

AASLH

# TECHNICAL LEAFLET BUNDLE

A PUBLICATION OF THE AMERICAN ASSOCIATION FOR STATE AND LOCAL HISTORY

## Collections Management II

BNDL015

Photos, post cards, maps, films, and architectural records – all of these add visual interest to our collections and complexity to storage and cataloging. This bundle will help you minimize the worry and maximize the benefit from these valuable items.

TL111 – Maps in the Small Historical Society: Care and Cataloging (1979)

TL116 – Post Card Collections in the Local Historical Society (1979)

TL120 – Evaluating Historical Photographs (1979)

TL132 – Collecting and Preserving Architectural Records (1980)

TL169 – Nitrate Films in the Public Institution (1989)

This bundle may help institutions achieve the standards as set forth under the Stewardship of Collections section of the AASLH StEPS Program.



American Association for State and Local History

# Technical LEAFLET

## Maps in the Small Historical Society: Care and Cataloging

By James Bartlett and Douglas Marshall  
*William L. Clements Library*  
*The University of Michigan*

For many years maps languished in the backwaters of archives because of their physical differences from books and the resultant problems of storage and handling. Now a large literature has come into existence on the subject of early maps, and it is important that local societies prepare to take advantage of this material. In 1976, symptomatic of this new interest, the Association of College and Research Libraries Rare Books and Manuscript Conference focused on the theme "Maps and Atlases: A New World in Rare Books and Manuscript Collections."

The purpose of this leaflet is to introduce the historical society curator to the basic elements of map preservation, storage, and retrieval using a card catalog. The cataloging procedure we have described is based on the Anglo-American rules of the American Library Association with modifications for the sake of simplicity and to account for some of the unique characteristics of antiquarian maps.

### Equipment and Storage

#### Map Cases

Whenever possible, maps should be stored flat and enclosed for protection in a folder. Rolled or folded maps or maps in a slipcase are

best unfolded and stored as separate sheets. Flat filing allows for compact storage and easy retrieval and eliminates wear resulting from continual unfolding. In addition, flattened maps are easier to measure, compare, and study.

There are numerous companies involved in the manufacture of large sheet filing equipment. Much of this equipment was originally designed for drafting companies but will accommodate maps equally well. The cases are of two basic types, for vertical storage and for horizontal storage. Vertical storage equipment is not suitable for use with large antiquarian maps. Because paper weakens with age, many old





*Horizontal filing cases are the most practical for storing large maps.*

maps will not support their own weight if stored on end. Horizontal filing cases are better for the library or historical society collecting older materials. These cases are available in a variety of sizes in a price range of \$200 to \$500. Basically, they feature shallow horizontal drawers of approximately 24"x18" to about 74"x46" in stackable units of two to five drawers. Cost depends upon the number and size of drawers per unit and whether the cases are constructed of wood or metal. Wooden cases are the least expensive, but they are also less resistant to fire and wear.

Ideally, the size of the drawers within the cases should be sufficiently large to accommodate all the maps in the collection without being so large as to constitute a waste of space and cover material for the average-sized map in the collection. A drawer of approximately 43"x32" should prove large enough for most maps and might be considered the best choice if only one map case can be purchased. For larger collections, consideration should be given to a combination of different sized filing units. A single case of 43"x32" or greater dimensions could be used to house large maps while the bulk of most collections will fit

easily into smaller and less expensive units of approximately 38"x25".

For both large and medium-sized cases, shallow two-inch drawers are preferable to deeper ones. A large pile of maps in individual paper folders is heavier than might be imagined, and extracting a map from the bottom of a deep drawer can be difficult. Also, cases with a large number of shallow drawers will allow more possible sub-divisions in the arrangement scheme employed. Hold-down wires or straps are available for most map drawers at a nominal price. They help to secure the folders in place within the drawer and should be installed on all cases to guard against possible damage to the maps.

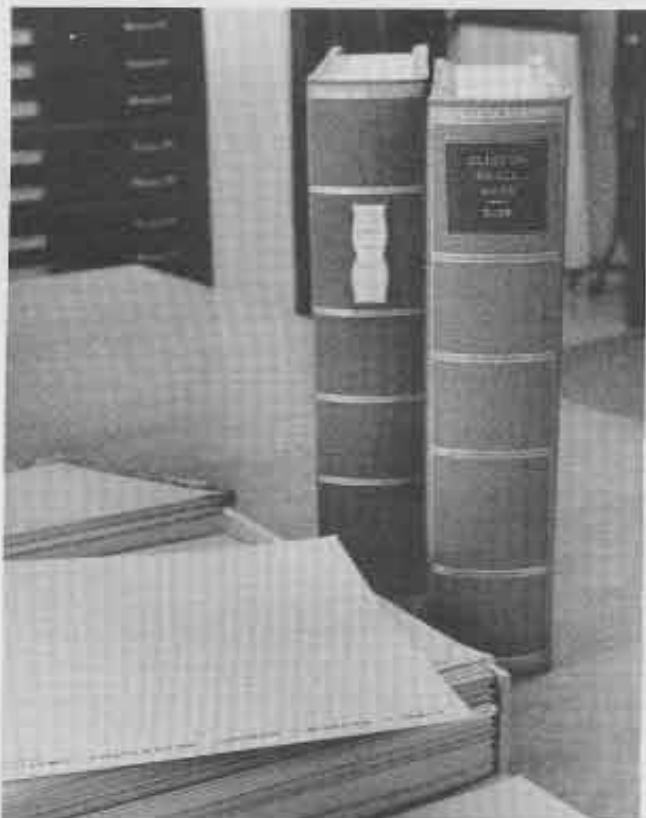
The variation in size, cost, and capacity of the equipment available allows curators some latitude in matching filing cases to the scope of their own collections. Optimally, when planning for the purchase of equipment, the collection's rate of growth should be considered as well as its present size. The curator should closely examine and compare equipment offered by several manufacturers before deciding to purchase.

#### *Map Folders*

All maps should be stored in protective folders, preferably one folder for each map. The folder will keep the map clean while in storage and reduce wear from friction as the map is taken in and out of the drawer. Heavy paper folders are adequate for protection and less expensive than plastic covers, but only acid-free paper should be used. Acceptable long-lasting paper covers are available from several library supply firms in various sizes and in thicknesses of .010" and .020", the best weights for ease of handling and maximum protection. Price varies with size, thickness, and the quantity ordered from about 60 cents to \$1.25 apiece. Although initially expensive, the folders will prove a bargain as they endure several decades of moderate use.

Folders should be ordered an inch or so smaller than the drawer dimensions or else be trimmed to fit. This helps prevent the edges from becoming dog-eared or snagged. Within each drawer, all folders should be the same size regardless of the size of the map they contain. When various-sized folders are mixed within one drawer, the small ones often slide to the back and become difficult to locate. They should be filed with folded edges to the front as these do not tear as easily as the open edges and are easier to grasp when being removed.

To aid retrieval, each folder should be labeled with the name of the cartographer, abbreviated



*Small maps, stored in vertical file boxes occupy only a few feet of shelf space.*

title, and date, as well as the area or subject classification under which the map will be filed. All folders should be labeled on the same spot on the front corner. Neat, permanent letters can be applied to the folders with a tool like the Leroy Scriber manufactured by Keuffel & Esser, which retails at \$30 and higher. Similar lettering pens are available from most large library suppliers. "Press-type" letters are attractive but time consuming to affix; typed or hand-printed stick-on labels may not be as easy to read.

#### *Small Maps*

It is a waste of space and materials to store a very small map in a standard-sized folder and drawer. One alternative is to separate the small maps and store them in vertical files or in one of the many types of letter file boxes available from library suppliers. These maps can be arranged in a simple chronology in one or two boxes instead of duplicating the arrangement scheme used for the large drawers. When stored in file boxes, several hundred maps occupy only a few feet of shelf space. "Small maps" or a similar identification must be typed or stamped in the corner of catalog cards to indicate where these maps are stored.

#### *Large Maps*

In every collection there will be a few maps too large to fit in filing drawers unfolded. If such maps are frequently studied, repeated use will wear them at the folds. They must be unfolded and stored flat. Framing and hanging is one solution, but this exposes the maps to deterioration from room lighting. Early large maps usually consist of several joined sheets which can be separated for storage. For others, we recommend sectioning the map and mounting the separate pieces on acid-free cloth or backing paper.

#### *Arrangement and Classification*

Any collection of maps should be arranged and stored in the filing drawers according to some kind of classification system. Classification provides for the easy retrieval of individual maps by grouping together similar types of maps. Any classification scheme should be kept as simple as possible and designed to concur with the specific characteristics of the collection. No one arrangement scheme is best suited to all types and sizes of map collections. A classification scheme tailored to the map collection of a small town historical society will likely need to be less extensive than that of a large research library. The number of maps in a collection, their degree of subject homogeneity, the number of drawers or subdivisions available for storage, and the direction in which the collection is likely to grow are all factors to be considered when arranging the collection.

Traditionally, the two most common approaches to map classification have been arrangement by geographic area and arrangement by subject. Both systems have their advantages, but in most cases a geographical arrangement scheme is the more appropriate for a collection of historic maps. Thematic, or subject, mapping is a fairly recent development in cartography. Most early maps are a composite of subjects and do not easily lend themselves to arrangements by topic. A typical early map might depict an area's roads and political boundaries, have inset plans of several towns, offer a list of property holders, and provide several paragraphs describing the political and economic history of the area. Any of these features, in themselves, could be considered as a subject for the purposes of classification. Just as importantly, most readers in historically oriented collections approach the maps by area and period rather than by subject. Readers usually are interested in observing historical development by comparing successive maps of the same area.

A geographic arrangement is especially suited

to a collection of maps covering a wide scope. A natural hierarchy is easily formed from the largest to the smallest area. As an example, a historic map collection of the United States might be arranged as: North America, United States, areas west or east of the Mississippi, groups of states (Great Plains, Pacific Northwest, etc.), individual states, and perhaps the counties or individual towns of the state in which the collection is located. Within each specific area the maps can be further subdivided by date and then by the cartographer's name. At the same time, an area as small as an individual state is compatible with geographic arrangement. The arrangement scheme could proceed from the maps of the whole state through sections of the state, townships, or counties, to specific towns. Unlike subject classification, geographic arrangement is easily amenable to changes in the size of the collection. A region or a state can be subdivided further when the collection grows large enough to warrant it.

Though subject and geographic arrangement schemes are those most commonly employed for map collections, the final arbiter must be the specific characteristics of the collection itself. Many small collections are centered on specific topics that serve, in themselves, as logical classification categories. Other small collections might easily be arranged by a simple chronology. But whatever arrangement scheme is chosen, it must possess sufficient latitude to accommodate potential growth.

## Cataloging

### I. MAIN ENTRY

#### *Main Entry Under Author*

In keeping with the principles of the Anglo-American cataloging rules, main entry is made under the cartographer or other individual most responsible for the creation of the map image. Lloyd Brown in his book, *Notes on the Care & Cataloging of Old Maps*, has noted some common title statements on old maps that usually indicate the cartographer:

- "... made under the direction of ..."
- "... from the latest observations of/by ..."
- "... compiled from the latest surveys of/by ..."
- "... surveyed in the present year by ..."
- "... amended and corrected by ..." (Unless the name of the original cartographer is also given, in which case he would be given main entry.)

Unambiguous author statements like these make clear which individual was responsible for the map. However, early maps were often the

product of the efforts of several individuals, and an author statement might read:

"... Composed from surveys taken by the Hon. William Bull Esq. Lieutenant Governor, Captain Gascoign, Hugh Bryan, Esq; and William De Brahm Esqr. Surveyor General of the Southn. District of North America, Republished with considerable additions, from the surveys made & collected by John Stuart Esqr. His Majesty's Superintendent of Indian affairs, by William Faden successor to the late T. Jeffreys, Geographer to the King . . ."

