

Records Programs: A How-To Guide

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Dedicated to Hans Nussbaum, AAAS Business Manager (Retired), who knows the value of records, and as a devoted historian of AAAS, carefully preserved much of the Association's 20th century corporate memory.

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Preface

The manual is designed to serve as a guide to the establishment and maintenance of a records program by the officers and governing boards of scientific societies and organizations.

This manual is not intended as an exhaustive treatment of the subject. It is intended as a guide only, providing both a *raison d'etre* for the preservation of organizational papers in an established program, and the basic "how to" to begin the serious task of bringing together the documents that should be saved. Because this manual cannot treat in depth the many facets of document selection, arrangement and preservation, references are provided to lead the user to more detailed treatments of specific areas of interest.

Some scientific associations may already have decided to place their historically important records with a library, university archive, or science history center rather than keeping them themselves. This report still has some use for them because it suggests how they can improve current record-keeping operations. The better the files today, the better the archives tomorrow. Scientific societies that want to explore the option of finding a home for their old records should request a copy of the brochure "A Guide to Donating Your Organizational Records to a Repository" from the Society of American Archivists (address in the Getting Help section of this report).

Much of what follows is based on nearly fifteen years experience in developing an archive at the American Association for the Advancement of Science. Before 1982, the AAAS had no clearly defined policy for collecting and maintaining the records of the Association. Much of its early history was lost, at least prior to about 1960. A potpourri of 19th and pre-World War II, 20th century records are to be found scattered among several eastern university archives and in the archives of the Smithsonian Institution in Washington, DC. Since 1960, and more particularly since 1980, more complete records exist at the Association headquarters in Washington, D.C. The neglect of the earlier records is unfortunate inasmuch as the Association, founded in 1848, played a seminal role in the emergence and later dominance of the scientific and technology enterprise I

the United States. Thus, as the Association prepares to celebrate its 150th anniversary, it finds itself in a difficult position of not being able to document the full extent of its contribution. However, AAAS is not unique in this regard. Other organizations for one reason or another faced or now face similar problems. But some, like AAAS, have taken positive steps to prevent further losses of their corporate histories.

This manual is designed to take some of the mystery out of the concept "Records Management," to encourage the officers and governing boards to examine their records with a view to preserving the corporate (*i.e.*, institutional or organizational) memory, and to make the establishment of a records program less daunting a business than it might otherwise appear.

Acknowledgements

A project such as this generates an amazing number of debts to one's friends, professional colleagues, and coworkers.

This manual owes much to Alan Leviton of the Pacific Division of AAAS and the California Academy of Sciences, who read the entire work at several stages and tested it against his experience with scientific records in a variety of organizations. He also typeset and proofread the book.

Several science archivists critiqued the initial outline and offered advice that reshaped the work, notably Clark Elliott (Harvard University), Pamela Henson (Smithsonian Institution), Lori Hefner (Lawrence Berkeley Laboratory), Helen Samuels (Massachusetts Institute of Technology), and Joan Warnow-Blewitt (American Institute of Physics).

A special thanks to Donna Wells, now at Howard University, for her work on this project when she was at AAAS. David Whitescarver of Rogers and Wells, a distinguished law firm in Washington, D.C., kindly reviewed the outline from the legal point of view. I was blessed with two enthusiastic and helpful program officers at the National Historical Publications and Records Commission, Lisa Weber and Daniel Stokes.

Finally, a large cast of AAAS staff helped the project. Carl Amthor, Debra Wright, and Nan Broadbent provided a niche for the archives in their departments. Joseph Walton and his staff (especially Alton Whitehead, Gregory Gatlin, and Hubert Kelly, Jr.) unfailingly supplied day to day assistance. Janet Kegg, AAAS librarian, provided superb reference service. Among the directorates and departments of AAAS, Laurie Baker, Dawn Bennett, Monica Bradford, Ruth Campbell, Catherine Campos, Mary Curry, Fran Garner, Elizabeth Gehman, Jim Landry, Regina Livingston, Linda McDaniel, and Colleen Struss shared their knowledge of records with me. Bill Bodziak and Julie Ische helped with the administration of the grant that funded this project. And last but assuredly not least, AAAS Executive Officer Richard Nicholson provided encouragement and support for this project at a crucial juncture.

The National Historical Publications and Records Commission awarded AAAS a grant (92-112) that partially supported the project. The NHPRC has been a friend of science records for several decades, and this is but the latest evidence of their interest.

Finally, Professor Mark Aldrich of Smith College helped in countless ways, among them as box-mover, surveyor, sounding board, critic, and cheerleader.

Much of the merit of this report can be attributed to the contributions of all these people. I thank them heartily.

Mistakes remain indisputably assignable to the author.

Why Bother with Records and Archives?

JCAST Report

AAAS's Experience

Affiliates Survey

Advantages of Records Management

Joint Committee on Archives of Science and Technology (JCAST) Report

Realistically, very little is known about the activities of the great majority of scientific and technological societies and of efforts to preserve their records. In spite of their obvious importance for understanding the community of scientists and engineers, JCAST fears that these records are in grave danger either of loss or wide dispersal (Elliott, ed., *Understanding Progress as Process*, 1983, p. 16.)

Starting in the early 1960s, the scientific and historical communities evidenced growing concern over the state of documentation for post World War II American science. Conferences were held, scholarly papers published, and centers for the history of specialized scientific disciplines established. In 1978, a committee of archivists, historians of science, and historians of technology was formed with assistance from the National Science Foundation and eventually the National Historical Publications and Records Commission. Records managers were added to JCAST in 1980. The work of this committee, especially its widely distributed final report (1983), has influenced the documentation of science and technology powerfully over the last twelve years.

JCAST's central conclusion was that while the "results literature" (as they termed technical reports generated from research) was emphasized in efforts to document science, far less attention was being paid to saving the records of the conduct and management of scientific work (the "Process" in the final report title).

JCAST reported briefly but trenchantly on scientific societies. While universities are where science is taught and basic research done, and industry and government where it is developed and applied, scientific societies in the JCAST scheme are "facilitators of communication." Associations are where ideas are debated, both in print and at meetings, the currently most accepted knowledge certified, and to a degree, where the community of practitioners is defined. They sponsor meetings, publish monographs and technical magazines and newsletters, establish professional standards, and spread the results of science to the public. Records are most commonly generated by the publications of the society, the central organization, and the officers. Elected officers' papers may largely duplicate files of the central organization, JCAST noted, and if they are preserved, are often deposited with the scientist's or engineer's papers in the archives of their home institution. Among the records JCAST found in associations are:

- Publications records, especially for journals

- Minutes and agendas of business meetings, especially the central executive authority (The Board of Governors, Council, or equivalent group)
- Programs of technical meetings
- Financial records
- Membership lists

JCAST recommended that scientific societies support or establish discipline-focused history centers, such as the Chemical Heritage Foundation in Philadelphia, which cooperate with a number of chemistry societies as well as the chemical manufacturing industry. JCAST argued that larger societies with their own headquarters should consider starting an archives and records management program as part of efficient business practice. Those who could not maintain their own records should seek a depository (history center, library, university or other archive) whose collecting policy allows them to accession the material. JCAST stated that history committees within scientific associations should make part of their mandate the insuring that the papers of the society were maintained somewhere. Finally, JCAST hoped that scientific groups would know where the personal papers of their major officers--presidents, journal editors, executive secretaries--had come to rest, and would help shepherd those papers that had not yet made it to an archive to a suitable depository.

JCAST paid greatest attention to records management in relation to industrial science, not scientific societies. Because of the legal and regulatory climate surrounding business in the United States, JCAST knew that records management was likely to strike a responsive chord in the industrial setting. There was concern, however, that general business retention schedules applied without customization to scientific companies would destroy many records needed to document the research work of the firm.

AAAS's Experience

Coincident with JCAST's work, the American Association for the Advancement of Science began to address the issue of what to do with its own records. In 1979, Hans Nussbaum (the AAAS Business Manager, trained as an economist) noted that 1980 would be the centennial year for *Science*, the society's weekly technical journal. He and Michele Aldrich surveyed some of AAAS's holdings and suggested that a consultant work with them on a more thorough report and plan of action. Dr. Richard Lytle of the Smithsonian Archives led the project, which was supported by a grant from the NHPRC. In July, 1982, Dr. Lytle submitted his report, which was accepted by the AAAS Board of Directors; the Board also acted on Lytle's recommendations and passed an archives policy (see Appendix A) to govern the whole Association. The AAAS Archives was established shortly thereafter.

The AAAS Archives grew tremendously in the next few years as the association moved from four sites scattered around Washington, D.C. to one building. Before they moved, offices sent to the archives records they had been accumulating for decades. The central building included space for the archives with fixed shelving (the floor supports would not take mobile shelving) and adequate temperature and humidity controls (part of the building HVAC system). Nearly all the records in this space have been transferred to acid free boxes. As they prepare records for transfer, most AAAS offices assemble a file

list (finding aid) and fill out a transfer form describing the material (see Appendix C). The archives keeps a master computer database of all archival collections that includes the information on the transfer form and notes the existence of a finding aid.

AAAS offices, especially the accounting division, found that they needed to keep some records for a few years before discarding them, but the documents were not needed for long-term, historical preservation in the archives. The association rented nearby storage as an order of magnitude less expense than rental space in the active offices. A new form was devised to control these records.

Richard Lytle noted that AAAS did not put a high priority on maintaining office files, and several years of collecting records from these offices into the archives bore out his observation. In 1992, the AAAS asked the NHPRC to help establish a records management program at AAAS and to report the lessons of doing so to other scientific societies. This is the genesis of this guide.

Affiliated Society Survey

JCAST recommended that AAAS survey scientific societies to learn which ones had archives and records management programs. The universe of organization is large; to keep the survey manageable and to insure a good response rate, AAAS confined itself to a canvass of its affiliated organizations (238 as of 1995). The executive secretary or equivalent officer of each society received a personalized letter explaining the project, a brief questionnaire, and an addressed stamped reply envelope. We expected a response rate of about 25%, but received 72%. The results of the survey are as follows:

- 50% had neither an archives or records management program
- 31% had someone who served as archivist (staff or member) or had arranged for a depository to take their records
- 17% had some combination of archives and records management
- 3% had records management only

Often the society's chief officer (president or executive officer) was listed as the head of the program rather than a specialized staff person or society member.

Advantages of Records Management

The benefits of records management fall into three categories: (1) improving efficiency of association operations, (2) value to the scientific community, and (3) legal justifications.

In his book on record-keeping requirements, Donald Skupsky puts the following phrase in boldface: "**Meet you own needs first.**" The greatest incentives for proper handling of records are that they improve the way the association conducts its business. Susan Diamond estimates, for example, that records management frees up about 40% of the space devoted to file storage. That room is much better used by programs that carry out the goals of an association. She also points out that money is saved that is not squandered on the proliferation of more and more file cabinets and folders. A telling point is the faster retrieval of information when clutter is reduced. Diamond also notes

that in 1991 dollars, \$120 worth of clerical time is needed in the search for an incorrectly handled document. Thus, if records are well managed, staff will conduct business faster and more accurately. Also, good records produce data for historical perspectives in planning the future of an organization, and historical significant materials are a rich source of inspiration for marketing pieces, from ads to brochures to calendars and right on through the alphabet.

