participants on a national basis. Since the initiation of the program in 1972, more than 52 institutions have become participants, and nationwide access to the system is provided through a telecommunication network. After 10 years a review of the entire project took place, resulting in a change of direction. Currently, instead of emphasizing information retrieval on the national level—the original intent of the program—it now seeks to fulfill the collections management needs of individual institutions.

A major concern of CHIN is the development of standard terminologies for the description of objects. In 1982, CHIN initiated a new operating system (PARIS) to allow faster access to collections records and active management of collections. The initial 67 information fields have been expanded to 120.

CHIN also provides several categories of funding and professional expertise depending upon the needs of the individual museums. Planning grants to determine the feasibility of documentation efforts may lead to grants for inventories and collections management projects (including funds for equipment). Grants are available for demonstrations and publications explaining the process of inventorying collections, as well as for training programs for museum students and sabbaticals for museum professionals to write about documentation projects.

Since Canadian museums are nationalized, there exists a centralized governing authority and funding agency for them, and the goal of creating a national inventory can be set. While acknowledging that the Canadian situation cannot be duplicated in the United States because of fundamental differences in governance and support for museums, the overall objectives, outreach programs and funding categories of CHIN can provide valuable examples for the American museum community.