Where a map is the result of the separate efforts of several individuals, with no one person clearly labeled as cartographer, main entry is decided by the relative importance of each person's contribution. First in significance is the work of the surveyor who is responsible for the initial study of the area being mapped. Credit would next be given to a compiler who assembles pre-existing surveys or observations into a drawn map. A final consideration for main entry is the publisher or the engraver if either is known to have often been involved with compiling maps. These individuals are responsible for the creation of the map image and, as such, can be compared to the author of a book.

If the work of one cartographer is amended or enlarged by another person, main entry is usually made under the cartographer who first created the map.

Palairret, Jean, 1697-1774.

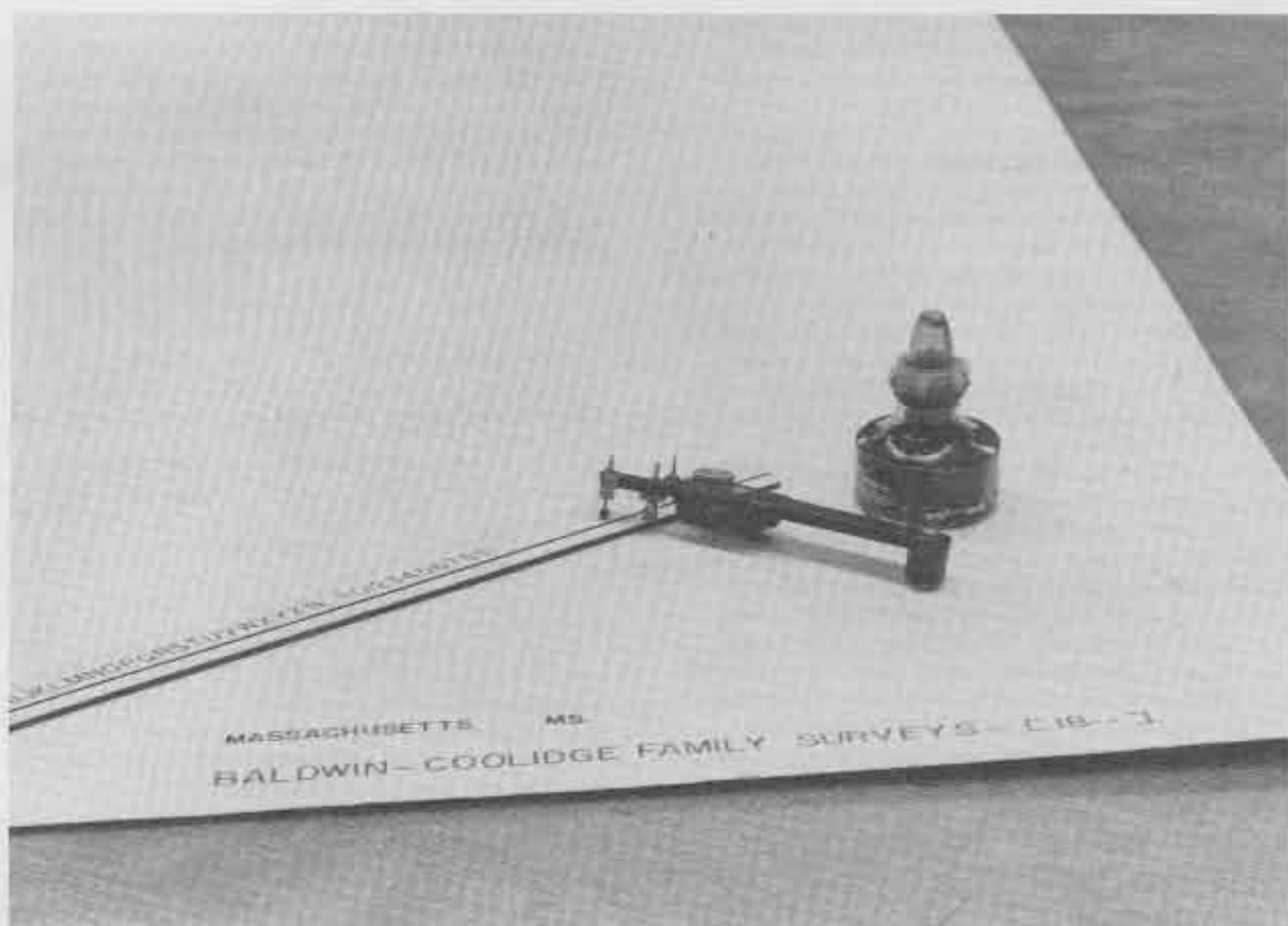
A map of North America by J. Palairret with considerable alterations & improvements from D'Anville, Mitchell & Bellin. By L. Delarochette. London, printed for Tho. Bowles . . . [1760]

An exception would be made only if the reviser had so totally altered the map as to have, in effect, created a new map.

Other persons commonly credited on a map are those who worked to finish the printing plate or upon individual copies. They are recognized by a note and an added entry but are usually not considered for main entry. These individuals are often credited in the margins of the map with their contributions usually given in Latin.

delineator	(del.)	draftsman
sculpsit	(sc.)	engraver
scripsit	(scrip.)	letterer
pinxit	(pinx.)	artist
excudit	(excud.)	publisher*

\*often synonymous with engraver



*A Leroy Scribe is useful for neat, permanent lettering of map folders.*

#### *Supplied Entry*

Often the name of the cartographer or other pertinent information not given on the map itself can be found in a reference source. This information may be used for catalog entry but should be enclosed in brackets to indicate it was not taken from the map itself.

#### *Main Entry Under Title*

If the authors of a map are unknown, and the only names indicated are those of minor contributors such as the printer, engraver, etc., main entry is made under title. If the map is without title, as well, the cataloger must supply one. This supplied title should be a concise, revealing description of the map area placed within brackets.

[Roads between Trenton and Newark]

#### *Form of Name*

Ideally, entry in the card catalog is made under the fullest form of a person's name that is available, including birth and death dates. Once a name has been introduced into the catalog, all subsequent entries under that name should be put in the same form. The form of an individual's name may differ upon several maps, but the standardized form is used for all catalog entries. In this manner, individuals with similar names can be readily distinguished. An example can be taken from the three James Cooks in the Clements Library map catalog who were all active in exploring and mapping in the Western hemisphere at about the same time.

Cook, James, 1728-1779.  
Cook, James, fl. 1766-1773.  
Cook, James, lieutenant.

The Anglo-American rules give more specific information on the proper form for both corporate and personal name catalog entries.

## II. DESCRIPTION

The purpose of describing a map on the catalog card is to distinguish it from other maps in the collection by the same author or with the same title and to help the reader decide if the map contains sufficient pertinent information to warrant examination. The more information the reader can discern from the catalog, the less he will need to ruffle through the map drawers themselves. Lengthy and detailed descriptions, however, are difficult for the patron to read and for the cataloger to write. Therefore, a description should involve the most interesting features of the map in the most concise manner possible.

Major elements commonly included in the description—title and author statements, place and date of publication—are often scattered over the map and must be assembled in the prescribed order by the cataloger. The map cartouche (the ornate enclosed area that serves as a kind of title page) will usually contain the map title and its authors. The cataloger, however, should always examine the complete map surface, as the date, place of publication, and names of publishers or engravers frequently are among the border decorations. Any descriptive elements appearing in an unusual form (on the verso, handwritten, etc.) should be mentioned in the note area of the catalog card.

## Transcription Rules

To aid in identification, information taken from the map is transcribed to the catalog card exactly as to wording and spelling. However, early capitalization and punctuation was non-standardized and is difficult to transcribe on modern typewriters. To aid both reader and cataloger, modern capitalization and punctuation may be employed.

Lieutt. Genl. for Lieut. Genl.

Unnecessary words deleted from the transcriptions are indicated by an ellipsis (. . .), while information supplied for clarification is bracketed.

Entered According to the Acts, 1787, by  
WToms, 12 Cheapside, London  
Entered . . . 1787, by W[illiam] Toms . . .  
London,

## Author-Title Statements

Titles on old maps vary greatly in length and location upon the map. The title is transcribed in total unless it is very long, in which case it may be abridged with superfluous information replaced by ellipses. However, the first words of the title are always transcribed.

"To His Excellency S<sup>r</sup>. Henry Moore Bar<sup>t</sup>.  
Captain General and Governour in Chief,  
in & over the Province of New York &  
the Territories—depending thereon in

## MAIN ENTRY TITLE/AUTHOR STATEMENT

## IMPRINT COLLATION

## NOTES

Lattré, Jean, fl. 1743-1784.

Carte des Etats-Unis de l'Amérique suivant le Traité de Paix de 1783. Dédiée...a Benjamin Franklin...par...  
Lattré. 1784. A Paris. Chez Lattré...

54 x 76 cm.

Scale: 1:5, 068,800 or one inch to 80 miles.

Cartography based on the Mitchell map of 1755.

Copy without marginal text.

Inset: Supplément a la Floride...

With this is issued: Cappon, Lester J., The first French map of the United States of America.

A facsimile of the original map in the Newberry Library, reproduced by Lakeside Press, 1973.

Phillips, Maps, p. 864.

America—Chancellor & Vice Admiral of the same. This Plan of the City of New York, Is most Humbly Incribed, by his excellency's Most Obedient Seryant, Bern<sup>d</sup>. Ratzen. Lieut<sup>t</sup> in the 60<sup>th</sup>. Reg<sup>t</sup> Survey'd in 1767. London, Publish'd according to Act of Parliament Jany. 12, 1776; by Jefferys & Faden, Corner of St. Martins Lane, Charing Cross."

Ratzer, Bernard, fl. 1756-1784.

To His Excellency Sr. Henry Moore Bart. . . . This plan of the city of New York . . . by . . . Bernd. Ratzen [sic]. Lieutt in the 60th. Regt Survey'd in 1767. London, published . . . Jany. 12, 1776; by Jefferys & Faden . . .

When a map has two or more titles, preference is given to the title within the cartouche, then to a title within the map borders, and, finally, to a title outside the borders. The title not chosen is given in the note area. A title in English and another language is transcribed in English only with the other title indicated in a note. Subtitles are transcribed as part of the title separated by appropriate punctuation.

Illinois: Exhibiting the latest surveys and improvements.

The author statement should include those persons considered as authors of a map, such as the surveyor, the compiler or cartographer, and the publisher. Other contributors are cited in the note area. The statement of authorship is transcribed as it appears on the map. Unnecessary words, honorary titles, or addresses may be abridged, but occupational titles are usually included.

Delarochette, Louis Stanislas d'Arcy, 1731-1802.  
Bowles's new one-sheet map of South America, divided into its provinces, governments, &c. . . . according to D'Arville, by L. Delarochette. Printed for . . . Bowles & Carver . . . London [c. 1795]

### Imprint

The imprint area follows the author statement and records the names of the publisher and printer and the place and date of publication. The publisher is usually designated by one of the following phrases:

" . . . published by . . ."  
" . . . printed for . . ."  
" . . . entered according to the acts by . . ."

Imprint information is transcribed as it appears on the map with addresses, titles, or other unnecessary words abridged.

Place and date of publication will sometimes

be missing from maps. The cataloger should make an effort to determine this information by consulting reference sources or by examining the internal evidence on the map. Changes in political boundaries, notes on new discoveries, or a dedication can all be used to estimate the probable place and approximate date of publication. Maps were often revised at a later date without changes in the imprint. A careful search for internal evidence may uncover the approximate date of re-issue which is then included with the original publication date.