Society members are the segment of the scientific community most likely to gain from keeping good records. To pick a simple but common example, streamlined membership records yield prompt answers to inquiries about dues and subscriptions. When a records program results in an archive of historical records, members can find materials to study and write the history of a society's contributions to the discipline (for example, see the recently compiled post-World War II, two decade history of AAAS, *Renewing a Scientific Society*, by Dael Wolfle [AAAS, Washington, D.C., 1989]; also the interesting *Geological Society of Washington*, edited by Eugene Robinson [1993]).

Historians, sociologists, and philosophers of science will use a society's records to write about how science operates (e.g., David Hull's *Science as a Process* [University of Chicago Press, 1988]), and their results will often find their way into improved science education in the classroom.

Traditionally, the rationale for records programs has centered on legal reasons, which Skrupsky details at length and illustrates with horror stories from case law. Authorities on records management tend to express the legal justification in negative language, stressing the need to avoid lawsuits or once one is filed, minimize the chance of an adverse ruling. But there are positive aspects of records in legal disputes: as Skrupsky remarked, records are cheaper evidence than the testimony of witnesses, and good records may be the source of your defense.

Skrupsky draws back at several points and reminds readers that regulations tell businesses what records they must keep for certain periods of time, but that without such rules, businesses would probably keep them for about the same period anyway, because the records are simply needed to conduct operations. He also notes that each organization should decide on its own how much longer than the minimum it will keep certain documents. The obvious benefits of retaining historical records must be balanced against the slight but real chance that they could be deployed against you in litigation. He summarizes the legal basis of good records management this way:

- Records that should exist, do exist.
- Records that should not exist, do not exist.
- Records are admissible as evidence because they have been properly cared for.
- Records for your position in a dispute can be assembled efficiently, completely, and at little cost.

How to Set Up a Records Program

Functional Analysis

Records Survey

Appraisal

Creating and Activating Records Retention Schedules

Functional Analysis

The goals of a records program are to document your organization for conducting its business more efficiently and to preserve its heritage for myriad historical purposes, ranging from analysis and planning to celebration. To be useful and complete, the records program is grounded in what modern archivists and records management call a functional analysis of your organization--*What does your association do?*

Archival functional analysis grew as a theoretical concept from the minds of many thinkers, including Helen Samuels (archivist of the Massachusetts Institute of Technology). Samuels has also published the best known application of it in *Varsity Letters: Documenting Modern Colleges and Universities* (1992). Because Samuels specializes in science archives and because MIT is a science-oriented university, *Varsity Letters* offers many lessons for scientific associations. A glance at Samuels' list of general university functions shows that scientific societies share many of them:

- Confer credentials (recruit, select, admit, advise, and graduate students)
- Convey knowledge (teach, learn, formulate curricula)
- Foster socialization (informal learning outside classes)
- Conduct research (search for new knowledge)
- Sustain the institution (governance, finance, personnel, buildings, security)
- Provide public service (technical assistance and continuing education for the community outside the university)
- Promote culture (preserve and display art, science, history and other aspects of society through museums, libraries, and archives).

Samuels stresses that the mix of these functions varies from school to school, and that an activity such as athletics may belong to one function at school 'x' and another at school 'y.' To be a useful basis for collecting and appraising records, functional analysis must be conducted at each institution. She also encourages archivists and records managers in workplaces other than academia to do a general functional analysis like hers for the entire setting, and then tailor it to their specific institution.

Below is a first attempt at a functions list for scientific societies. Some of the terms are borrowed from Samuels, but the activities under them are different from universities. Your association may do some of these but not others, and your group may add functions not on the list.

- Set Direction of the Association and the Discipline
 - establish policies and priorities
 - initiate programs and projects
 - de on the mission of the association
 - take stands on issues such as creationism
- Certify Scientists and Convey Honors
 - election to membership or fellow status
 - appointment and election to office in the society

- certification based on exams or experience and training
 - awards for research distinction and service to science
 - awards for students
 - financial support for research or curriculum change
- Edit and Publish the Work of Scientists on Paper or Electronically
 - journals and newsletters
 - monographs and popularizations
 - software and data sets (maps, tables, catalogs, fieldtrip guidebooks)
 - instrumentation and techniques guidebooks
- Convene Meetings
 - on research topics within the discipline
 - on societal issues relating to the discipline
 - on governance internal) matters
 - encourage student participation and presentations
- Advance Education in Science
 - teach short courses on technical topics
 - affect the scientific curriculum from nursery school to graduate school
 - popularize science through lectures, exhibits, and publications
 - infuse science into popular media (TV, radio, print) (via releases, meeting press rooms, and broadcasts)
- Advise Government and Voters on Scientific Issues
 - run seminars
 - give testimony on request
 - conduct research and publish results and recommendations
 - inform members on government matters of interest
 - recommend and supply scientific experts
- Certify Knowledge and Define Boundaries
 - take stands on controversial issues such as creationism
 - arbitrate disputes
 - offer print or in-person forums for debate
 - establish and enforce codes of behavior
 - expose quackery
- Measure and Improve the Status of the Profession
 - conduct labor market, educational pipeline, salary and other human resources surveys and publish results
 - assess the health of funding for scientific research
 - track participation of people in science, including women and ethnic groups
 - run employment exchanges, job fairs, and job bulletins
 - monitor the status of persecuted scientists

- Sustain the Institution
 - finances, including sales of advertising and products
 - administration
 - fundraising
 - member recruitment and services

To tailor a functional analysis for your own society, study the mission statement, constitution and bylaws, organizational chart, annual reports, histories, minutes of the executive body (Board and Council). Examine its products. Think about what its officers do. The resulting document will be a first draft. As your association evolves, and you learn more about it through observation and study of its records, the functional analysis will change, especially the emphasis within categories.

Records Survey

A survey of active and non-current records, kept in all media, follows functional analysis and precedes appraisal and disposition. It will tell the association what is well documented, what is documented in duplicate or in too much detail, and what is under-recorded. The survey will help suggest economical storage of inactive records needed for research purposes or retained because of state and federal regulations. Active files will be improved by eliminating duplication and clutter, and less file space will be needed.

To keep the survey manageable in terms of time and resources, sketch out a plan for it before beginning the project. The plan might state the goals of the survey, outline the method (questionnaire filled out by the departments? Interviews by you or a records consultant? Telephone follow-up or not?), list what data are to be collected, include a draft of the survey form and a list to remind you of all the locations where you must search for records, schedule actions on a timetable, budget costs, and suggest how the results might be disseminated.

Experienced records surveyors warn against trying to accomplish everything with one survey. The data collected should be directly related to the goals of the project, which in this case are appraising records and deciding which should be kept in what medium and location for how long. Too ambitious a survey leads to long questionnaires that neither you nor your allies in the offices will have the time or patience to complete. The ideal survey form is one page, with clear, short questions and lots of space for answers and comments (Fig. 1). Test a draft form in a small office that is supportive of the idea of a records program before you start using the questionnaire throughout the organization. If possible, design your form and computer data entry screen with the same layout.

If someone else, especially people in the department owning the records, is going to fill out the form for you, avoid archival jargon or give examples where you must use it. Use departmental accounting codes if you want to number things.

Records manuals provide samples of survey forms. Your form will reflect your goals and organization, but should include the following minimum items (Fig. 1):

- Department name and contact person
- Records series name and title (e.g., "Paid Invoices")
- Description of the records

- Who creates and maintains them
- What they are used for
 - Current operations
 - Research value for planning, forecasting, history
- What they consist of: what's in a typical file?
- Medium/housing (including hardware and software if electronic)
- Copy or original?
- Inclusive dates or time span
- Size: linear or volume measurement or count
- Activity: how long the department frequently consults records
- Who surveyed them and when (date)

Inventory Work Sheet

Date	Number
Record Series	Administrative Unit
Dates	Restrictions
Volume	Source of Material
Number and Size of Files, Drawers, or Documents	Office Location (Building, Room No.)
Person Completing Survey Form	Contact person
Description (Title, types of material, nature and dates of responsibilities creating office or officer, subjects covered, duplication, missing or purged material)	

Arrangement

Index, Finding Aids or File Guides

Figure 1: Original inventory work sheet used at AAAS, based on a similar form used by the Smithsonian Archives.

The concept of *records series* needs a few words. Obviously you cannot complete a form on every document or every file folder, and a form that includes all the records on a department on one page is too aggregated. *Records series* are those files that are related to each other by the way they are created or used. If you are doing your first survey and need some experience with the series concept, ask an experienced archivist or records manager to review a few of the first forms you fill in. It also helps to read a few published guides to archives holdings to see what constitutes records series and titles (see, for example, the Guide to the Smithsonian Archives (1978, 1983)). There is some variation from institution to institution on assigning record series titles, as evidenced in a general compilation such as Andrea Hinding, ed., *Women's History Sources* (1979) which reports on collections all over the United States. You should be consistent on record series titles

within your survey in order to spot duplicate sets of records in different departments and to create uniform retention schedules for similar records throughout the association.

Craft a letter about the survey and the records program. It should explain why the association is undertaking this effort and what the departments can expect to gain from it. The letter should outline your method and acquaint staff and officers with the personnel who are doing the survey. In the letter to department heads, ask who from their unit can work with you as a partner on records in their office or department. Discuss the project with this person face to face if possible; this is someone who can be a long-term ally of records management there. Mention their names in subsequent letters to staff and reports on the project.

Scientific associations are small enough that you should be able to examine records yourself with the help of your department ally. Mailed questionnaires usually get a low response rate and are error prone, but they may have to be used for distant sites such as regional division records. Telephone follow-up is advisable for gaps, errors, and non-respondents. Depending on the corporate style, make appointments to examine records or drop in when you know the department is at peace (do not survey accounting records at the close of your fiscal year or of any office just before an annual meeting.)

Look for records everywhere--in closets, file cabinets, bookcases, desktops, credenzas, basements, attics, parking areas, tops of furniture, under furniture, in supply and specimen cabinets (in museum collections, curators occasionally file collection-related documents, such as field notes, with specimens). Be alert for all media--letters, memos, contracts, receipts, notes, drafts, blueprints, minutes and agenda, filled in forms, printouts, reports, computer tapes, audiotapes, videos and films, disks, photos, index cards. Draw floor plans and mark where records are located. Be respectful of private materials kept in desk drawers. Label unmarked file cabinets as you go. Carry a survey kit consisting of paper, scissors, clipboard, forms, scotch tape, tape measure, bandaids, flashlight, felt-tip markers, post-its, hand soap, hand lotion, gloves, and, just in case, aspirin. A notebook computer will allow you to enter data on the spot rather than copying them later from forms, but even these small computers cannot be used everywhere. Back up your data files frequently if you do use a computer notebook (always carry a spare floppy disk for this purpose). Survey the records in departments first because it will give you a better idea of the universe of records generated by the association, and then survey storage areas where inactive records are kept.