London: published by Wm. Faden . . . 1783 [c. 1790]  
Charleston [Mass.]  
Philadelphia [18--]

### Collation

The collation is placed upon separate lines following the imprint and records the size of the map, coloring, where the map is to be found, and the name of any series it may have been issued under.

Map size is measured in centimeters (height by width) from the outside edges of the borders. Titles, credit lines, or other minor inscriptions outside the borders are ignored. For maps without borders, the plate impression or size of the sheet can be measured. This variation is then indicated in parentheses after the size.

33 x 57 cm. (sheet size)  
60 x 120 cm. (on two sheets)  
45 x 62 cm. (plate size)

If the map is in or with some other source of information or has been taken from a book or atlas, its source is indicated in parentheses.

45 x 56 cm. (In: Carrey, H. Atlas of the U.S., N.Y., 1833)

The name of a map series (very uncommon on early maps) would be listed as the last element of the collation.

Col. map 45 x 67 cm. (Early maps reproduction series)

Any materials, such as booklets or printed indexes, accompanying the map are indicated in the notes area.

## III. NOTES AND ADDED ENTRIES

### A. NOTES

The number and content of the notes is left to the discretion of the cataloger. Ideally, notes are concise condensations of information on the map most useful to readers. The cataloger must make a trade off between the number of notes and the number of catalog cards used to describe each map. As a general rule, it is



advisable to attempt to describe a map on a single catalog card. It is usually easier to examine the map itself than to study several cards. Long bibliographical descriptions or other information about the map too long to include on the catalog card can be typed on a sheet of acid free paper and stored with the map.

Following are some pertinent notes the cataloger may wish to include on the catalog card. Most notes will not be applicable to all maps, and the final decision as to their inclusion rests with the cataloger.

### Scale

The scale is the first note below the collation lines and should be determined for every map that is cataloged. Determining map scale is made easy with the use of a natural scale indicator, a simple measuring device laid over the surface of the map. Map scale should be noted in both the Representative Fraction (RF) form (e.g. 1:12,000) and in the descriptive form common to early maps (e.g. "one inch to 1,000 ft."). Including the RF scale facilitates the comparison of early and modern maps.

Many early maps will give the scale in old European units of measurements. The table listed under "measure" in *Webster's New International Dictionary*, second edition, is helpful in converting to modern units of measurement. A note is made if the scale is not indicated and can not be estimated by the cataloger or if the map is not drawn to scale.

Scale not given.  
Scale varies.  
Not drawn to scale.

### Projection

It is difficult for an untrained person to determine a map projection, and the information is of limited value to most readers. Therefore, the projection is usually ignored unless it is specifically mentioned on the map. In which case, it can be noted after the scale or on the next line.

### Title Notes

The source of the title and any variant titles are explained by a note.

Title from verso.  
Additional title: New map of America.  
Title also in French.

### Other Contributors

All the contributors to the map not included in the description, usually the draftsman, engraver, colorist, etc., are mentioned in a note. This information may be copied directly from the map.

"H. Tanner, del"  
"B. Lincoln Sculpt."

### Insets

Insets that comprise a significant portion of the map surface or offer useful detail are first noted and then separately cataloged. Minor insets are simply noted by title.

Insets: A plan of Chesapeake bay; A view of the harbour.

### Other States and Copies

Different "states" of a map reflect changes to the plate from which it was printed. A map state roughly corresponds to an edition of a book. Cartographic analysis to identify variant states of a map is difficult for a cataloger with little map experience. Rather than attempting to number variants, a map that is a variant state from another map in the collection or from a map described in a reference work is noted simply as "another state."

Another state of 1755 Mitchell map of North America.

If the collection has two identical copies of a map, only the first need be cataloged with a note made that there is "another copy."

### Facsimiles and Reproductions

A facsimile map is an attempt to duplicate an original including exact size and coloring; a simple reproduction duplicates the map image without attempting to be an exact copy. All maps that are copies of originals should be so noted on the catalog card.

Color reproduction of the original map in the Bodelain Library, Oxford University.

### Bibliographical References

Reference works offering more detailed information on the map being cataloged may be noted in short title form.

Phillips--Atlases, II, p.493  
BM cat--44223

### Accompanying Materials

A note is made if the map is accompanied by a booklet, index, or any other extra materials.

Accompanied by: T. Clark, *Early settlements on the Mississippi*, 1975.

### Contents or Special Features Notes

The cataloger will want to inform readers of special information or subjects found upon the map.

Contains several prominent cattle trails.  
Gives names of property holders.

## B. ADDED ENTRIES

Added entries provide additional access to the map being cataloged, and all appropriate added entries should be made. An added entry is made simply by typing a new top line over an additional copy of the main entry card. The "tracings," a record of the added entries made for each map, is recorded on the verso of the main entry card. The subject/area added entries are numbered with Arabic numerals, name, title and series entries with Roman numerals. Catalogers traditionally type all subject/area entries in red or in capital letters to distinguish them from title or series entries.

1. SUBJECT/AREA
2. SUBJECT/AREA
- I. name
- II. name
- III. Title
- IV. Title. The additional or alternative title.
- V. Series

Inset separately cataloged.

*Subject/Area Added Entries*

Added entries are made for the principle area(s) described by the map as well as any special subjects featured. The date of the map can be added to the subject/area entry to allow for a chronological index of the maps in the catalog under each subject and area.

MONTANA — 1898  
CANALS — 1824

The area added entry should be made under the most specific common name in current usage. For example, a map of Manhattan Island is entered under that name and not under New York. Old maps of areas that have been renamed are entered under the current name with a "see-reference" placed in the catalog referring from the old name to the name in current usage.

Isle St. John  
see  
Prince Edward Island

Once a name for an area/subject has been placed in the catalog, it is considered "established" and all subsequent maps of the same area/subject are entered under that same name. For example, once "land ownership" has been established as a subject heading in the catalog, the cataloger should not later create an additional, overlapping, subject heading for "property holdings." This practice of establishing entry headings helps assure that all similar maps will be found together in the catalog. Additional information on organizing see-references and subject headings can be found

in *Sear's List of Subject Headings*, the standard work on the subject, or David J. Haykin, *Subject Headings: A Practical Guide* (Washington: GPO, 1951).

*Name, Title, and Series Added Entries*

Added entries are made for relevant personal names, corporate names, titles, and series, in that order. Any person whose work was germane to the map or whose name may serve as an access to the map should be recognized with an added entry. The entry is for name only as each person's contribution can be found in the body of the catalog card.

The short title of the map (the first line of the title or the title up to the first punctuation) is sufficient for the title added entry. The title entry may be abbreviated in the tracings as simply "Title." Any additional alternative title should be given in full in the tracings.

- I. Title
- II. Additional title: Revised map of the new territories . . .

A series added entry is abbreviated as "Series" in the tracings, while a note is made at the end of the tracings if an inset has been separately cataloged.

## Supplemental Reading and Bibliography

*Cataloging Systems and Map Librarianship*

*Anglo-American Cataloging Rules*. "Chapter 11: Maps, Atlases, etc." Chicago: American Library Association, rev. ed., 1987.

The most convenient and concise reference to map cataloging.

Boggs, Samuel W., and Dorothy C. Lewis. *The Classification and Cataloging of Maps and Atlases*. New York: Special Libraries Association, 1945.

An older work still useful for the identification of projections and the determination of scales.

Boswell, Roy V. *Collection for the History of Cartography*. [Originally pub. as *Western Association of Map Libraries Information Bulletin*, vol. 7, no.2 (March 1976)] Fullerton: California State University, 1976.

An excellent example of how to develop, store, and exhibit a collection of antiquarian maps which was assembled at Cal State Fullerton in the early 1970s.

Brown, Lloyd A. *Notes on the Care & Cataloguing of Old Maps*. [Orig. ed. pub. Windham, Conn.: Hawthorn House, 1940] repub. Port Washington, N.Y.: Kennikat Press, 1970. 110pp. Maps, illus. \$8.25.

A readable primer, somewhat dated by advocacy of English linear system over the metric, but presentation has considerable charm and utility.

Drazniowsky, Roman, comp. *Map Librarianship: Readings*. Metuchen, N.J.: The Scarecrow Press, 1975. vii + 548pp. Maps, illus.

A selection of 48 articles appearing for the most part during the past decade on all phases of map forms, classification, and processing, plus a valuable 18-page bibliography.

Karrow, Robert W., Jr. *Manual for the Cataloging of Antiquarian Cartographic Materials*. Second draft, Chicago: The Newberry Library, 1977.

A definitive system modeled on the Anglo-American rules and expanded considerably to serve as the basis for the Midwest Map cataloging project begun in 1975 at the Newberry Library.

*International Standard Bibliographic Description (Cartographic Materials)*. London: International Federation of Library Associations Committee on Cataloguing/Geography Map Sub-Section (unreleased, 1976).

Still in a draft format, this system will provide an authoritative reference upon publication.

Nichols, Harold. *Map Librarianship*. London: Clive Bingley; Hamden, Conn.: Linnet Books, 1976. 298pp. A single-authored survey of recent practices with particular reference to British archives.

Verner, Coolie. "Carto-bibliographical Description: The Analysis of Variants in Maps Printed from Copperplates." *The American Cartographer*, v.1, no.1 (April 1974), pp. 77-87.

How to analyze and describe early engraved maps which appear similar.

Watkins, Jessie B., comp. *Selected Bibliography on Maps in Libraries*. Syracuse, N.Y.: Syracuse University Libraries, rev. 1967. 18pp.

A useful list of articles and monographs to 1967—divided by subheadings to cover acquisition, classification, cataloging, storage, and use.

#### Map Identification and Selection Aids

Cobb, David A. "Selection and Acquisition of Materials for the Map Library," *Drexel Library Quarterly* 9 (October 1973), pp. 15-25.

A recent look at how to access collection needs and purchases.

Groce, George C., and David H. Wallace. *The New-York Historical Society's Dictionary of Artists in America 1564-1860*. New Haven: Yale University Press, 1957.

A biographical directory which includes engravers and lithographers and supercedes Stauffer, *American Engravers* (1907) and Fielding, *American Painters, Sculptors and Engravers* (1926).

Heawood, Edward. *Watermarks, Mainly of the 17th and 18th Centuries*. [vol.1 of Monumenta Chartae Papyraceae Historiam Illustrantia] Hilversum, the Netherlands: Paper Publications Society, 1950.

A valuable reference work containing 4,000 watermarks which can aid in determining the origin of early maps when little else is known.

Library of Congress, Geography and Map Division. *The Bibliography of Cartography*. Boston: G. K. Hall and Company, 1973. 5 vols.

A dictionary of about 90,000 items on all aspects of cartography.

Lister, Raymond. *How to Identify Old Maps and Globes*. Hamden, Conn.: Archon Books, 1965. 226pp.

A general review of the history of cartography plus a list of about 3,250 cartographers, engravers, and publishers from about 1500-1850.

Ristow, Walter W. *Facsimiles of Rare Historical Maps: A List of Reproductions for Sale by Various Publishers and Distributors*. Washington, D.C.: Library of Congress, Geography and Map Division, 1971. 3rd ed., with supplement.

Useful guide to obtain reproductions with a new edition now in press.

Ritzlin, George, ed. *World Directory of Dealers in Antiquarian Maps*. Chicago: The Chicago Map Society, 1977. \$3.

A list of dealers who stock original maps arranged by location.

Tooley, Ronald V. *A Dictionary of Mapmakers*. London: Map Collectors' Series, 1964-present.

An alphabetical list of cartographers, engravers, geographers, and publishers to 1900 issued in installments now complete to Powell.

#### Public Map Collections and Catalogs

Published map catalogs can aid the identification and collation of specific maps and atlases.

*Map Collections in the United States and Canada: A Directory*. Compiled by David K. Carrington. New York: Special Libraries Association, 1970. 2nd ed.

A listing of the 605 principal institutional map collections in the U.S. and Canada. A revised edition is scheduled for 1979.

*Directory of Canadian Map Collections*. Compiled by Joan Winearls and Yves Tessier. Ottawa: Association of Canadian Map Libraries, 1969. \$3.

Detailed directory to 87 map collections in Canada with listing of size, scope, equipment, reproduction facilities, and catalog format.

*World Directory of Map Collections*. International Federation of Library Associations, Geography and Map Libraries Subsection. Edited by Walter W. Ristow, München: Verlag Dokumentation, 1976. 326pp.

A select directory to the major map collections arranged by location.

#### Great Britain:

*British Museum Catalogue of Printed Maps, Charts, and Plans*. 1967. 15 vols.

*Maps and Plans in the Public Record Office*. Vol.2: America. (H.M.S.O., 1974).

*National Maritime Museum*. Vol.3: Atlases and Cartography. (H.M.S.O., 1971).

#### U.S. and Canada:

*A List of Geographical Atlases in the Library of Congress*. By Phillip Lee Phillips and Clara Egli LeGear. (U.S.G.P.O., 1909-1974), 8 vols. [vols.1-4 reprinted Amsterdam: Theatrum Orbis Terrarum, 1967].

*A List of Maps of America in the Library of Congress*. By Phillip Lee Phillips. (U.S.G.P.O., 1901 and reprinted Amsterdam: T.O.T., 1967).

*Guide to Cartographic Records in the National Archives*. (U.S.G.P.O., 1971).

*Index to Maps in Books and Periodicals*, Map Department, American Geographical Society. (Boston: G.K.Hall, 1968), 10 vols. plus 2 suppl.

*Index to Printed Maps, Bancroft Library, University of California Berkeley*. (Boston: G.K.Hall, 1964).

*Map Catalogue of the Canadian Section, National Map Collection, Public Archives of Canada*. (Boston: G.K.Hall, 1976), 16 vols.

*New York Public Library, Dictionary Catalog of the Map Division.* (Boston: G.K.Hall, 1971), 10 vols.  
*Research Catalog of Maps of America to 1860 in the William L. Clements Library, University of Michigan.* (Boston: G.K.Hall, 1972), 4 vols.

*General References on the History of Cartography*

Bagrow, Leo. *History of Cartography.* Revised and enlarged by R.A.Skelton. London: C.A. Watts, 1964. 312 pp.

A survey of the history of cartography to about 1750 with an appended list of 1,100 cartographers.

Brown, Lloyd A. *The Story of Maps.* Boston: Little, Brown and Company, 1949. xix + 397pp. Repub., Bonanza, 1968.

A readable survey more sophisticated than suggested by its title and includes an important 32-page bibliography arranged by subject.

*Imago Mundi: The Journal of the International Society for the History of Cartography.* Lympe Castle, Kent, England. 1— (1935—). Annual.

Includes articles, cartobibliographies, short notices, survey of recently published literature, and reviews of books.

*International Directory of Current Research in the History of Cartography and in Carto-Bibliography.* Compiled and edited by P.K.Clark and E.M.J.Campbell. London: Geography Dept., Birkbeck College, 1976. No. 2. \$5.

A guide to research topics and active scholars with a useful index arranged by subject.

Ristow, Walter M. *Guide to the History of Cartography.* Washington, D.C.: Library of Congress, 1973.

A listing of 398 basic references with a classified index.

Skelton, Raleigh A. *Maps: A Historical Survey of Their Study and Collecting.* Chicago: University of Chicago Press, 1972. xvi + 138pp. Paperback ed. with illus., 1975. \$2.75.

A study which traces the development of the field as a serious specialization by one of its most distinguished scholars.

Woodward, David, ed. *Five Centuries of Map Printing.* Chicago: University of Chicago Press, 1975. xi + 177pp. Paperback ed. 1977. \$7.95.

Series of six essays on the techniques of map reproduction which defines the technical background to cartography.

Josten's Library Services, 1301 Cliff Rd., Burnsville, Minn. 55337. (612) 890-9350  
 Kraftbill, Box 800, Tulsa, Ok. 74101. (918) 628-1400  
 Talas (Div. of Technical Library Services), 104 Fifth Ave., New York, N.Y. 10011. (212) 675-0718  
 University Products Inc., Box 101, Holyoke, Mass. 01040. (413) 532-4277; toll free (800) 628-1912

*Map folders:*

Hollinger Corp., 3810 S. Four Mile Run Dr., Arlington, Va. 22206. (703) 671-6600  
 Talas (address above)  
 University Products (address above)

*Leroy Scriber:*

Keuffel & Esser Co., 20 Whippany Rd., Morristown, N.J. 07960. (201) 265-5000

*Natural scale indicator:*

National Ocean Survey, Physical Science Services Branch, C153, Rockville, Md. 20852. The NOS distributes, free, a heavy paper version of the natural scale indicator.

Douglas Marshall has been the curator of the map and newspaper collections at the William L. Clements Library of the University of Michigan since 1970. In addition to his curatorial work, Marshall has written and taught in the area of discovery and exploration and is coordinator of the program in The History of Discovery at the University of Michigan. Douglas Marshall's most recent book is *Campaigns of the American Revolution: An Atlas of Manuscript Maps*, co-authored with Howard H. Peckham.

James Bartlett is a librarian and was formerly assistant to Marshall in the map room at the Clements Library. Bartlett is currently a graduate student in the Program in American Culture at the University of Michigan.

*Addresses of Suppliers*

Following are several addresses of companies supplying filing equipment. A further source of information on all types of library supplies and services is the "Annual Buyer's Guide," in *Library Journal*.

*Filing cabinets:*

Bro-Dart, Inc., 1609 Memorial Ave., Williamsport, Pa. 17701. (717) 326-2461  
 Demco Educational Corp., Box 7488, 2120 Fordem Ave., Madison, Wisc. 53701. (608) 241-1201  
 Fordham Equipment and Publishing Co., 3308 Edson Ave., Bronx, N.Y. 10469. (212) 379-7300  
 Hamilton Industries, 1316 18th St., Two Rivers, Wisc. 54241. (414) 793-1121  
 Highsmith Co., Inc., Box 25, Ft. Atkinson, Wisc. 53538. (414) 563-6356





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**American Association for State and Local History**

1400 Eighth Avenue, South  
Nashville, Tennessee 37203

**TECHNICAL LEAFLET 111**

Technical Leaflets are published by the American Association for State and Local History for the purpose of bringing useful information to persons working in the state and local history movement. The selection of subject matter is based upon varied inquiries received by the Association's home office. The leaflets, which are detachable from the magazine, are

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American Association for State and Local History

## Technical LEAFLET

### Post Card Collections In the Local Historical Society

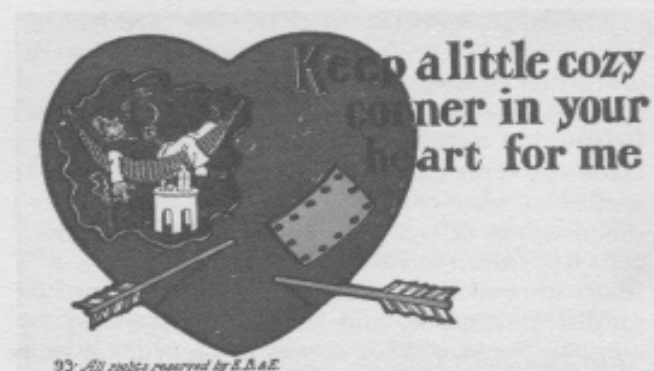
By Charles J. Semowich  
and Enid T. Thompson

The picture post card, one of the commonest and most ephemeral artifacts of the early twentieth century, can be a useful base for building a picture collection, an illustrated local history collection, an exhibit program, discussion programs, or an embryo oral history program. Available at little or no cost—new ones can be purchased cheaply at the corner drugstore, and old ones can be found in almost anyone's attic, basement, or miscellany drawers—they are also easy to handle and care for. They usually have no great sentimental value, so people are willing to donate them to collections or to societies. In fact, post cards are the perfect medium to begin or to build upon a local history collection.

Especially valuable to collections are photographic post cards. Other types, such as Christmas cards, comic valentines, trade or advertising cards, and the common "penny post card," have uses, but the historical and visual information contained on the photograph are of greatest value.

This form of card was so common early in the century that even personal photographs were mounted on post card paper. The types of views printed on post cards include major events, family portraits, scenery, machinery, buildings, cityscapes, paintings,

local landmarks, animals, sporting events, or any other subject of current interest. They were created to provide a glimpse of contemporary life so that people who could not be part of the sender's immediate surroundings could share in that life. This helps to explain why many scenes exist only on post cards and not on any other photographic medium. Details of street scenes or events are recorded in totality and normality providing a picture not always available in posed photographs. The sender of the card may have looked at the scene every day and been unaware of the details, but the camera recorded



Pre-1907 Valentine post card.



*Trade card—The Dunning Grocery Company in Binghamton, New York.*

them. Thus, the scenic post card carrying the innocuous message, "Wish you were here," is a source of much visual documentation about American life, especially of life during the first quarter of this century. Consequently, the well organized and catalogued post card collection can be a useful resource for any historical society.

#### **History and Development**

The production of the post card began in the 1840s, just before the production of photographs, when small pocket-sized engravings that could be mailed became available. In 1869 the first government-issued post cards appeared in Vienna, Austria, and in 1873 the United States government issued official post cards. The fact that these cards were often used for advertising messages makes the "trade card" collection a valuable resource for the study of businesses and manufacturing. In 1893, souvenir post cards were issued in conjunction with the Columbian Exposition.

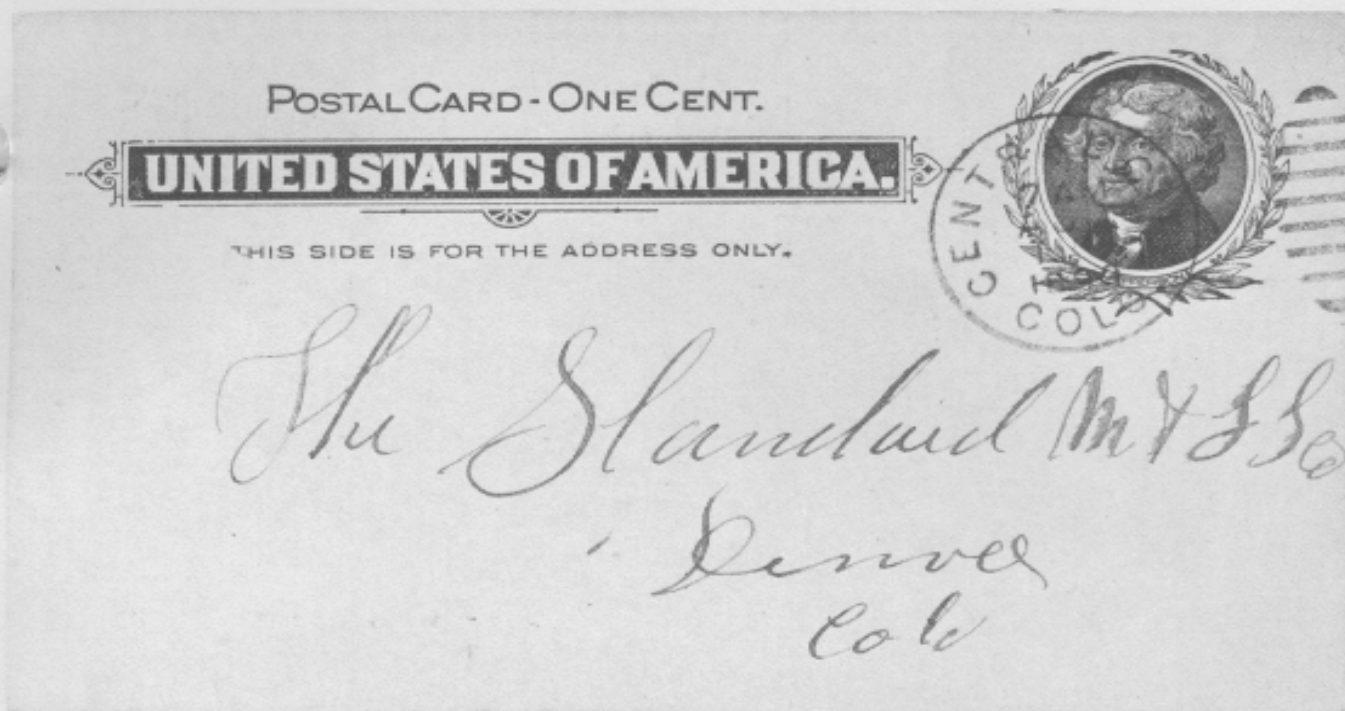
The most important date in post card history is May 19, 1898, when private companies were permitted to issue their own post cards that could go through the mails at the one-cent rate. Before that date the private cards, such as the trade souvenir cards, were permitted in the mails but were charged the regular first-class postage rate of two cents. Passage of this one-cent legislation led to the post card explosion that followed. Large companies were formed to publish post cards, and good photographers combed the world for scenes to record. Of more importance to local history, however, is the fact that there were hundreds of small, local