Provide progress reports on the survey to the association as you go along, in the association newsletter or e-mail bulletin board. Each department should receive draft and final copies of the survey of its records, including what you find in storage. You may decide to distribute a summary list more widely than just in-house; AAAS did this after its first record survey ten years ago, and found that other science archivists were as equally interested in it as historians of science.

Appraisal

Appraisal in everyday parlance means 'assess for monetary value.' Sometimes records are indeed evaluated for their market value, but this is rare and usually done where personal papers are being donated rather than organizational records assessed. In

archives and records management, "appraisal" means judging what records should be saved (and for how long) and which can be discarded (and when).

In deciding what records to keep and destroy, a scientific association has some minimum obligations imposed by regulation and law, but these often cover documents least useful in telling about your organization. The surest touchstone is the functional analysis of your group. The goal of appraisal is to preserve records that document what your organization does. The value of the records arises in part from uses to which the association puts them in everyday operations and in part from the scientific world of which it is a part. Archivists and records managers recommend establishing retention periods records needed for the operations of the group--including documenting its past activities in the context of science generally and saving material that has long term research value--and then lengthening the retention period, if necessary, to comply with the law.

In comparing the records survey against the functional analysis of your association, you will find that some activities are scantily documented and others are recorded in many different series. Over the years, archivists have developed criteria for choosing among series that compete for valuable space. The Smithsonian Archives, a major history center for American science, bases its appraisals on the history of the office and its records in the context of the importance to the Smithsonian and the scientific community of which it is part. It uses the following criteria from the archival and records management literature to assess the institution's own records:

- **Administrative Value.** Often the office that created the records can provide guidance on this point. Study why the record was created and how it was used in the originating office.
- **Legal and Fiscal Value.** Skupsky and the federal Guide to Records Retention can be helpful general guides, but review by your own auditor and lawyer is crucial in meeting state requirements and in tailoring retention to your own circumstances.
- **Research Value.** This may be for evidence to sustain your association's side in a dispute, or it may be for historians, scientists, journalists, or others looking for data or writing about your group. "All records have some research value...select that portion with sufficient value to justify the costs of retention, description, and preservation." (Brichford, 1977, p. 8) The first criterion for judging research value should be the degree to which an item or collection of items documents the activities of your association, measured against your functional analysis. Other factors affecting research value include these:
 - Credibility (first hand account? Biased source?)
 - Timespan covered (duration, gaps)
 - Intelligibility
 - Frequency of use
 - Type and quality of use
- **Arrangement, Accessibility, Volume, and Form**

- Relation to Other Records. Is it the series of the originating office? Is it the fullest set? Is it a duplicate set?
- Age, Scarcity, and Uniqueness. Material relating to the origins of a group are prized even if in humble forms. Functional analysis may require that some records that are poorly preserved, are hard to read, or disarranged are kept because they are the only trace of an important activity.

Creating and Activating Records Retention Schedules

Schedules are tables or outlines that briefly describe records created by association offices, specify how long they should be kept there, and set a date for discard, for transfer to storage (with a later date for discard from storage), or for sending to archives. The date that triggers action may be so many years after the record was created, or it may be so many years after an event, such as an audit. Schedules may be generated in a database or word processing software, depending on how complicated the records picture is in your association and how often you expect to revise them. A database takes longer to set up than a text file, but can generate more kinds of reports for you and is easier to sort. A text file accommodates comments more easily.

The minimum retention period for some records is determined by regulation (especially if you do business with the government, such as receiving federal grants), statutes of limitation that give a time limit during which you can sue or be sued, tax audit requirements, and other guidelines and rules. For this reason, some records management handbooks suggest you ask your association lawyer to work closely with you on drawing up schedules. It is more practical to consult a good guidebook on records retention, such as that by Skupsky, and present the draft schedules for your lawyer to review for local and state quirks or for circumstances peculiar to your organization. The accounting firm that audits your association's financial records should also review the draft schedules for records kept by the finance office. External review by archivists or records managers at nearby institutions or other scientific societies may also be helpful.

Internal review moves up the chain of organization. First to check the schedules should be the people you worked with on the records survey, then the heads of the offices or elected officers, and finally the chief executive officer. It is advisable to obtain written agreement to the schedules, but if someone below the top level is a chronic procrastinator, you can try telling them that the schedule goes into effect in x weeks unless you hear from them.

The hardest part of implementation of a records program is accustoming offices to discarding or transferring records according to the schedule. Penn *et al.* have observed that records get transferred and destroyed all too often not by the schedule, but when offices run out of space. If offices do not follow the schedule and association records are needed in a court battle, your records management program may be challenged as a paper tiger, as it were, and opposition counsel may subpoena material from records that should have been long gone. Offices need to be persuaded that keeping records "just in case" can be more harmful in lawsuits than disposing of them on an approved and regular basis for business reasons. Sometimes economic arguments are persuasive: Robek *et al.* report that records kept offsite instead of in busy offices can cost fifty times less to store. Diamond

advises setting specific days during the year for file clean out following the guidelines of the retention schedule. Skupsky suggests coercion in a humorous aside--by conspiring with the purchasing office, you can delay buying more file cabinets until inactive files are transferred or destroyed according to the schedules.

Written documentation must be kept of records that are destroyed. This will save historical researchers from hunting in vain, and will be useful in handling subpoenas on extinct records. When the records program is started, associations find themselves ready to discard large numbers of records discovered to have no legal, operation, or historical value whatsoever. Skupsky notes that judges are apt to be skeptical of one time destructions, and suggests that records that would be discarded under scheduling be handled that way rather than as one shot efforts whenever possible. For the remainder, you should retain information from the survey, decision-making, and approval processes that justify their disposition.

Publicizing the records retention program is usually done by distributing the schedules with instructions on how to use them. You may want to include summary guidance on how to set up good files with the schedules; ARMA publishes superb manuals on this, and a set can be placed in the association library. The handouts should also include instructions on how to transfer records to storage or the archives (see appendix D of this report). Circulating a copy of the schedules and procedures to current staff or officers is not enough to insure action. Be prepared to visit or call offices to make sure they are following the timetable. Try to get the guidelines and instructions into the association handbook, personnel manual, or procedures book. When new staff or officers start their work, send them a welcome with the records schedules and procedures attached. If your association runs training seminars, offer to conduct one on filing and records management.

Retention schedules are subject to change. Compliance will be better if they are kept up to date. Eliminate record series that are no longer kept, and add sections on new ones. Review retention periods with those who use the records--are they too long (the records aren't being consulted) or too short (someone went looking for something that had been discarded?). Records managers recommend a thorough review and revision every three years or so.

Association Activities and the Records They Create

- Set Direction of the Association and the Discipline
 - Establish policies and priorities
 - Initiate programs and projects
 - Decide on the mission of the association
 - Take stands on issues such as creationism

The records for this function are most often generated by the governing bodies (Board of Directors or Council), the Executive Office (if there is a staffed headquarters), and the President.

The agenda, minutes, reports, and other substantive records of the governing bodies are crucial documentation for your organization. Staff members and outside

researchers commonly begin research on any topic relating to the association by finding out what the governing bodies had to say about it. Obviously these are permanent and vital records, worthy of the greatest care in preservation, security, and accessibility. During the San Francisco earthquake and fire of 1906, staff of the California Academy of Sciences risked their lives to save the minute books from a burning building, and these documents are among the few items of the Academy that survived the cataclysm.

The Executive Office usually oversees implementation of the mandates of the governing bodies. It establishes procedures for the organization and works with committees and staff to insure that the association conducts its operations in a business-like fashion and accomplishes its mission. Its records are a rich source of information about the long-term achievements of the group and are frequently consulted by its own members and staff and by outside researchers. In setting up retention schedules, records managers and archivists find that correspondence, reports, budget files, governance records, and the like should be retained as permanent records. What can be scheduled for disposition--and the office itself almost always recommends this--are records relating to logistics (such as setting up meeting times and places for the governing board) once they aren't needed for current operations or audits. The official set of financial records of this office is normally kept by the accounting office of the association, but a few duplicate record series such as annual budgets may be kept by the Executive Office for ease of reference.

The records of the President relating to the society--and of other elected officers--are usually considered part of his or her personal papers and are rarely accessioned by an association archive. Normally they are deposited with the rest of the papers in the library or archives of institutions with which the officer had their last or longest employment. Sometimes it is necessary to copy parts of the President's or other officers' files to fill a gap in the documentation of an important association activity. If these copies are accessioned into the permanent files of your group, the source of them must be made clear, as permission to quote will probably reside with the depository where the original papers are. It is also a good idea to keep a list of where the papers of past officers of the society are housed.

Associations are sometimes consulted about where scientists who have been officers should place their papers. The Society of American Archivists and some discipline history centers publish one-page brochures that can be distributed for guidance. If there is someone to do it--a history center or committee is ideal for this--the association may take a more active role by contacting important past officers and helping them shepherd their papers to a depository.

- Certify Scientists and Bestow Honors
 - Election to membership or fellow status
 - Appointment or election to office in the society
 - Certification based on exams or experience and training
 - Awards for research distinction and service to science
 - Awards to students
 - Financial support for research or curriculum change.

Current membership lists are kept by every association, usually in electronic form. The lists range from simple name, address, and dues paid entries on pc word processing software that generates bills and labels to mainframe databases that keep detailed profiles on the members, including their past activities in the association. The AAAS member file is of the latter type, requiring four computer screens for data entry.

Appraisal and retention for membership files are daunting. Groups that publish a member directory may find that keeping an archival set of the books is sufficient for verifying whether persons were members. However, there is a limit on the size of the association that can produce a manageable volume. The Geological Society of America has about 17,000 members and its 1995 directory, with indexes and small but readable typefaces, over 350 pages long in 8.5 by 11 inch format. AAAS, which now has 142,000 members, hasn't published a member directory since 1948 (although it does publish lists of fellows occasionally).

Groups too large for directories may find that microfilm or microfiche copies of the printed out list, made once a year, are an acceptable medium for checking on individual memberships

Directories and micro-printouts are clumsy substitutes for electronic files if the association or an outside researcher wants to do statistical studies of the members because the data must be sampled and reentered. For that reason, the final choice is to keep them in electronic form. Machine readable records present serious records management and archival challenges, and a substantial and helpful literature has grown up to deal with them if your association decides to keep its members records in that medium (see "Further Readings" section of this report).

Three points from this literature cannot be stressed enough in electronic record-keeping:

- Preserve old data on media and in computer languages that can be read by software and hardware available today (ideally, this can be written into the contract with an outside fulfillment vendor if you use one; if you handle the records yourself, convert the data and test their readability when you change software or machines or hire a conversion bureau to do it).
- Archive all editions of the printed data entry guidebooks that tell you what the elements of the electronic file are and what they mean (the current guidebook for the AAAS membership system runs to 35 pages).
- Save data at least once a year on the same date(s) every time so that members who stay with you for only a short period are recorded.