publishers of post cards, such as photographers, newspapers, drugstores, and dry goods stores.

There were two methods of manufacturing post cards: using photographs and using lithographs. Most large manufacturers had their cards printed in Germany using several lithographic stones, each carrying a different color of ink. Some publishers preferred having a one-color lithograph tinted in color by hand, while most of the small publishers had their photographic views printed directly on post card paper rather than transferring the image to lithographers' stones. As in the photography of the era, sometimes these views were hand tinted. When one printing of the post card was sold out, it was easier to take a new photograph and issue a new card than reprint the old one, which is why picture post cards often provide some of the best chronological history available.

Generally speaking, actual photographic post cards were produced in very small runs. Even the amateur photographer printed his images on post card paper and sent them through the mail. Thus, one of the real challenges for the post card collector is identifying the photographer who made the card and researching his career as a post card publisher.

The backs of the earliest post cards were not divided as are more recent cards; only the address was permitted on the back side of the card. The famous "Wish you were here" appeared on the margin of the photo or was printed on the other side. In 1902 the English postal system permitted the inclusion of messages on half of the address side, and this innovation was extended in the United States on



Before 1907 the backs of post cards were not divided, and only the address was permitted on that side of the card. This card, issued by the United States government, is postmarked 1899.

March 1, 1907. Some card stock without the divided backs would have been used subsequent to that date, but it is useful for establishing an approximate date for otherwise undated post cards. Cards printed during the period between 1906 and 1930 can be tentatively identified by the fact that there were white margins on the sides of the photographs. After 1930 the photographs were mostly borderless. From the 1930s until World War II post cards were often printed on fabric-textured paper and were called "linen cards." Color photography was invented in 1935, and actual colored photographic cards were issued after 1939. All these facts, as well as geographic details, are helpful in dating post cards. Of course, if the post card was mailed, the postmark is extraordinarily helpful in dating the card and the scene.

Whenever possible it is important to identify the photographer of the scene. Many of America's finest photographers made pictures for post cards and at the same time made impressive photographs of the scenes for art collections and for inclusion in brochures, art books, or travel books for businesses or resorts. Books of scenic views were popular early in this century, and many of the scenes were reproduced on cards. Time spent comparing post cards from a collection with these books and brochures is time well spent. It contributes

to identification and dating, and differences in details can be noted. Often, famous photographers, such as William H. Jackson, took a new view of the same scene every year over a long period of time. If the picture post cards of these views can be assembled in a series, they form a remarkable photographic history.

#### Organization

Begin organizing a collection of post cards by grouping them. Trade cards are usually put in a trade card collection, identified as well as possible by the business issuing them, dated, usually by consulting the local business or telephone directories, and filed alphabetically by the business issuing them. Valentine and Christmas cards, birthday greetings, and other greeting cards are best kept together and handled as memorabilia collections since they are very useful at holiday times for exhibits and publications but do not contribute a great deal of information to users. However, even holiday cards should be examined for useful information before they are filed, and they should be dated as closely as possible. Written documentation of any type on the cards, such as names, dates, addresses, and information about special events, should be listed in an index file.

In an institution that is gathering a collection of photographs, post cards that are





Personal photographs were often printed on post cards. Before card backs were divided, messages were written in the margin or directly on the image on the front of the card.



Top. Many early cards were lithographed in Germany as was this New Year's post card, post-marked December, 1908.  
Bottom. The outline for this drawing of the William Penn House in Philadelphia was lithographed in black; then the card was hand colored with water colors.

photographic in nature and lithographic cards should be handled with the photographs. Others, such as Christmas and Thanksgiving cards, should be placed with their proper memorabilia groups.

Storing and indexing photographs or pictures by subject is the most manageable system for historical societies and libraries. Similar pictures are sorted into groups, studied for details, and thoroughly identified; then subject headings can be assigned. Political or geographic boundaries and time frames are the most logical divisions for a post card collection, and they are also the most useful for historical purposes.

A typical subject heading list might look like this in its early stages:

*Eldorado Springs*

*Before 1900*  
*1900-1919*  
*1920-1939*  
*1940-1949*  
*1950-1959*  
*1960-1969*  
*1970-1979*  
*1980-*

*Eldorado Springs*

*Hotel*  
*Houses*  
*Resort*

*South Boulder Canyon*

*Agriculture*  
*Business*  
*Schools*  
*Transportation*

*People*

*Adams family*  
*Jones brothers*  
*Smith, James C.*

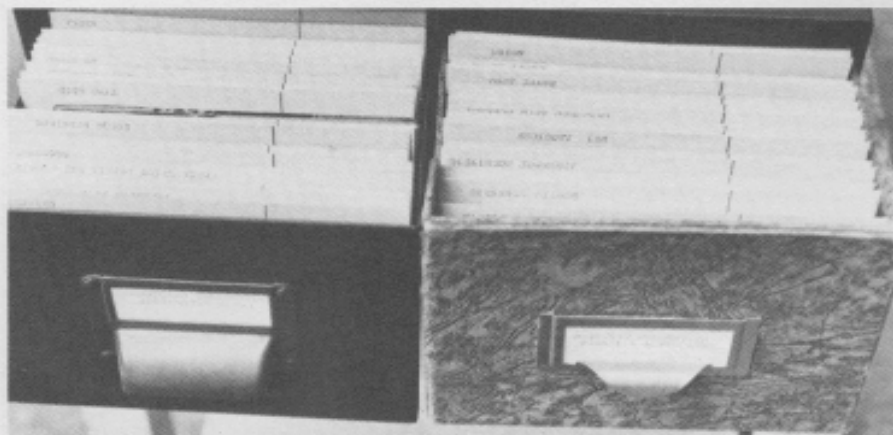
If the collection of post cards or photographs covers a wider area than a single town, work from the larger area and the most general picture to the most specific:

- I. *County (by decades or years if needed)*
  - A. *Townships (alphabetically and by date)*
    1. *Villages within townships*
    2. *Districts (all alphabetically by names and subdivided by date if necessary)*
  - B. *Cities (alphabetically)*
    1. *Binghamton*
      - a. *General scenes*
      - b. *Bridges*
      - c. *Buildings*
      - d. *Churches*
      - e. *Natural features (lakes, hills, etc.)*
      - f. *Parks*
      - g. *Schools*
      - h. *Streets*
    2. *Dover*

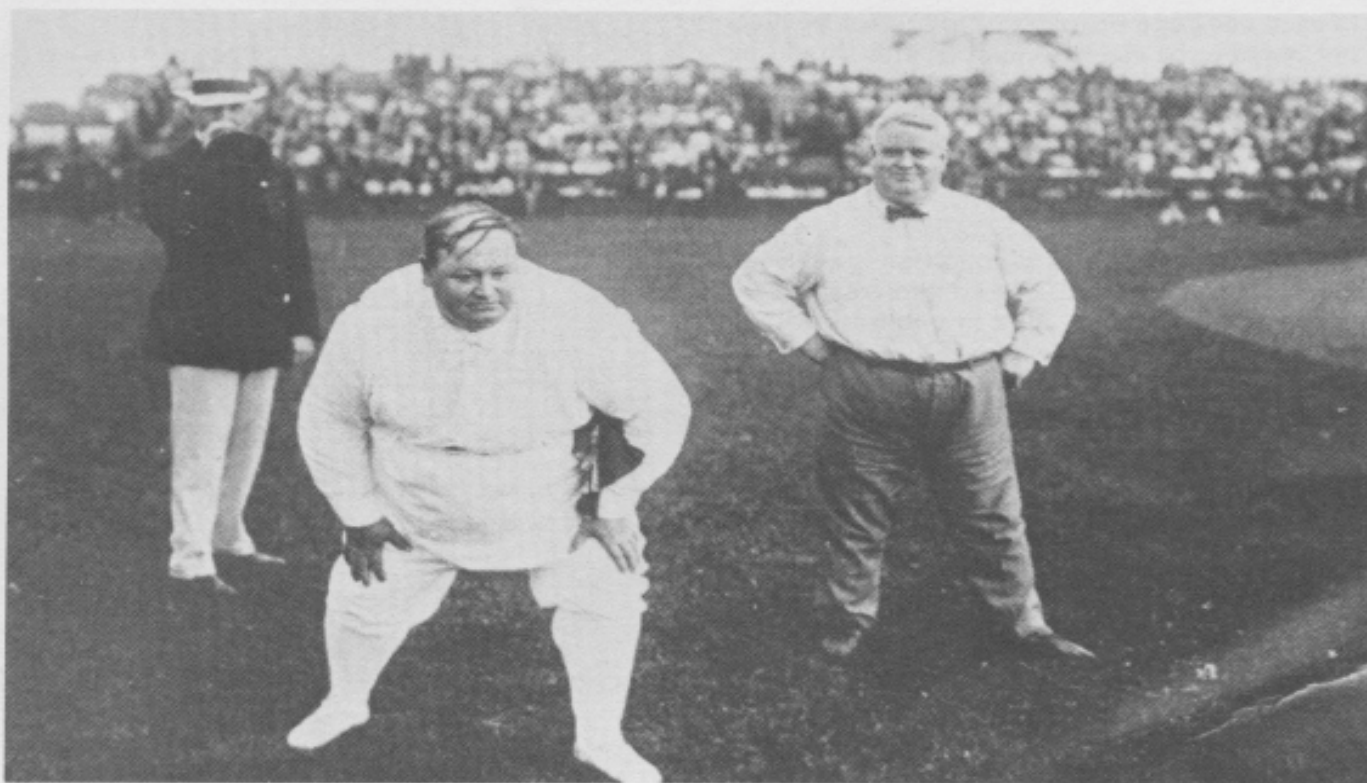
Special subjects that are important to an area require special subject headings, such as:

*Transportation*  
*Boats (or water)*  
*Railroad*  
*Streetcars*  
*Wagons*  
*Agriculture*  
*Food crops*  
*Fur farms*  
*Livestock*  
*Celebrations*  
*Harvest festival*  
*Regatta*  
*Rodeo*

Use whatever subjects were important and served to give the locality its own individual flavor.