Records on office-holding, election to fellow, awards, or other honorary status consist of nominating and evaluating papers, correspondence and reports on the election process, and lists of persons awarded the standing. The lists are normally permanent records, but your records survey may show them maintained by several offices and only the set generated by the office that administers the program usually needs to be kept beyond current needs. Nomination and evaluation papers are often collected under a pledge of confidentiality; if they are retained, this promise must be honored for the duration stated in the solicitation or assessment. The forms on successful awardees are often retained for long periods--even permanently--by associations because questions

arise on why someone won it, possibly as a precursor to awarding them something else. However, these papers are bulky, and associations commonly discard files on unsuccessful nominees within a few years and may sample files on awardees back a decade or so if they lack space to keep them all.

Some care is needed with records or certification. These days employment may hinge on whether a person has the credentials claimed, and hiring offices may check your association to find out if the applicant did indeed pass the certifying exam or course. If the certification has a finite time period to it before renewal is required, you should keep records that document who qualified under the program up until the renewal deadline is past. If certification is indefinite, lists should be maintained of those who qualified for enough time to cover the working life of most scientists (say, fifty years). The exams or applications for certification need to be retained for the period during which an accusation of fraud might be raised, as determined by the statute of limitations in your state. A sample of them should be retained permanently as part of the documentation of the process, as should files relating to policy and procedure for running the program. The certificates themselves are good exhibit artifacts and a few of each are worth preserving for that use.

- Edit and Publish on Paper or Electronically
 - Journals and newsletters
 - Monographs and popular books
 - Software and data sets (maps, table, catalogs, fieldtrip guidebooks)
 - Instrumentation and techniques guidebooks

This activity is at the heart of what JCAST termed the "facilitator of communication" role that scientific societies play in the world of science. Associations are well experienced in handling the enormous number of paper and electronic records required to carry out publications programs.

Publication touches on areas where lawsuits (plagiarism, slander and libel) may arise. The statute of limitations in your jurisdiction is crucial for deciding the minimum time for keeping what records. For example, since *Science* is published in Washington, D.C., story files (the materials gathered by the writers of the magazine's news section) must be kept at least one year in case a story is challenged in court. As a practical matter, story files are commonly kept at *Science* for at least three years, partly on the advice of AAAS lawyers and partly for news department operations. The writers commonly check older story files for follow-up or in researching related issues.

Once the issue that inspired the story has died down and the likelihood of legal challenges is past, the question arises of what to do with these records. Most commercial publications discard story files when the topic is stale, finding that the published version is enough and that the number of files can be overwhelming. However, the news section of *Science* is such a vital part of the magazine and so depended on by the scientific community that the AAAS archives solicits donation of older story files by reporters for long term preservation. Some of these have intrinsic value, such as Eliot Marshall's box full of material on Three Mile Island, Mitch Waldrop's files on Challenger, or Gina Kolata's interpretation of mathematics breakthroughs. Not all writers choose to send their

story files to archives, but enough are saved to show how the news department has functioned over its nearly thirty years of existence.

Story files present another problem: writers often do interviews under a pledge of confidentiality, and include the notes in the files. For that reason, access to story files may be restricted. At *Science*, researchers outside the news department must have the permission of the writer to use the files, or if the reporter has left AAAS, of the head of the news section.

Central to any technical journal are the records of the submissions from scientists and the process by which the manuscripts become published articles. The volume of material is awesome; *Science* generates over thirty cartons a year of paper worthy of at least short term preservation, plus gigabytes of computer files, in connection with the review and publication of scientists' research.

Journals of all sizes have some sort of tracking and indexing system to chart the course of a submission through review and editing. This may range from a card index with handwritten entries about actions taken on each item to a computer database that captures many features of the submission as well as accounting for the handling of it. As *Science*, the system has evolved from one end to the other of this range. The current computer tracking system also serves as a subject index for the technical side of the journal; a customized thesaurus is used to optimize the reliability and usefulness of this feature of the database. In its current incarnation, the system is a vital record of the association, and special arrangements have been made to keep backup copies onsite and offsite in case of disaster.

The second group of records generated by submission of research papers is what is called a "jacket" in publishing slang. It is an envelope or folder which contains the submission, reviewers' comment, and correspondence between authors and editors. If the article is accepted, the file swells with material from the editing and production process--revisions, copyedited texts, and marked up galleys. At *Science*, six months after an article is published, the file is thinned of the latter material.

At AAAS, confidentiality of the review process requires that the computer database and jackets files are closed to researchers. Only the editorial staff has access to these files. One exception is made on the database: the AAAS librarian is allowed to search it when normal bibliographical channels do not yield desired citations. Articles not accepted for publication are returned promptly to the author, and only a slim record is kept of the transaction. The jackets for accepted manuscripts are maintained by the journal only for its own use for about five years after submission.

Other scientific societies conduct peer review under pledges of confidentiality for a finite period of time or have a policy that allows disclosure of the names of authors and reviewers to each other, in which case the group needs to decide whether to keep submission records for the long term. Most do not. The volume of these operations can be sizable, and if the records are maintained beyond current operations, they may need to be sampled. Several studies of the peer review process have been conducted by scholars using such records, but each association needs to weigh its unique blend of resources before deciding how long to keep them. Some organizations may decide to keep the tracking files but not the jackets.

No matter what resolution is reached on the issue of submissions file and story files, most scientific associations try to preserve the records of the evolution of editorial

policy and procedures. This material may be in the form of correspondence of the editor, minutes of editorial advisory committees, reports of ad hoc evaluative boards, memos to and from staff, and similar records. When the records of the editorial office are well managed, they become good permanent records for archiving on this important function. For example, the central office papers of Philip Abelson, editor of *Science* from 1962 to 1984, take up only twenty boxes in the AAAS archives. The files of his successor, Daniel Koshland, editor from 1995, are expected to be about ten boxes. The records of both were maintained by exceptionally competent secretaries well trained in filing and with an eye for what was significant.

Book publication (reports, monographs, popularizations) is a common association enterprise. With the desktop publishing, the amount of paper files per book has declined somewhat, but the problem of what to save has been transferred from one medium to another. The correspondence between editor and author, the minutes of advisory boards, contracts, reports to the executive office, and procedural guidelines are durable records of limited size, and are commonly retained as permanent records. The proliferation of drafts, galleys, and paste-ups can be staggering. Normally the latter records are maintained for about a year after the book appears in print. By then the publications office has some idea of whether a second edition is needed and if any of the artwork must be saved for that occasion.

Software and data sets (maps, fieldtrip guides, tables, and catalogs) should be documented in two ways: an archival set of the final version should be maintained in a secure place, and the process by which the material was produced should be codified. As with books, successive drafts are usually not kept long beyond the appearance of the item, although the first draft may be deemed to have historical value. A special consideration arises regarding the data from which these products are formed. Normally these are retained by the office that created the item, rather than among the records of a publications office.

Instrumentation catalogs and techniques guidebooks may generate extensive "information" files from which the publication is drawn. The experience of the AAAS with the files of the *Guide to Scientific Instruments*, a supplemental issue of *Science* for several decades, may be instructive. When the *Guide* was outsourced, the archivist and head of the project retired the files to a storage area for three years. During that time, they were not needed by researchers. The office head and archivist decided to save a one-in-twenty sample of the files to illustrate how the guide was produced, a compromise between the need for space and the needs of future researchers which has proven satisfactory so far.

- Convene Meetings
 - On research topics within the discipline
 - On societal issues relating to the discipline
 - On governance (internal) issues
 - Encourage student participation and presentations

Association meetings may be managed by a central meetings office or dispersed through the organization. Also, any given meeting may cover more than one of the above functions; the AAAS annual meeting, for example, includes all of them. Symposia,

lectures, and contributed papers given during the annual meeting present the research findings of scientists and spell out the implications of the work for society at large. An active pressroom insures that print and broadcast media can efficiently disseminate the findings to the public. Both the AAAS governing bodies (Board and Council) are convened during the annual meeting. An awards competition for the best contributed papers, social functions, and special registration rates are designed to have graduate students participate, and for younger students, an entire day is taken up with hands-on science activities for children in the host city.

Abstracts printed in a meeting program are a variant form of publication in many fields of science, and a convenient summary of what the scientist intended to say in the presentation. They have considerable research value and requests to the AAAS library for abstracts from 19th and 20th century AAAS meetings are not uncommon. However, what the scientist actually said is harder to document.

Many associations allow an outside service to tape proceedings of lectures and technical sessions and sell them for a reasonable fee. The contract with the audiotaping company usually promises that a set of the tapes are given to the association and these can be archived. However, audiotapes require special storage conditions and must be retaped periodically before sound quality deteriorates. There are also restrictions on the distribution and use of the tapes that are spelled out in the release form signed by the speakers and the contract with the association; if you archive the tapes, it is crucial to keep the copy of contract and permission form used each year for reference purposes.

Sometimes the author provides a paper copy of the presentation. Like the abstract, this may deviate from what was actually said, but paper is a convenient medium and many researchers will use it in preference to audiotapes. The AAAS Office of News and Information collects papers for release to the press during the meeting, and at its close presents a set to the AAAS archives. Not all authors submit written versions to the News and Information staff, but many significant presentations are saved in this guise.

Abstracts and technical session proposals may be reviewed before acceptance for the meeting. The review records are subject to the same difficulties regarding confidentiality as those for a technical journal, although the number of files is likely to be more manageable. If the reviews themselves must be destroyed to keep them confidential, the process by which the review took place still should be documented so that members, staff, and outside researchers can understand the way the meeting was constructed. This may appear in the form of minutes, handbooks, guidelines, letters, and memos.

Meetings on governance and internal matters are relatively painless to record. Traditional paper files of agenda, correspondence, minutes, and reports are generated; there may also be audiotapes of the proceedings (these do not need to be retained if the minutes are written out). The files are usually of modest size. Because policy, priorities, projects, and directions are hammered out at these meetings, the records are usually of long term operational and research value.

Student participation is partly documented when the records of presentations are captured in some form or other, but meetings serve another function for students that is more difficult to capture. At universities, Samuels terms this activity "foster socialization." By seeing how scientists conduct scholarly and practical business at meetings, students learn how they are supposed to behave from a much bigger sample than the professors at their university. It may require a deliberate documentation strategy

for an association to collect any material on this, for example, by surveys of registrants that include special questions for students.

Meetings are a form of scientific communication that almost always inspires photography. Only fieldtrips bring out more shutterbugs. Registrants and association staff photograph nearly everything--social gatherings, lectures, informal discussion groups milling around in the halls, the meeting site, living quarters, the long lines at registration, banquets, and awards ceremonies. Photographs are indisputably the best way to document exhibits at meetings. They belong in your records. Modern film does not present the nightmares of preservation of glass negatives, nitrate and acetate but it does require attention in cataloging and packaging to prolong its life and usefulness. There are some good books on photo archives to guide you (see "Further Readings" section of this report).