The Broome County New York Historical Society's post card collection is stored in file boxes. Subject headings for the collection are visible in the photograph.



*The back of this photograph post card reads, "Fat man's race, Johnson Park, Johnson City, New York, 1917."*

#### Accessioning

Usually, but not always, post cards are donated in groups. When they are accepted, a receipt should be given to the donor and the gift listed in the accession or donor file. The cards do not usually need to be individually numbered as artifacts, but ownership should be established and the provenance of the card, its photographic history, and its ownership record noted. At this time, all documentation of people, any writing on the card, and oral traditions surrounding it should be recorded in a reference file. Then a subject heading can be assigned, written on the card in number two pencil in a designated spot on the back of the card, and, if used in the museum, an ownership stamp applied in another designated spot. The post card can then be filed in its proper place, but the particular collection could be reconstructed in its entirety at some later date if necessary. This might be done because individual collections tell something about post card collecting in general and specifically about the collector.

#### Storage

Storage of post cards is one of the simplest storage procedures for museums or libraries. If the collection is made up entirely of post cards,

the best way to store it is in metal four-by-six inch card file boxes or drawers. Five-by-twelve plastic shoe boxes, available in many stores for less than a dollar, are also good for storing beginning collections. With markers to identify the contents and the covers that come with the boxes, they can be placed on open shelves.

Dividers made of acid-free paper should be placed between the post cards in the various categories identified in the subject heading index. The number of cards belonging to a particular subject group can be written in pencil on the divider card and easily changed when additions to that subject grouping are placed in the file.

The usual requirements for proper collections storage are desirable—temperature and humidity control, air conditioning, acid-free storage containers—but if these are not available, the post card collection will be moderately protected in file drawers.

If the post cards are being handled as part of a larger photographic collection, it is best to use regular picture procedures: label in number two pencil with the assigned subject heading, stamp, identify, and store in alphabetical order in file cases or document boxes. It is wise to decide how many photographs or cards will be placed

in each envelope or folder, and if a folder does not contain the selected number, this should be noted in pencil on the outside of the folder. If there are more pictures on a subject than one envelope or folder should contain, add a second or even a third for the overflow.

#### Conclusion

The uses of a post card collection are infinite. They can be displayed, copied and enlarged for photographic exhibits, used in publications, used to stimulate discussions at meetings or as subjects of study. They provide visual documentation of lost buildings or scenes, add depth to a regular photographic collection, and duplicates serve as excellent exchange items. All of these uses added to the low cost of processing and minimal storage area requirements make collecting post cards one of the best ways for a small group or society to begin its collection.

Charles Semowich received his MFA in 1972 and is a candidate for the PhD in American Decorative Arts and Museum Techniques. He has served as curator of the Susquehanna County Historical Society in Montrose, Pa., as an instructor at several institutions, and as president and newsletter editor of the Broome County Landmarks Society in New York. Semowich is the author of articles published in *Antique News*, *Antique Trader*, *Design*, and *Arts and Antiques Weekly*. Enid Thompson is an adjunct assistant professor in the Department of History at the University of Denver, a free lance researcher, writer, and consultant. From 1962 to 1972 she was librarian for the State Historical Society of Colorado. Thompson is the author of several books, including four publications for the National Park Service and *Local History Collections* published in 1978 by the American Association for State and Local History. Post cards illustrating this leaflet are used courtesy of the Broome County Historical Society and Enid Thompson.



## American Association for State and Local History

1400 Eighth Avenue, South  
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#### TECHNICAL LEAFLET 116

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which are detachable from the magazine, are copyrighted © 1979 by AASLH and should be catalogued as part of HISTORY NEWS.

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American Association for State and Local History

## *Technical* LEAFLET

### **Evaluating Historical Photographs: A Personal Perspective**

By Paul Vanderbilt

#### **Introduction**

Evaluation, even the evaluation of historical photographs, can mean a good many different things, but in the context of this leaflet it will mean how to tell "good" photographs in the historical sense—that is those which are deserving of respect, expenditure, preservation, and all kinds of special attention—from those which can be stored as is or discarded without further ado. Of course, there are shades in between.

The very thought of "evaluation" is often explosive and directly wired to charges of bias or ignorance. Or it may set up currents of panic and feelings of insecure ground underfoot. We need to do our best to defuse these inhibitions by removing fear and establishing familiarity and confidence. Sound judgment in this area, after all, is more a matter of common sense than is generally supposed and is founded more in a firm understanding of

one's general situation than in a painful item-by-item analysis.

The evaluation process involves questions of what to try to find and acquire, what to pay for, what to keep intact, what to weed out, what to insure, to what to apply preservation measures, what warrants the considerable expense of sorting, printing, mounting, cataloguing, and providing with containers. The key to answering these questions lies in determining what constitutes historical value in photographs. Is it rarity or early date or association or striking imagery or a combination of all these factors?

A typical situation occurs when an ambitious institution acquires an unsolicited, large, and varied collection, say of mixed photographic negatives and prints, to add to its holdings. Let us say, just for exercise, that this new collection obviously includes some very interesting and pertinent pictures mixed in with

unidentified, broken, badly deteriorated, and irrelevant items. The project of the moment is to put this new acquisition into usable condition so it can be drawn upon in part for publication and, perhaps, for exhibition. The following questions should be asked in evaluating the collection:

- Shall the acquisition be accepted at all? This should be a matter of institutional policy and plan.
- Shall it all be kept intact? What is a proper perspective?
- Shall any of it be discarded? Is there a commitment?
- Shall certain items receive preferential treatment and the rest be held as is?
- Shall the unprinted negatives be printed—all or in part? The answer to this is very likely a matter of current budget.
- If there are large numbers of routine studio portraits shall all or only a selection be added to the alphabetical reference files? Which individuals are historically significant? Or is everybody?
- Are there scattered, or significant numbers of, pictures of particular artistic interest apart from their historical pertinence?
- Is this "artistic" interest one of:
  - Beauty?
  - Technical excellence?
  - Pertinence to the history of photography?
  - Interesting visual experimentation?
  - Sensitive response to imagery?
  - Biting social commentary?
  - Sentiment, tradition, and nostalgia?
  - Tangibility—the fixing in its flight of some fugitive wonder?
  - Transformation, whereby an "ordinary"

original subject becomes, in the picture, extra-ordinary or something else altogether?

Fortunately for us, we are here concerned with "historical" values, which I think can be made to seem reasonably tangible, and not primarily with the elusive, semantically endless elements of aesthetics. However, purely visual considerations, not exactly "aesthetics" but the adequacies of fine photography, do enter in, for one photograph of historically valid subject matter is definitely superior, by reason of the photographer's skill in organization of choices, to another offhand and poorly phrased picture of the identical subject. One portrait, as we all have observed, may, without flattery, so represent an individual's best remembered characteristics as to contain much of the emotion of actual presence, while another exposure, perhaps made a moment later, has no such charm or strength.

When asked, I have consistently recommended the inclusion of some training in art history among the qualifications of staff entrusted with the care of collections of historical photographs. This profession does not exactly require art history, and the relationship is oblique. It involves not the facts of artists' lives, but handling large quantities of extremely varied pictures and sensing how they acquire value by fitting into a general and diversified intelligence. I think the point of understanding is reached when all you have read and heard—and perhaps disbelieved—is spread out beside all the range of images—all you have seen and perhaps forgotten—and there is no need for the words to explain the images or for the images to illustrate the texts or even to match. Yet, in unrelated pairs, that is just what they do as complements, and you realize that in the mismatch there is an even deeper metaphorical logic. It is the point at which intellect and intuition meet, and you know

that something of value has come full circle.

Actually, evaluation, that is, sorting out and making selective decisions, should be the most exciting and pleasurable part of curatorial work, not frustrating uncertainty. This is where you actually *see* the pictures, actually have the opportunity to practice your profession with competence. The uncertainty cannot be solved by establishing a set of rules or formulae, and that is not what we shall pretend here. It is not a technical matter, but judgment and understanding can be discussed and outlined so that the variations are healthy, not disastrous.

#### Individual Judgment

In the end, it is a matter of personal opinion, but I do not think it is as arbitrary as is generally supposed. There is always a question, bubbling below the surface, whether personal judgment is to be trusted and followed or disallowed as essentially illegal. On the one hand, there is a tendency to regard all criticism as questionable elitism and arrogant privilege and to carry this tendency over to all classification, categorization, value judgments, and even evaluation. On the other hand, criticism can be viewed as a creative function, directed not at personalities but at the finest intellectual exercise of knowledgeable taste.

I support and admire applications of individual judgment which can, in themselves, approach an art form, and very selective private collections are not infrequently more interesting in plan and quality than some more extensive public collections. But, as in works of art, it is those insights that go well beyond personal idiosyncrasy and achieve a pointedness in universality that have lasting value.

Curators or evaluators ideally do not act as individuals dividing items into those they personally like and those they dislike. They should be instruments, acting for the group they represent, selecting material to

enhance an institutional long-range program and weeding out superfluous photographs which could needlessly exhaust the available funds. Their judgment, at best, is professional and as objective as they can make it, not personal. I do not believe that in practice the effects of exercising personal judgment are especially divergent. It may be due to the content and mannerism of so great a proportion of older photographs rather than to choices in selection, but the historical collections I see are very similar, in fact too much alike, and more limited to rather tame criteria than they need be.

#### Defining Acquisition Objectives

If two or more people about to make selections can agree on objectives and ground rules, which should not be impossible, one person's selection is not necessarily going to coincide with another's, but, bearing in mind those basic agreements, and given in both cases what I think are the essentials of method, is not one selection likely, in the long run, to be as historically serviceable as another? I am arguing that the same objectives of the collection may be equally well served by two different extensive sets of pictures—different, that is, in the inventory of actual images—provided that the principles of selection are the same and neither is founded in detectable prejudice. One can say, as an analogy, that the statistical results of two public opinion samplings may be equally valid, even though each polled entirely different individuals, provided all other factors—the proportional mix, timing, locale, manner of presentation, etc.—are identical. The definition of objectives and the method of implementation are the deciding factors in overall effectiveness of samplings, not the identity of the samples themselves.

Here, because we are dealing with historical collections, "definition of objectives" means a statement taken from



institutional policy and purged of any meaningless bombast. The essential evaluative tool should take the form of a written plan telling what a collection is to consist of and what goals it is to reach. Such a plan should not be rigid or exclusive but establish the central structure while still providing an outline for developments that take advantage of unforeseen circumstances. This structure should serve to keep the collection on course toward its goal, with opportunity for intuitive judgment, sparkle, adventure, and, undoubtedly, relief from routine.

### Guidelines in Other Fields

Let us see what can be learned from planning and outlining as practiced in other evaluative professions. As a model, we might look at an acquisitions plan, not for photographs, but for paintings, drawn up a few years ago by a leading historical society. The society in this instance decided to acquire and hold:

1. Paintings specifically assigned to the care of the society by statutory provision, such as the official series of portraits of former governors of the state.
2. Paintings that relate to or reflect individuals who have served the society as members of the board, administrative officers, or in other ways.
3. Selected paintings that relate to society properties or activities in which the society is or has been involved.
4. Selected paintings that relate to American and Canadian history as denotative, representational documents in a literal or illustrative sense so that they illuminate historical individuals, events or places, and are of sufficient quality to warrant retention as paintings rather than as photocopies.
5. Selected paintings that convey a historical interpretation in the graphic idiom—that is, paintings which carry a more or less abstract connotation or synthesis which supplements the available literature. Paintings in this category must be judged on their quality, outlook, and perspective in relation to the historical process.
6. Selected paintings that are representative of social artifacts—that is those which reflect popular taste of what people liked to have in their homes, clubs, churches, and community centers.