Scheduling retention of meeting registration records is a vexing question. Since they record financial transactions, they have a minimum period when they must be saved that varies among states. Most of them are now computerized, and are useful as marketing lists for a surprisingly long time after the close of the meeting. Once that application fades, the record that has a longer life than the individual registrations is the statistical summary or analysis of the data if one were done. It can be used for planning and for history, and is commonly preserved in reports to governing boards or the executive office.

- Advance Scientific Education
 - Teach short courses
 - Affect curriculum
 - Popularize science
 - Disseminate science to the media

Scientific associations commonly offer specialized instruction in the discipline in courses at the annual meetings of the national or regional groups, or in special sessions throughout the year. These courses range from a few days to a few weeks and are designed to upgrade or update technical skills and knowledge of members and other registrants. Continuing education credit may be provided if the course meets criteria of educational institutions that certify its contents as sufficiently rigorous.

The contents of these courses are captured in the near-print course syllabi, outlines, and readings lists, just like a university class. These should be retained for at least five to seven years in case someone wants to verify what a participant was taught. They may have considerable historical value. Related files are the correspondence of the course director with the association's sponsoring office and registration records. The size of these files is usually manageable enough for associations to add them to their archives as permanent records. If registration records are too bulky to be saved indefinitely, they may have to be discarded (perhaps after sampling), but lists of participants should be kept for the reasons mentioned above in the discussion of certification.

Societies may influence science teaching in schools and universities through cooperative ventures with educational institutions and associations or through creating new curricula for use in classrooms. This activity is one of the most direct interactions

between an association and its culture, and has great interest for members and other researchers.

A full set of the products of these reform efforts is always worth permanent retention. Deciding what to save and for how long from the records of the process by which the materials was created is more problematic. Often these projects are done under a grant from a funding agency (private or government) or under contract, and the agreements that set them up may specify minimum retention periods for drafts, evaluation data, and administrative records. Once that time has passed, the issue becomes how much longer to save these materials. Nearly all educational reform projects have some form of assessment built in, and the amount of material from this part of the project can be formidable. About half of the files relating to *Science: A Process Approach*, a post-Sputnik curriculum project for elementary schools conducted by the AAAS, related to the evaluation of its draft products in trials in the schoolroom. Fortunately, most projects summarize and analyze these data in reports, making it less painful to discard the raw data (after sampling to show how the evaluations were collected) once the report is archived and minimum retention dates are past.

Scientific societies reach the public with the results of research through the media--print, television, and radio. Many organizations have a publicity officer, committee, or office that deals with the press to encourage news coverage. Press releases, press conferences, and press rooms at meetings are employed to get the word out about scientific discoveries reported in the association's journal or presented at technical sessions. Some societies prepare radio or TV programs for broadcast.

Documenting what the association said follows directly from these activities. Files of releases and audiotapes of press conferences often find their ways into the archives of the group. What is harder to document is what the public actually got out of these efforts. The most common medium for showing the effect of publicity efforts is a clippings file, which presents archivists and records managers with a preservation headache. Newspaper has a high acid content, yellowing and then disintegrating within a few decades unless treated, especially if pasted onto high-acid paper scrapbooks or kept in poor conditions of temperature and humidity. If the association decides to preserve the information (contents) of the clipping, the item can be copied into long-lived paper, but for exhibits, the original clipping is prized and will need deacidification, an expensive and time-consuming procedure generally reserved for only the important material. Organizations with an aggressive press office that uses a clipping service may also find themselves awash in clippings. Archivists faced with this dilemma may decide to save only one version of the story along with the tags from the other clippings showing what other papers ran it on what days. When space is at a premium and deterioration of clippings becomes serious, some societies may be forced to discard them. A competent historical researcher should be able to find most of these newspaper stories in research libraries.

- Advise Government and Voters on Scientific Issues
 - Run seminars
 - Give testimony on request
 - Inform members of government matters of interest
 - Recommend and supply scientific experts

Most scientific associations are tax-exempt under statutes of the Internal Revenue Service that do not permit lobbying in more than minuscule amounts. Historically, societies have concentrated instead on educational roles in policy issues and become involved in legislative matters only on request. AAAS, for example, runs Congressional seminars that are designed as instructive, not didactic, and that address both sides of contentious issues. In conjunction with several affiliated associations, it conducts a program to place scientists and engineers in Congressional offices for a year. The association publishes data and analysis on scientific research and development budgets in federal agencies. Occasionally the AAAS President may be asked to testify at a Congressional hearing on a science-related issue.

The possibility of a challenge to tax exemption because of activities that might be misconstrued as lobbying is very real. Consequently, it is advisable to establish retention schedules for records of government, especially legislative, contacts and projects for a duration that would take the association safely past an audit. Seven years is not unreasonable.

What of the value of records of government-related activities beyond this minimum? Historians have shown great interest in this aspect of scientific societies. Currently, for example, several scholars are researching what associations did--and did not--do to help members who had trouble during the McCarthy era. The role of scientific associations in Vietnam War era concerns, their activities in arms control, and their work on preserving threatened natural environments are predictable topics for the future. In some societies, the documentation of the Board or Council's actions may be sufficient. But groups more active in these matters, the records of committees and projects could be marked for permanent retention with some confidence that members, staff, and other researchers will use them.

- Certify Knowledge and Define Boundaries
 - Take stands on controversial issues such as creationism
 - Arbitrate disputes
 - Offer print or in-person forums for debate
 - Establish and enforce codes of behavior
 - Expose quackery

Scientific theories and research can lead to stimulating debate in the community over matters of fact and truth. Over the years, conduct becomes codified in the scientific world through ethics guidelines, unwritten rules of procedure taught to the young in informal venues, and experience with methods that work in settling disputes. Technical journals, newsletters, and meetings sponsored by scientific societies leave a record of this process. The retention schedules and decisions on archiving their records will usually secure an adequate body of material for staff, members, and outside researchers to investigate how these issues came to be handled.

For intense arguments that flare quickly across the scientific landscape, such as cold fusion and the extinction debates, researchers have recently gathered documentation from all sorts of sources, including print output, organizational email bulletin boards, and abstracts and audiotapes of meetings of scientific associations. The unpublished material related to these activities in society archives are a valuable complement to this kind of

documentation. And for the many topics that are not captured by these special targeted efforts, the archives of the association, along with the papers of protagonists, may be the only records for later study. The published literature--much of it issued by associations--gives the researcher clues on where to look for such material. When the archivist or records manager notices documentation on a serious scientific debate in material accessioned for permanent retention, they should highlight its existence in the finding aid that describes the collection.

- Measure and Improve the Status of the Profession
 - Conduct and publish employment and educational surveys
 - Assess the health of funding for research
 - Track participation of various groups in science
 - Run employment exchanges, job fairs, and job bulletins
 - Monitor the status of persecuted scientists

Associations produce important studies of the numbers and attributes of students and employed workers in the discipline. Sometimes these reports are based on government data, such as the federal census, but often societies collect the data themselves. For most purposes, the written reports provide sufficient documentation of the project, but often the original data gathered by the association have a research value beyond a few years. This occurs when the detailed evidence is only summarized in the publication but can be used later for longitudinal studies. There are several factors that can be used to evaluate this possibility. One is whether the data were gathered in such a way that comparisons can be made with later surveys. Often the need for preserving confidentiality interferes with the ability to match answers from a later survey. Also, the advice and assessment of the members or staff that collected the first set of data are crucial; they may have anticipated long term use and planned for it in their study design. They can also warn records managers and archivists about the need for restrictions on data gathered under a pledge of confidentiality.

Scientific associations have been concerned since the days of the civil rights movement with the issue of whether science is open to all segments of the population. Nearly every group has had, and many still have, committees that address equal opportunities for women or racial minority groups who might be underrepresented or under-appreciated in their discipline. If there is no special office devoted to this cause, the records of the committee are likely to be found with the executive office. These committees and projects are rarely content with handwringing over low numbers but are likely to encourage, survey, publicize, and sponsor intervention efforts to improve the situation. This work is an important index of the social conscience of science, and deserves attention in a program to document the organization.

Job fairs and bulletins (increasingly maintained online) are a prized service to association members. The documentary challenge is whether to preserve only the records of the creation and conduct of the operation, or of all of the listings also. Space considerations may dictate sampling the latter.

Some associations dedicate themselves to helping secure the freedom of persecuted scientists working abroad, or of improving the work conditions of members who have encountered discrimination. These activities generate case files arranged by the

scientists' name, and parts of these records may be protected under standard rules of privacy. Case files are commonly restricted (permission from the head of the office and the scientist involved may be needed for examining them) and they may be closed. Case files of associations especially active in this cause may also get voluminous. The AAAS files on Andreas Sakharov take up one entire box. If sampling is used to reduce the bulk, a random technique may not be desirable, but whatever process is employed, it must be written out and accessible to researchers who might obtain the privilege of using the material.

▪ Sustain the Institution

- Finances, including sales of ads and products
- Administration (staff, phones, travel, building, computers)
- Fundraising
- Member recruitment and services

These support activities can overwhelm an association with records. Authorities estimate that the accounting department alone generates about half of the records of any business. Besides volume, there is variety: records from a finance office may include the following, and the list is suggestive, not exhaustive:

Auditor's reports	Accounts payable	Journal entries
Budgets	Accounts receivable	Timesheets
General ledger	Tax forms	Payroll records
Monthly reports	Tax work papers	Bank statements
Fixed assets	Capital accounts	Canceled checks
Contracts	Insurance policies	VAT returns
Telephone records	Postal meter accounts	Photocopier readings
Invoices	Collections records	Check carbons

These records are also likely to be the target of regulations about minimum retention issued by the Internal Revenue Service, granting agencies, and state authorities.

Because of the business and legal nature of financial materials, the records management literature, especially Skupsky, does a superb job of indicating retention periods for them. Schedules can be set up from these books and then customized to meet the quirks of the association's home state and the needs of current operations within the society. The question remains which ones associations might want to keep longer than the period required. Auditor's reports, final copies of filled-in tax forms, financial statements to the Board or Council, the budget as passed by the Board, and the summary year-end general ledger are often maintained for long periods of time or treated as permanent records.

Fundraising in scientific societies is devoted to raising from individuals (members and philanthropists) and organizations (foundations, corporations, and government agencies). Records for approaches to each are usually kept separate. Donor files on persons include letters outlining the worthiness of the association, requests for donations, data on responses, copies of thank you notes, and later rounds of appeals. Most associations also keep files on bequest from the estates of members and others that

consists of a copy of the will, correspondence with the executor, and probate records. Files on bequests are usually permanently archived a few years after probate, because they are a valuable indicator of whether any restrictions were placed on the use of the money. Individual prospect files other than bequests are commonly treated as information files--updated with the latest data and discarded when no longer needed for fundraising.

Development files on funding agencies include profiles on the group, correspondence not related to a specific grant, and notes on meetings and interviews with program officers. These are treated as information files (thinned of out-of-date data and kept for current purposes).

The fundraising office may also keep files on grants that duplicate in part the records of the finance office. Both sets need to be studied before a decision is made on which to retain. The development office but not finance is likely to keep records of unsuccessful proposals, for example, at least for long enough to be useful in seeing what didn't work with an agency before sending in an application for a new project.

When a development office undertakes a special campaign, such as seeking funds for a new building, the files are apt to be segregated from the regular files kept on individuals, corporations and agencies. The records of one campaign tend to become the platform of the next, and may consequently be treated as "current" records until the second campaign is finished. These high-energy projects generate records of considerable color and say a lot on how the association views itself and projects itself to donors. Shorn of duplicates and routine material, they are good candidates for permanent retention.

Member recruitment activities generate promotional materials that make good display items once they are past their current usefulness. Like fundraising campaigns, they offer a convenient way to study how the association envisioned and advertised itself over time. At AAAS, one example of each mailing is kept with a one-page report on how it was deployed and its success rate.

Member service records include a lot of correspondence with prospective and current members. This varies from routine requests to send another copy of a missing journal to profound (sometimes highly critical) comments on the health and effectiveness of the society. Some membership offices weed out the routine letters shortly after the issue seems resolved or segregate the routine from the extraordinary in filing. Others keep all letters for a year or two to see if a pattern evolves that needs fixing, such as careless handling of the association's journal at a particular postal center. Archivists and records managers can help member offices cope with the volume of this mail. If they do, records that have promise for long-term research value, such as historical researchers, will not be lost among routine transactions. If a record series of everyday letters does make its way to the archives, it is a good candidate for sampling.

Records Problems and Problem Records

E-mail (Electronic Mail)

Records of Regional, Topical, and Affiliate Bodies

Project Files/Grant and Contract Records Sampling

In this chapter we address troublesome records and issues that cut across several functions of scientific societies.

E-mail (Electronic Mail)

Archives and records managers are still experimenting with how to appraise and schedule electronic mail. Rancorous public arguments over White House e-mail had distorted the evolution of policies on the issue. Much email in scientific associations is akin to telephone or internal memo traffic: it is often of housekeeping or transitory nature (such as setting up dates and times when a group can meet, or publicizing the forthcoming staff blood drive). Thus, it is documentary overkill to save tapes of all email traffic in the organization, as has seriously been proposed for some major political bodies. But what of the small fraction of email messages in scientific associations that is significant?

E-mail consists of correspondence and bulletin board notices, and the strategy for preserving them may be different. At AAAS, most staff members print out important electronically sent and received correspondence and file it with their paper records. In the Science and Policy office, the director, Albert Teich, has asked his staff to place a copy of valuable email messages in the office chron file [chronological file, *i.e.*, log of daily activities] to keep everyone updated, as well as archiving crucial messages on line (most e-mail software provides for this and it is handy for short term retention needs) or in paper subject files. He reports that compliance is not perfect, but that a notable number of documents do get shared and saved this way.

Bulletin board notices are another matter. Some boards, especially those maintained on the World Wide Web, may record an important public face of the association or have intrinsic value for historical or journalistic research. *FYI* (American Institute of Physics news bulletin board) and Robert Park's justly renowned electronic comments on the Washington science scene are an outstanding example; these are influential far beyond the physics community. Other boards may have considerable at-the-time interest but far less durable value: at AAAS, the "non-AAAS" staff board is replete with notices of apartments sought or for rent, cars for sale, kittens for adoption, and the like. While this board gives a homey feel to the organization, the archives does not preserve its everyday traffic. Every once in a while, when a significant debate flares on this board (such as over the scientific merit of the movie and book *Jurassic Park*), the archives will try to print off the arguments, which run to about ten pages before petering out. However, this creates an "artificial" collection, filtered through the eyes of the archivist, that researchers must use cautiously.

Regional, Topical, and Affiliate Group Records

These groups may perform many of the same functions as the parent society for a smaller constituency--run meetings, publish newsletters, serve as a forum for graduate student work, and so on. The number and complexity of these bodies varies from one society to another. The Geological Society of America's [GSA] six regional sections, given the nature of geological field work, are very lively and active parts of the association, and there is significant documentation on them at the national headquarters. AAAS has four regional divisions that serve the far-flung members of the association (Pacific, Arctic, Caribbean, and Southwestern and Rocky Mountain) who find it a problem getting to national meetings in the East, South, and Midwest. Both GSA's and AAAS's

geographically aligned groups concentrate on science relevant for their regions, and both are prized by graduate students as the best place to debut one's first research papers.

The collections policy for the association needs to address the issue of who saves the records of regional groups. If the national headquarters interacts closely with them, there may be enough materials saved to document their activities in central records. Serious consideration ought to be given, in such a case, to having the other records of the regional group placed in a depository in the region rather than with the archives of the parent body. This may prove convenient not only for the officers of the regional branch, but also for scholars who are studying scientific topics germane to the geographic area.

Topical, disciplinary, or scientific specialty branches of the association are almost always run by elected officers who keep the records of their work with their personal papers. In doing a records survey, archivists and records managers need to watch for what material on these groups is saved by the central organization. In the Geological Society of America, for example, newsletters of the twelve specialized divisions (geophysics, sedimentary, Quaternary, and so on) are written by division officers but distributed with help from the main office in Denver, giving an opportunity for the headquarters to document their operations. At AAAS, the discipline sections contribute significantly to the content of the annual national meetings, and their work shows up in the review process conducted by the central meetings office and in governance records in the executive office. If the survey shows that such documentation is adequate for the current purposes and history of the association, having the rest of the records deposited as personal papers of the scientists in libraries and other archives is probably preferable to trying to collect them centrally.

An association may maintain formal connections with other societies that share common goals, activities, and concerns. The Geological Society of America's fifteen affiliated organizations hold business meetings and sponsor short courses and symposia at the GSA annual meeting. AAAS's 238 affiliates appoint representatives to its topical sections and may work collaboratively on projects in the human rights or international areas. It is unlikely that an association would manage or collect the records of affiliates; rather, each will probably handle its own documentation. The exception might be an association whose history center might accession the records of a small affiliated organization if there were no other depository that could take them.

Project Records/Grant and Contract Records

These kinds of records were mentioned above as being generated by many functions of scientific societies. They consist of files on the administration of the project--who took part in it, finances, and how it was funded, operational records such as minutes and internal memos--drafts and materials related to review and production of reports, and data. It is the third class of information that causes records managers and archivists the most heartache because of the size of the files, the arcane nature of the evidence, and the unpredictable future uses for the material. Data files must be retained for the minimum amount of time required by the funding agency or if none is specified, for at least long enough for the scientific community to review and assess the published results of the project (about three years). As mentioned above, data that might be needed in

longitudinal studies should be retained until that application is completed. But what happens after these minimums?

A group of archivists and researchers (see Haas, *et al.*, 1985, in "Further Readings" list of this report) addressed this problem for scientific records in general and arrived at the following useful guideline. It is not necessary to keep data for long that can be assembled again from libraries, laboratories, or surveys. An example is the agency budget books that form the basis of the popular AAAS report series on research and development expenditures by the federal government. However, if the data cannot be reassembled, such as evidence from questionnaires sent out by the project or interviews done by staff or committee members, researchers may have to come to your archives to use the evidence because it exists nowhere else. These data may still take too much expensive space to save in their entirety. This brings us to the question of sampling.

Sampling

Scholars from the humanities are often uncomfortable with sampled records. They are convinced that whatever they need will be in the discarded portion, and some may not be trained in how to use and interpret samples. The sciences, however, use sampling techniques frequently and users of scientific association records are apt to understand the need for and the limitations of sampled material.

Gerald Ham recently appraised the slim literature on archival sampling. He points out that the selection an organization makes of what to save of its records is itself a form of deliberative sampling, and that for extremely large record series (larger than those generated by scientific associations--for example, FBI case files) carefully planned sampling may be the only basis for appraisal. More common, but still underutilized, in Ham's opinion, is sampling to reduce a large collection of files to a size that is economically justifiable to save.

Ham notes that statistical, systematic, and judgmental sampling techniques are used by archivists. The first well known to scientists; it assumes a homogenous [for instance, numeric vs. alphabetic] collection of data (files in this case) from which a mathematically valid selection can be made using a random number table. However, the evidence in project files is often already a sample of a population; in that case, one would be sampling a sample, and few statistical procedures could be performed with validity. For this reason, and because random sampling is more time consuming than the next procedure, it is rarely used.

In the second sampling technique, the archivist chooses files [often records in scientific parlance when used in reference to data sets] at set intervals, such as the first of every twenty, as AAAS did with its files on the *Guide to Scientific Instruments*, or a year in every five of a long chronological run. This method does not meet the usual criteria for random sampling as the term is used in the sciences, although some archivists lump it with random sampling because it is based on arithmetic.

The third sampling technique is deliberately to choose files whose information content is likely to be valuable for future researchers or to choose files only to illustrate an operation, the most controversial method used. One variant that Ham mentions is the "fat file" technique where the largest files in a series are chosen because they are presumed to document significant activity. Ham reports that this has been applied

successfully in sampling voluminous court records, but a moment's reflection on the distortion it might cause in, say, member correspondence might give an archivist or records manager pause. Another example is to save all the files of "significant" or "historically important" scientific figures in a series of files on persons, but this reflects the values, often unarticulated, of the selector in his or her culture (thirty years ago, few women's names would have been chosen). Because of the limitations of purposeful sampling, it is often used in conjunction with one of the probability techniques to give a better idea of the original documentation.

Ham includes a caveat from hard-won experience: "*the sampling process must be meticulously documented* [italics added]...[with] precise and detailed information, mathematical and otherwise, on the sample design and how it was drawn, and a detailed description of the original universe of records, including what was not retained." Only then can researchers draw useful albeit cautious inferences from the data.

Disaster Recover Planning

Scientific associations will find this topic intrinsically interesting because the sources of serious threats are studied by scientists: wind, fire, flooding, earthquakes, and destructive behavior by humans (vandalism and arson). Your organization is also likely to widen the project of writing a disaster plan to cover all aspects of its operations, not just the archives--the library, computer operations, member fulfillment, current research operations, and others.

Planning for disaster has two goals: reducing the chance that the problem might occur, and coping with it if it does. In the last twenty-five years, several incidents that harmed records have led professionals to write very helpful manuals on the topic, which can guide you through the planning process and lead you to vendors of services and supplies. Several of these books are cited in the further readings section of this report.

The survey done for disaster planning is different from that for records management, but they overlap in one important area--the identification of vital records (the ones your association would need immediately to keep operations going after a disaster). Some offices regard all their records as "vital," but if they are asked to bear the cost of backups or duplicate copies stored offsite, suddenly become more realistic about risk management, and will help you target records worthy of those expensive precautions. Other records issues that need to be addressed in the survey are varieties of media (salvaging tapes, books, and manuscripts require different techniques), and priorities for treatment (finding aids may be saved early on because they are needed for insurance claims).

The main emphases of a disaster plan survey are facilities and people. Experts recommend that a single person lead the effort to design and carry out the survey and plan, possibly with the advice and assistance of a small committee. Other "people" issues are seeking the cooperation of nearby repositories (so that expertise and supplies can be shared when disaster hits) and staff education (about the plan and in skills relevant for coping with problems--a hand-on session on handling soaked records or on using fire extinguishers, for example). The plan should include a telephone tree to notify staff if disaster strikes outside of business hours, and a list of experts (specialists in conservaton

and suppliers) that you will need to reach nearly immediately. You will have very little time to act: mold can start growing on wet paper in as little as forty-eight hours.