A little imagination can readily translate this line of thinking into the terms of any other category of pictures.

While there may be scant literature on the evaluation of photographs in the sense we are discussing here, there is abundant advice in print in related fields, such as book selection for libraries. One of the most readable texts, Helen Haines' classic *Living with Books*, advises that "in the last analysis, the selection of books is an individual exercise . . . of personal judgment of qualities of literature." Large public libraries exercise staff judgment at book order meetings, using both brief oral reports and written review slips on which specialists in the various fields evaluate factors. University libraries depend heavily on individual faculty recommendations. There are similar procedures for the selection of music recordings and motion picture films. Haines outlines as "tests for non-fiction":

- What is subject or theme?
- What is scope? Complete? Partial? History of the subject, or discussion of certain aspects or conditions?
- Additional subjects covered?
- Is the book brief? Exhaustive? Selective? Balanced?
- Is the treatment concrete? Abstract?
- Is it popular? Scholarly? Technical? Semi-technical?

- Is it for general readers? Students? Specialists?
- Date?
- What are the authors' qualifications?
- Have they used source material? If secondary material, is it reliable?
- Is it accurate? Inexact?
- Is the work based on personal observation or research?
- Does the author understand thoroughly the period, facts, or theories?
- What is the author's point of view? Partisan? Fair-minded? Conservative? Radical?
- Does the work show any degree of creative power?
- Is the form appropriate to the thought?
- Has it originality of conception? Of expression?
- Has it a clear graphic style? Readability? Charm? Profundity? Imaginative power?
- Has it vitality? Interest? Is it likely to endure as a permanent contribution to literature?

plus some other considerations of physical characteristics and values for readers. I am glad to see charm and vitality included in the list.

Much reliance is placed on the published reviews and annotations that appear in book-trade lists, official lists of the current output, and professional journals, but a good deal of selection has to be done quickly, before notices are published. By comparison with picture selection, this is a slow process, presumably involving actual

reading and a judgment based on the immediate personal impression, an estimate of usefulness to others, and an appraisal of intrinsic qualities. The *Milwaukee Public Library Book Selection Criteria* (1975), a good sample presentation of this whole procedure, deals mainly and thoroughly with the inclusiveness of whole collections, rather than the choice among similar works. For its rare books collection, for instance, the library requires:

1. Books printed before 1600
2. American books printed before 1820
3. Wisconsin books printed before 1869
4. Limited editions of 300 or less
5. First editions of great books by prominent authors
6. Books of aesthetic importance, e.g., fine printing
7. Items of local or archival value
8. Special collections that need to be kept together
9. Books difficult to replace
10. Bibliographical curiosities such as miniature books
11. Books having great monetary value
- 12-13. Autographed copies
14. Materials associated with prominent persons or events

Some of these criteria are clear, but there is no discussion, at least not here, of points 7 and 14.

In each category for which this Milwaukee manual offers guidance there is an indication of the desired "depth," according to this scale:

1. "Exhaustive"—everything available on the topic
2. "Comprehensive"—all materials that meet selection criteria
3. "Representative"—a balanced collection covering basic and significant materials on all phases of the subject

4. "Selective"—only the important basic or significant items of current value
5. "Minimal"—only materials of general information such as dictionaries, encyclopedias, or surveys

#### Guidelines for Historical Photographs

All of the above strikes us as rather academic, which may be expected of textbooks and working manuals. But this leaflet is *about* evaluation and cannot itself become a definitive measure. Let us approach the selection of historical photographs this way: (1) some pictures must be retained because there is a standing commitment to policy; (2) some are normally expected to be chosen because they fit conventional patterns; (3) some ought to be kept because it would be a disservice to neglect them; and (4) it might be a good idea to include some because they would be fun. The general evaluation consists of fitting *kinds* of pictures to some such planned set of desiderata; the evaluation of individual pictures consists of judging whether each is good of its kind.

Standing commitments may not afford much choice of particulars—the commitment may be to inclusiveness. But let us hope not. Preservation of archival photographs in the classical sense of records of official agencies with some legal status, may or may not allow weeding and sampling. Administration tends to give high priority to providing whatever space is needed for archival materials, and archives are generally stored as is without much analysis beyond that provided by the originators. So, circumstances favor keeping archival files intact, without undertaking the labors and expense of detailed attention. Photographs that serve as records of the institution itself—official portraits, properties, buildings, holdings, publicity material, meetings, and the like—must usually be kept, by definition, without much concern beyond identification.

There is more freedom of evaluation in

the sorting and selection of candidates for the general historical files. One would do well to follow the conventional expectations. Is each one a pertinent subject, and does the photograph show that subject adequately? In the first judgment, be as inclusive as space, time and budget allow; in the second, I advise more discrimination. We are pretty well agreed on the pertinence to local history of portraits and group portraits, pictures of buildings, streets, overviews of communities and topography, industries, events, celebrations, farms and agriculture, land use, living conditions, social affairs, local curiosities, objects, vehicles, and the like. Perhaps this is not a list of desiderata; it is a fair partial roster of what is generally available, for before about 1925 there were almost rigid conventions, practiced by commercial professionals and amateurs alike, about what was worth photographing. With rare exceptions, they did not photograph the aspects of life that we, in retrospect, would like to have as images of the past, and we have had to learn how to supply interpretations to those conventions: static groups, formalized tableaux, rigid perspectives, self-conscious proprieties. These limitations—and they are not limitations from some points of view—were not technical, as is sometimes supposed, but are due to an understandable delay in visual evolution. Almost no one in photography saw the possibilities of a direct and purely photographic vision. But, by accepting these conventions, we can recognize a dignity peculiar to that era of photographic conceptualization.

Award points for historical pertinence on any one or any combination of these grounds:

- *Early date.* Relative to the chronology of the subject or locale in question.
- *Any "first" or anything that shows a beginning.*

- *Prominence.* Any person, place, or object well-known and often cited in literature.
- *Legendary association.* Not necessarily factually prominent, but related to local stories or folklore.
- *Accomplishments documented.* The evidence of local pride.
- *Characterization.* Samplings of appearances in the environment, activities, typical though anonymous citizens.
- *Memorials.* The sites and circumstances of events that have marked local news.
- *Growth and change.* Pictures that lend themselves to pairing with earlier or later photographs.
- *Objective "reality."* Pictures that "tell it like it is," free of editorial manipulation and chauvinistic clichés.

Deduct points on any of these grounds:

- *Superfluity.* If you find eighteen different photographs of the same well-known public building, hold on to the clearest, brightest one and any that show actual variations in structure, condition, surroundings, weather, lighting, detail, etc., and discard the rest of the virtually duplicate standard commercial views. If you find eight pictures of the same well-known person, retain the most presentable and dignified one and any which actually show other periods of his or her life, characteristic settings or activities, informal moments, or related association items; unless you are collecting an exhaustive iconography, discard the extra, lesser, routine studio portraits.
- *Unclarity.* This portion of evaluation

stresses pictures that adequately show something. There is, according to this standard, little point to a picture purporting to show a certain individual but from so far away that the person appears as a mere spot in the background—excepting, that is, in such collectors' specialties as Lincolniana or the investigation of an assassination. Nor is there point to an otherwise insignificant street or town view in which the buildings are hardly distinguishable or the town a mere irregularity on the horizon. Inadequacy of representation may include many common photographic defects such as gross underexposure, unsharp focus, flare, fogging, chemical deterioration, or interference of extraneous objects in the background or foreground.

- *Dullness and stupidity.* Any picture made with so little concern that it fails altogether to negotiate its subject.

But bear in mind that there is another set of considerations, in which "adequate representation" is *not* paramount, and the "faulty" picture is graphically perhaps superior for certain purposes to the perfect one. This condition presupposes that the "natural" appearance of the subject is entirely familiar and that the picture is to be used not to convey identifying information but critical commentary or question, as in caricature. Then the blurred or fogged image, the unexpected (sometimes intentional) light effect, the ghost of a subject, or even some idiotic malapropism may provide precisely the appropriate flavor.

I remember, to insert a pair of illustrative anecdotes, the spirited journalist in the Library of Congress print room who strode past our more or less mandatory display and said to me, "Can't you put up something to give us a little jolt once in a while? All I ever see here is this gallery of dreary Presidents!" And for years I put up



*This adequate but rather stuffy photograph of a house built in 1822 in Mabbettville, N.Y., was produced as a matter of routine record to show the house. The house is of local historical interest because it was the home of abolitionists and served as a station on the "underground railroad." Consequently, a more pertinent photograph might be one showing the secret stairway by which slaves made their escapes.*

*A photographer interested in experiments in instant perception produced this photograph of the same house while shooting "grab-shots" from a moving car. A case might be advanced that this is the more interesting of the two pictures, but it would not adequately serve the needs of an architectural historian.*



on the walls of our historical society's reference room a variety of our finest treasures, which visitors, hurried and preoccupied with their own business, rarely looked at. Then, there came into my hands a four-foot, narrow circuit camera group picture of a long row of people. It had been in a fire and quite ruined by heat, smoke, and water. Still in its frame and intact, it was partially melted and adhering to the glass. Though a few faces clearly showed here and there, most of the image

flowed in rather decorative blobs and stained waves, like some ancient lava. I put it prominently on the wall, and for months, without exception, every person who came in the room made straight for that non-picture and stood studying it in fascinated wonder. It was the hit of the season and may have provided some visual education.

There is a useful principle which we might call "iconographic variations." In "illustration," you present a single picture

that as nearly as possible generalizes the whole of its subject. In "iconography" you assemble as many different pictures as possible dealing with the same subject, like references in a bibliography, so as to allow study of the subject by comparison of the various ways in which it has been represented or interpreted. Sometimes such an extended coverage may prove very interesting, but aim at variations in viewpoint and circumstances, not meaningless repetition or pointless banality.

I would put a high value on certain extensive series of very similar pictures, such as the results of some survey or business specialization retained as examples of nearly exhaustive treatment. In carefully selected cases when the quantitative, repetitive treatment is of fairly high quality, the subject itself, in an iconographical sense, takes on an added psychological dimension from within this very boredom.

Something is to be said, too, for the rescue operations involved in taking care of some collections or pieces that do not quite fit your program but which otherwise would probably be destroyed. Evaluate any chance windfalls and, if there is really something there, try at least to store them, perhaps until they can later be placed in more appropriate hands. Though the hard line would not allow any distraction, a more generous professional attitude would not be party to any unnecessary loss. Many desirable acquisitions are lost because those who inherit them are unfamiliar with the field, and when they turn for evaluation to the only institution they know, the institution itself may not take advantage of the opportunity due to overly restrictive policies.

### Preservation

Preservation poses many problems. Are you trying to preserve everything, just on principle, because everything is in some way valuable? Common sense tells you

that, values quite aside, you cannot manage this. What you have to settle for is an adequate sampling, including selected, whole, unedited units as quantitative samples, from which you can make deductions as to the nature of that which has been allowed to disappear. My own views on preservation of photographs are these:

1. Gather as much bulk material as possible from storage in institutions, then spend time sifting this material for potential immediate projects.
2. Put as much as possible into book and serial published form and add the bibliographical information to the library's system.
3. Institute as much "supplementary publication" as possible. I refer to the making of permanent master copies, by microfilm or other means, from which single issues can be produced on order for the very limited clientele concerned, without the expense of edition publication. Routinely microfilm almost all exhibitions, for instance. This approach, effective in the technological, scientific, and educational fields, has not been widely applied in photography.
4. Selectively and carefully preserve a few representative individual examples for collective samplings to illustrate the full range of production, "good" and "bad."
5. Store away certain reservoirs of problematic or neutral material suspected of being useful in the future. Revised evaluations, then, can be made of raw materials which we cannot quite deal with yet, pending developments in psychology.
6. Forget about trying to preserve everything or a record of the output of every individual. These things, in photography, are enormously repetitious. Let them go, not by destruction but by natural selection. That is, they may self-destruct before

their keepers judge them worthy of investments of time and money.