The facilities survey considers many facets of the setting of records: the structure and design of the building (pipes and roofs, ventilation, light fixtures, for example), storage configurations and practices (collections at least four inches off the floor, no carpets in stack areas, clear aisles, sufficient clearance for sprinklers), staff and other activities in the area (smoking lounges, coffee pots and hot plates), detection and alarm systems (ionization of other alarms for fire, water alarms to detect leaks and floods), and fire suppression systems. Precautions against seismic damage are advisable: anchoring equipment, cross-braced shelving with welded joints, and bolting shelves to structural elements in the building. The plan should note the existence and outline the use of sump pumps and auxiliary power systems.

Writing the plan is a relatively orderly procedure. Before you start, get the commitment of the association to implement recommendations and follow procedures. Obtain plans from similar and nearby businesses and institutions such as libraries; this will give you a head start on finding suppliers and conservators. Read books and articles that are germane to what you house. Conduct the survey. Check your insurance policies in the light of the survey. Set out authorities and tasks in case disaster does strike. The very first task should be to secure the safety of people: devising evacuation plans, posting simple instructions at many accessible spots, training staff in first aid and having supplies for that, and providing for roll calls to account for everyone. Outline disaster responses and recovery procedures. In appendices, include telephone notification plan, contacts, supply lists and vendors, and floor plans showing plumbing, wiring, fire suppression systems, collection shelving, and exits. Circulate the plan widely, and keep it up to date.

Central to the plan is the lists of steps to recovery. These vary with your association and resources nearby, but these are basic:

- Mobilize staff and appoint a coordinator.
- Assess and prepare for recovery
 - do a walkthrough to get a sense of the problems
 - assess if the site is safe for workers
 - photograph damage for insurance claims
 - take immediate steps to reduce humidity and (often) heat
 - decide if restoration will occur on or offsite
 - gather supplies
 - contact vendors
- Relocate damaged materials if necessary
 - conduct triage
 - follow priorities of record importance
 - evaluate which are the worst damaged (unrecoverable items should be photographed and documented before discard)
 - mark location of removed items for later reshelving.

Getting Help

Your association may decide it needs to hire an archivist or records manager, to seek on or both to serve as consultants, to build up a library of reference books on records, or to connect with archival or records professionals for occasional guidance and networking. Three national organizations, two certifying agencies, and a plethora of state, regional, and local ones are ready to help. There are also numerous companies that sell archival supplies.

- Association of Records Managers and Administrators
(ARMA International)
4200 Somerset Drive #215
Prairie Village, KS 66208
913-341-3808

ARMA is the main organization of records managers (membership about 11,000). It publishes many useful books and sells good books published by others as a courtesy to customers (members receive discounts). ARMA issues a newsletter and *Records Management Quarterly*, which includes book reviews. Regional groups (12), local chapters (29), and international groups (16) are affiliated with it; a list of the ones near you is available on request. ARMA meetings, usually in October, rotate around the country and are well worth attending.

- Institute of Certified Records Managers
Post Office Box 8188
Prairie Village, KS 66208
800-825-4276

This organization conducts the rigorous program for certifying records managers (about 650 persons are currently qualified). It can let you know certified managers located near you.

- Society of American Archivists
600 S. Federal St. #504
Chicago, IL 60605
312-922-0140

The SAA publishes highly useful books and sells those of other publishers that relate to archival concerns (members' prices are discounted). The society publishes a newsletter and *American Archivist*, which includes book reviews. SAA has about 5,000 members and about 45 state, regional, and local archives groups are affiliated with it (a list is available on request). The annual meeting, which is held in early September at various cities around the United States (and occasionally Canada) features nuts-and-bolts courses such as "The Lone Arranger" (for one-staff person archives) as well as technical sessions on theoretical and practical issues. Short courses are offered at other cities throughout the year. SAA publishes an employment bulletin and a directory of archivists who do consulting work.

Scientific associations will be especially interested in the work of the SAA Science, Technology, and Health Care Roundtable, which publishes a newsletter and a membership directory, and sponsors sessions on science records at SAA meetings. The current chairs are Sandra Tonnesen, Sandia National Laboratories, PO Box 5800, Albuquerque, NM 87185-0612, 505-845-9442, sltonne@somnet.sandia.gov, and Stephen Wagner, History of Science Collections, 521 Bizzell Library, University of Oklahoma, Norman, OK 73019-0528, 405-325-2741, swagner@harikari.ucs.uoknor.edu.

- Academy of Certified Archivists
C/o SAA, 600 S. Federal #504
Chicago, IL 60605
312-922-0140

The ACA certifies archivists through examination. About 950 have qualified so far. The Academy can let you know which ones are located near your association.

- Association for Information and Image Management
1100 Wayne Avenue, #1100
Silver Spring, MD 20910
301-587-8202

For guidance, publications, and human resources on documents imaging and micrographics, AIIM is a great place to start. The association has 10,000 members and fifty regional groups, of which it will supply addresses on request. Its meetings, held in spring and summer around the country, are renowned for their exhibits on the latest technology. AIIM is well known for its work on standards for information storage methods and media.

Regional and local groups are important affiliates of these national organizations. Strong organizations such as the New England Archivists or Mid-Atlantic Regional Archives Conference publish superb newsletters, run short courses and meetings of the highest caliber, and may even offer referral or employment services. The dues of these groups are usually very modest. They are well worth seeking out and joining.

Sources for Supplies of Archival-Grade Storage Boxes, Folders, and Photograph Materials

There are many suppliers of acid-free and buffered boxes and folders for long-term preservation of materials. The following is a sample of suppliers from whom archival-grade storage cases may be obtained and who may be contacted for catalogs and detailed ordering information. This list is by no means exhaustive. No one supplier is recommended above another.

Archivart
7 Caesar Place, Moonachie, NJ 07074
1-800-804-8428, ext. 1254

Conservation Materials

1395 Greg St., #110, PO Box 2884, Sparks, NV 89431
1-800-733-5283

Conservation Resources

8000 H. Forbes Place, Springfield, VA 22151
1-800-634-6932

Gaylord Brothers

PO Box 4901, Syracuse, NY 13221-4901
1-800-634-6307 (ask for their helpful Pathfinder booklets)

Hollinger Corporation

PO Box 8360
Fredericksburg, VA 22404
1-800-634-0491

Light Impressions

439 Monroe Avenue, PO Box 940, Rochester, NY 14603-0940
1-800-828-6216

Paige Company

400 Kelby Street, Fort Lee, NJ 07024
1-800-223-1901

Pohlig Brothers

PO Box 8069, Richmond, VA 23223
1-804-644-7824

Preservation Products

PO Box 29456, Lincoln, NE 68529
1-800-648-7329

University Products

517 Main Street, PO Box 101, Holyoke, MA 01041
1-800-628-1912

Further Readings

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- . *Developing and Operating a Records Retention Program: A Guide Book*. Prairie Village, KS: ARMA, 1986, 86p.
- . *Filing Procedures*. Prairie Village, KS: ARMA, 1989, 27 p.
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- . *Vital Records: A Guideline*. 2nd edition. Prairie Village, KS: ARMA, 1993, 29 p.

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- Lytle, Richard. *An Archival and Information Services Program for the American Association for the Advancement of Science*. Washington, DC: AAAS, 1982, 35 p.
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- Skupsky, Donald. *Recordkeeping Requirements: The First Practical Guide to Help You Control Your Records... What You Need to Keep and What You Can Safely Destroy!* Denver: Information Requirements Clearinghouse, 1991, 323 p.
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APPENDIX A

Archives Policy of the American Association for the Advancement of Science

Adopted by the AAAS Board of Directors in June 1982

[N.B. Originally drafted by Richard H. Lytle as part of a project supported by the AAAS and the National Historical Publications and Records Commission (NHPRC Grant 81-169).]

1. Definitions

- a. *AAAS Records*: All correspondence and other documentation produced in the course of official business of the AAAS.
- b. *AAAS Archives*: Those records selected for continuing preservation, usually after they become inactive. Archives assume many forms, including computer records and audio-visual materials.
- c. *Professional Papers*: Personal research notebooks, professional correspondence, and other records of research or other professional activity created by AAAS staff. (See section 3 for distinction between archives and professional papers.)
- d. *Manuscript Collections or Special Collections*: Archives and professional papers originating outside the AAAS (example: records of the Geological Society of Washington).

2. Archival Policy

- a. *Authority and Purpose*. The Archives of the American Association for the Advancement of Science is hereby established by the Board of Directors of the Association and under the immediate authority of the Executive Officer. The Executive Officer delegates policy and general oversight responsibilities to the Archivist of the Association.

The AAAS shall preserve its archives and the professional papers of its staff for their administrative and research value. The AAAS Archives is the official repository of the AAAS, charged with care of official archives and with soliciting donations of professional papers from staff.

- b. *Appraisal of Records.* All records created or received in the course of official business are the property of the AAAS. When records become inactive--no longer regularly used by the office or person who created them--they are appraised for continuing administrative and research value. Inactive records are:

- (1) discarded in accordance with the law and AAAS policy; or
- (2) transferred to the AAAS Archives

The purpose of records appraisal is to identify records of continuing value for the administration and history of AAAS. Current administration is served by creation of a corporate memory which documents activities, decisions, and programs. History is served by preservation of records documenting AAAS and the wider scientific community.

- c. *Disposal of Records.* All AAAS staff should be aware that AAAS policy does not permit unauthorized destruction, donation, or other dispersal of AAAS records. The Archivist of the AAAS will ensure that all disposition of records is consistent with AAAS policy, and staff members are urged to work with the Archivist in records disposition. The AAAS Archives will always consult appropriate staff when evaluating records for destruction. Once records are received in the Archives, they will be discarded only with concurrence of the office or person that created them.
- d. *Records Management.* In the normal course of its work, the AAAS Archives is involved in appraisal and records disposition; assisting AAAS staff in timely disposal of unneeded records is complementary to ensuring preservation of archives.

The Archives also assists AAAS staff with establishment and maintenance of files. General assistance is available to improving filing systems. Specific assistance is given to establish techniques which identify inactive records for appraisal and ultimate disposition.

Staff concern for AAAS archives should include preserving the order and integrity of records while they are current. Since archives are maintained in their original arrangement, staff should maintain current records in order and transfer intact those records selected for archival preservation. The archivist must be consulted before any records are dismantled or dispersed.

- e. *Cooperation with Staff.* Selection of records for preservation--and securing donations of personal papers--is a joint effort of staff and archivist. The archivist relies on the staff members for information about the office and its records, and the staff member

relies on the archivist for technical assistance and a broad view of what should be preserved.

3. Professional Papers and Non-Archival Materials

- a. *Official Records vs. Professional Papers.* While some materials are clearly official records and therefore the property of the AAAS, and others are clearly professional papers, in some cases the distinction is difficult to make. Professional staff members may combine official records and professional papers. Moreover, when records such as research notes pertain to AAAS activities in any way, the unit concerned has an interest in their continued preservation at the AAAS. These are difficult cases which must be resolved individually.

Papers of elected and appointed officers are considered professional papers (example, papers of section officers).

- b. *Non-archival Materials Defined.* Several kinds of material are excluded from the definition of archives:

- (1) files collected for information only, for example, a file of office equipment advertisements
- (2) extra copies of documents preserved only for reference convenience
- (3) stocks of publications
- (4) stocks of mimeographed documents
- (5) files of reprints

Staff should bring these materials to the attention of the Archives staff before discarding or transferring them to the Archives.

4. Special Collections

The AAAS does not collect archives, manuscript collections, or professional papers from scientists or science administrators not associated with AAAS. However, the Association is concerned that the history of American science well documented. To this end, the AAAS Archivist makes continuing efforts to alert other scientific societies to the importance of their own archives and to provide guidance and counsel to those societies where AAAS resources permit.

5. Other Responsibilities of the AAAS Archives

In addition to preservation activities, the AAAS Archives has several responsibilities to AAAS staff and others in the scholarly community.

- a. *Access to Archival Holdings.* The Archives maintain a degree of control over its holdings which will ensure reasonable reference service to staff and other scholars. The Archives will process selected records in depth according to demand and

potential research value. The Archives further informs the scholarly community of the AAAS's archival resources through publication of guides to the archives and communicating with appropriate scholarly journals.

- b. *Restrictions.* By selective imposition of restrictions, the Archives provides archival resources to staff and scholars, while protecting rights of privacy and legitimate proprietary rights. Unless restrictions are imposed by the donor or transferring office, research materials are open to all bona fide researchers.
 - c. *Physical Security.* The Archives provides physical security for records and personal papers used by researchers in its reading room.
6. Procedures for Securing Archives' Services
- a. *Requesting Disposition of Papers.* Staff who desire to transfer records or professional papers to the AAAS Archives should make an appointment with the Archivist, who will examine the materials in person. Both the Archives and the requesting office will benefit if consultation precedes work on the records. Records must not be sent to the Archives unannounced, because the Archives staff needs to examine records with staff assistance before the transfer is made.
 - b. *Determining Disposition of Papers.* Archives staff and administrators will decide on one of several actions:
 - (1) Determine that the records are not archival and make legal disposition or transfer to a holding area until legal disposition is possible.
 - (2) Determine that the records are archival and transfer them to the AAAS Archives.
 - (3) Determine that the records are active and establish a measure of identifying inactive records.
 - c. *Donating Personal Papers.* The Archives staff is available to assist in making arrangements for donation of personal papers. Although papers usually do not come to the Archives during the donor's active professional life, early arrangements for giving papers to the AAAS at a later date are encouraged.

APPENDIX B

Sample Finding Aid

Records of Business Manager (Hans Nussbaum)

Academies of Science Grants Files, 1959-1978

Location: The records are in the AAAS Archives, 1200 New York Avenue, NW, Washington, D.C.

Scope: The collection consists mainly of correspondence regarding AAAS grants to academies of science for support of research, usually by high school students. Sometimes

the files include reports from the academies on the grant recipients. There is one linear foot of material in three Hollinger boxes.

Provenance: Sent to storage as part of the non-current records of the Business Manager and transferred from storage to the archives. Note that there are related records on academies in other Business Manager records and in the records of the Office of Science Education.

Condition: Tissue copies are fragile. Two rubber band should be removed. Some pages stick at the bottom from adhesive used to hold carbon paper to copies. Items are in acid free, buffered containers.

Arrangement: Alphabetic by name of academy, reverse chronologic order of materials within each file.

Box One

Alabama Academy of Sciences
American Academy of Arts and Sciences
American Institute of the City of New York
Arizona Academy of Science
Arkansas Academy of Science
British Columbia Academy of Sciences
California Academy of Sciences
Chicago Academy of Sciences
Colorado Academy of Sciences
East Africa Academy of Sciences
Florida Academy of Sciences
Georgia Academy of Science
Hawaii Academy of Science
Idaho Academy of Science
Illinois Academy of Sciences
Indiana Academy of Science
Iowa Academy of Science
Kansas Academy of Sciences
Kentucky Academy of Sciences
Louisiana Academy of Sciences
Maryland Academy of Sciences

Box Two

Michigan Academy of Science
Minnesota Academy of Science
Mississippi Academy of Sciences
Missouri Academy of Sciences
Montana Academy of Science

(Nussbaum: Academies files, 1959-1978--2)

Nebraska Academy of Sciences
Nevada Academy of Science
New Jersey Academy of Science
New Orleans Academy of Sciences
North Carolina Academy of Science
North Dakota Academy of Sciences
Northwest Scientific Association
Northern New England Academy of Science
Ohio Academy of Science
Oklahoma Academy of Science
Oregon Academy of Science
Pennsylvania Academy of Science

Box Three

Rhode Island Academy of Sciences
Rochester Academy of Science
St. Louis Academy of Sciences
South Carolina Academy of Sciences
Southern California Academy of Sciences
South Dakota Academy of Sciences
Tennessee Academy of Sciences
Texas Academy of Science [two files]
Utah Academy of Sciences
Virginia Academy of Science
Washington [DC] Academy of Sciences
West Virginia Academy of Sciences
Wisconsin Academy of Sciences

Michele Aldrich
September 1988

APPENDIX C
Sample Transfer Work Sheets

A. Sample Archives Transfer work sheet currently in use at AAAS. Printed as double-sheet NCR (carbonless) form (designed by Donna Wells).

American Association for the Advancement of Science

ARCHIVES TRANSFER WORK SHEET

(For Archives use only)

Accession #: _____

Shelf Location: _____

Please supply the following information.

DATE OF TRANSFER: _____

DIVISION: _____

DEPARTMENT: _____

CONTACT PERSON: _____

SUMMARY OF CONTENTS: _____

BOX #: _____ of _____ COLLECTION DATES: _____ to _____

(Keep yellow copy for your files and place white copy inside of box.)

APPENDIX C (continued)

B. Sample Records Storage Center work sheet currently in use at AAAS. Printed at a triple-sheet NCR (carbonless) form (designed by Donna Wells).

American Association for the Advancement of Science

RECORDS STORAGE CENTER WORK SHEET

BLDG _____ ROOM _____ SHELF _____

DATE OF TRANSFER: _____ CONTACT PERSON: _____

OFFICE: _____

DESCRIPTION: _____

BOX OR NUMBER _____ OF _____ DATE(S): _____

CONDITION: _____

KEEP UNTIL: _____ REVIEW ON: _____
(month) (year) (month) (year)

ACTION TAKEN: _____

(white copy: item / yellow copy: administrative files / pink copy: office)

APPENDIX D

Sample Set of Instructions Outlining Procedures for Transferring Records to the Archives Currently in Use at the American Association for the Advancement of Science

Preparing Records for Transfer to the Archives¹

Appraisal

Records being transferred to Archives should be appraised by Archives' staff before transfer. By appraise, we mean evaluating in terms of research or archival value. We will either discuss the transfer over the phone or come to your office to evaluate the records. We will also work with you in determining guidelines for future transfers. Questions you will probably be asked include: Who will be using these records and how often? Is this the entire collection or are there more boxes to follow? Are there restrictions on use? How long should the records be kept?

Weeding

Because of space restrictions, the Archives cannot store multiple copies of items. As you pack items for transfer, remove anything above three copies of publications, printed material and form letters. Other storage areas may be used to store the multiple items.

Boxes

Paige boxes, used exclusively by the Archives, will be supplied after it is determined that records being transferred are archival candidates. Because of the expense involved, Paige boxes can no longer be supplied for moving purposes. Special moving boxes, very similar to the Paige boxes, can now be obtained from Building Services at x6409. The larger Office Mover Boxes are also available from them.

Packing Records

A Paige box normally holds about 1/2 of a full file drawer so when ordering boxes, use that as a rule. Even if a collection of files does not fill up a box, use the box anyway. Archives will transfer them to smaller boxes later. Paige boxes were not set up to handle hanging file folders. The metal hangers tear up the sides of the box and also prevent the lid from fitting properly. If possible, please transfer records in manila folders rather than hanging folders. Keep the files in their original order.

Pick-up and Delivery

Once items are ready to be brought down to Archives, notify Michele Aldrich and we will make arrangements for the transfer. If it is a small collection of only several boxes

and someone from your office can not bring them down, someone from Archives will pick them up. The Archives has a cart that it will loan for moving records. Larger collections will be picked up by Building Services. Please do not call Building Services yourself. They will not transfer archival collections without authorization from us.

¹Original document prepared by Donna Wells.

APPENDIX D (continued)

Identification of Transferred Records

Labeling

First, and most importantly, do not write or tape items to the outside of the box. Put all identifying information on a separate piece of paper and place it inside each box on top of the folders. This is to prevent the acidic inks and adhesive used in markers and tape from eventually eating through paper items.

Identifying information should include: the date items were transferred, the full name of the person supervising the transfer, the department, a short one line or one word description (*e.g.*, correspondence, story files, canceled checks) and the years the collection covers. For example "Chron Files, 1984-1986."

Boxes should be identified based on the number of boxes in the total transfer. If a transfer has 5 boxes, label them as box 1 of 5, box 2 of 5 and so forth.

Finding Aids

For future reference, keep some sort of notation of transfers. For example, some offices keep a computer file of all transfers. Each transfer will have a different computer file name. Besides the date of transfer and the number of boxes, their computer file includes a list of the folder headings in each box or a general description of each box's content. When a file is needed, they can call down and provide us with the transfer date, the box number and the file heading. The offices normally provide the archives with a paper copy of each file. At the top of each page, provide label information listed above.

If you prefer not to keep computer files, write or type a list of folder headings or a general description of box contents and make a copy for Archives and one for your files. At the top of each page, provide label information listed above.

If the box contains case files that have the same type of information in each folder (*e.g.*, membership surveys or applications), a list of folder headings is not necessary. In that case, the identifying information listed above is enough. Make sure the one-word/phrase description is specific enough to help with retrieval later.

About the Author

Michele Aldrich is by training an historian and by profession an archivist. Her academic background includes degrees in the earth sciences from the University of California at Berkeley and in American history from the University of Texas at Austin. She was a fieldworker in New England for the Women's History Sources Survey, which acquainted her with a wide range of organizational records. Dr. Aldrich is a Fellow of the Geological Society of America and of the American Association for the Advancement of Science. She has served as an officer of several societies including president of the History of Earth Science Society, chair of the History of Geology Division of the Geological Society of America, Secretary-Treasurer of the Forum for the History of Science in America, and a member of the board of USHIGEO. She is a certified Archivist and was the first archivist for AAAS, an organization she has been affiliated with for more than 20 years. Dr. Aldrich currently is archivist for the Otis Elevator Company and an Associate Editor for *Isis*, the journal of the History of Science Society.