7. Work out improved and more sophisticated agreements on specialization among institutions. One centralized source for computerized mail-order identification photographs of railroad locomotives, for instance, financed by those interested in locomotive history, would make more sense than the existing hundreds of fragmentary repositories competitively maintained, many at public expense.

I think it is easy to go to extremes in matters of preservation rather than to find some positive and tangible approach. Though there is much difference of opinion on this point, I suggest, in the interest of a realistic perspective, that you make your peace with the facts that most photographs are unstable and, moreover, most are really very fragmentary and often incidental notes of record, which are intellectually expendable.

Let me quote from an evaluative report written a few years ago for a local historical society:

"Factually, the collection as a whole is 'good,' even allowing for the common circumstance that many items bear scanty, insufficient, or no identifying data. Most of it is technically of routine professional quality. There is some, but not excessive, deterioration. But on the whole, the types of photographs you hold are not exciting (there are of course exceptions here and there) to anyone not concerned with local factual details. There are qualities in photography which are neither exactly technical nor exactly artistic, but are connotative rather than factually denotative, and thus determine value, print by print. These photographic qualities were largely

determined by the selective perception and sensitivity of individual cameramen in their instinctive ability to go beyond the routine into visual 'literacy.' This is a difficult, and controversial critical area that should not occupy space here, but I mention this much only because it seems to me that your collection is deficient in this respect, and sooner or later someone is going to refer to it as dull. I saw, of course, only spot samplings in the most cursory way but enough to warrant the assumption that the rest is more of the same. I saw very few 'outstanding' or striking pictures of broad connotative interest, few that would stick in the memory as photographs, few that seemed to continue giving after their factual basis was absorbed, that showed quality of vision. And these factors are what is particularly sought in photographs today, both in current work and in retrospective editorial selection, and they are, therefore, to be considered in planning, because they influence use and appreciation."

#### Nature of Photography

I now enter upon an extremely hazardous and controversial passage, but I make no further apology because some similar conceptual framework about the nature of photography should be included in this discussion. I shall use doctrinaire phrasing as though what I present were fact, when I know full well that there are dozens of such theses, proposals as to the kinds, divisions, and qualities of photography, which are equally valid. I present this not as solid truth but as material which may stimulate any of you, reflecting on it and disagreeing, to formulate theses of your own. It again has to do with criteria against which photographs under evaluation can be weighed.

Photography, basically a set of

dependable equations between light and optics and light and chemistry, is a technique. Its application has followed two main paths: (1) transcription of preconceived vision, and (2) exploration of vision recognized only after the fact.

Transcription, the commonly understood function of photography, is to make, relatively easily, quickly, cheaply, and automatically, a good, recognizable, handy picture of something somebody wants a picture of: portraiture, news, scenery, merchandise, "social document," and so forth. The general idea, though perhaps not all the particulars, of what the picture is to be exists beforehand; as a more-or-less thought-out concept, derived from precedents set by other pictures in circulation, the photograph is made to conform to that concept or quite possibly to improve on it. An essentially practical measure, this was the original motivation of photography, and it continues as the mainstream to this day, with all manner of technical, interpretive, and emotional variations, from Fox Talbot to George Tice and Stephen Shore.

Exploration, on the other hand, conforms to no preconception but works among all the hardly noticed things and circumstances seen only in the pictures. The photographer turns into a camera, crawls inside the camera, as it were, tunes receptors, and waits to see what will result when the shutter is tripped. What the photographer sees beforehand is a possibility, a probability, a circumstantial hope, not designed or projected, but only received, and not known until the picture is actually developed. The photographer has learned to see as a camera sees and internalize that vision. In transcription, the camera is the photographer's tool, predetermined to do what is bidden; in exploration the camera is guide and compass, to lead the photographer where he or she has not been before. This is a natural evolutionary sophistication beginning in America perhaps in 1916 with

the photo-reporting of the Mexican Insurrection and carrying through to Ernst Haas and the likes of William Klein and Mark Cohen.

### Conclusion

The evaluation of older, say pre-1925, photographs is different from that of photographs made since the growth and acceptance of modern art, modern advertising, and motion pictures viewed as anything beyond entertainment. The judgment of early work is mainly directed at its subject matter, but what we now have learned from modern work, in dealing with the subtleties of subject matter and not just its identity, has led to a certain re-evaluation of the older prints, looking at them not solely for their supportive information, usually not new to us, but for a view of those subjects through other eyes. This can only be done from "adequate" (which does not mean technically perfect) photographs, that is, photographs made with some regard to purpose and means, the aspects of the subject, its size, its isolation, its momentum, the light, perspective, and relationship of parts. The subject must in some way be characterized, take on, as it were, a personality, even though the subject may not be a person. The characterization, that is, the way we are led to think of this subject, may be predetermined. These things come through in the earlier work, but it is not reasonable to evaluate early work according to how much it anticipates the modern. Accept it on its own terms. Given this adequacy, we can see how the subject was regarded, in the instance and by the evidence of that particular photograph, in the contexts of its time. And this does not always mean regarded highly. Our evaluation of the picture is looking at and sensing some predecessor's evaluation of the subject.

I would posit that a successful and meaningful photograph, historical or not, is one that affords us a vision of something



we would not otherwise see, at least at that moment, a chance to see through other eyes but in terms of a common convention. In evaluation, then, ask:

- Is this something I or those I represent want to see?
- Can they really see it in this photograph?
- Will they see in it anything they can use to refine their sense of values?

To play safe, evaluate negatively. Dismiss that which is excessive, repetitive, inadequate, merely imitative, and stupid without redemption, and do all you can for the rest, for the values simmering in photography are boundless.

A prominent authority on historical photography, Paul Vanderbilt honored a special request from AASLH by writing this technical leaflet on the evaluation of photographs. Curator emeritus of iconographic collections of the State Historical Society of Wisconsin, he holds a degree in art history with emphasis on fine prints and studied photography with Clarence H. White, Sr. From 1929 to 1941, Vanderbilt served as librarian and editor of publications for the Philadelphia Museum of Art where he specialized in the extension of library principles to nonbook materials, notably photographs. He is editor of Stryker's *FSA/DWI Photographic Survey of America*, a consultant in iconography to the Library of Congress, artist-in-residence at the Apeiron School of Photography in Millerton, N.Y., a consultant, lecturer, and author of numerous articles on the subject of photography.



## American Association for State and Local History

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### TECHNICAL LEAFLET 120

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American Association for State and Local History

# Technical LEAFLET

## Collecting and Preserving Architectural Records

By Enid Thornton Thompson  
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University of Denver*

Architectural records detailing cultural, political, esthetic, and domestic history only recently have become a major item in historical collections. In academic circles, drawings have been collected and cared for, but more as artwork in art and architecture libraries than in working historical collections. The rising interest in historic preservation during the last few years has changed this view; architectural records now are research documentation rather than esthetic objects, although this view is not reflected in the new Anglo-American Cataloging Rules for Libraries.

Many institutions other than libraries are seeking actively and are receiving gifts of architectural records. Historical agencies need to recognize the special characteristics of these records and to learn how to care for them. This leaflet is designed to define the kind of records to be collected, and how to care for and catalog them by simple methods.

Although most existing architectural records are still in the offices of the architect who



*Architectural records come in all sizes and formats and often are found in large piles or rolls with no protection or records for reference.*

produced them, historical societies, libraries, archives, museums, government agencies, realtors' offices, and private homes often have such collections. In these days of urban renewal, records often outlast the buildings they represent and are the only record left of a landscape. Even small historical societies should be active in collecting these records in order to preserve the historic past.

Several large institutions have developed fine collections of American architectural renderings produced in the last fifty years.

#### HABS and HAER

In 1977, C. Ford Peatross was curator of what he calls the American "built tradition" in the Prints and Photographs Division of the Library of Congress. In an article in the 1977 Library of Congress *Quarterly Journal*, he described the Print and Photo Division as our national building archive.

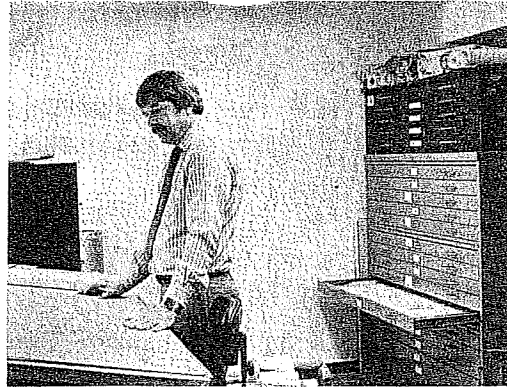
This collection was organized in 1930 along with the Historic American Buildings Survey (HABS) of the Works Progress Administration, which in turn was founded on the Pictorial Archives of Early American Architecture. The survey was a pictorial archive, collected and developed by the National Park Service, the Library of Congress, the American Institute of Architects, and the Carnegie Foundation. The collection originally was administered by the National Park Service and later by the Library of Congress. At the Library of Congress, it was placed in the Prints and Photographic Division.

The Library of Congress added another dimension to HABS records in 1969, with the establishment of the Historic American Engineering Records (HAER). In 1979, a group known as the Committee for the Preservation of Architectural Records, Inc., of New York gave its National Catalog of American Architectural Records to the Library of Congress, thus both broadening and increasing the depth of our national collection.

Since 1969, all HABS reports at the Library of Congress have been reproduced on archival-quality paper. Currently the Library of Congress Conservation Laboratory is reproducing the original drawings so they can be removed from the wear of general use. These steps help make this a permanent as well as an extensive collection.

#### Other Collections

Several other architectural collections in the United States have depth and lustre. The first of these is the Avery Collection at Columbia University, said to have "limited seats and unlimited resources." It includes not only



*In the architect's office, drawers often provide flat storage space for architectural drawings.*

architectural records but also archaeological records, related decorative arts, and material on all aspects of city planning.

The Massachusetts Institute of Technology was the first college in the United States to offer a degree program in architecture, beginning in 1868. The twelve thousand records of this program are the basis for a fine collection in the MIT Historical Collection which opened in 1971.

The Art Institute of Chicago maintains and makes good use of the architectural records of the "Chicago School." The April 1979 issue of *The American Archivist* reports on the Oregon Historical Society's Northwest collection. Other less well known collections also exist.

#### Collecting Architectural Records

Since large institutions have just begun to assemble and care for architectural records, there is much left to be done. First, materials must be recognized and collected.

Architectural records are not just drawings, although the phrase "measured drawings" is in general use and means architects' drawings. To be a complete architectural record, such items as blueprints, photographs, design-detail drawings, sketches and photos, and related official documents such as plots, deeds, permits, tax records, wills, correspondence, specifications and memorabilia, and personal papers should accompany and illuminate the history of a building.

These items usually have been in the custody of the architect, the builder, or the owner of the building. This provides a remarkably good base for arranging the records according to the archivists' traditionally basic rules: "respect des fonds," the principle of grouping records according to their origins, and provenance,

which postulates grouping papers according to origin and arranging them in the order in which they were created. These principles are particularly easy to follow because architectural records are produced in a disciplined and orderly manner, labelled, and numbered sequentially. When records come in an apparent order, use it. When the order is apparent but disorganized, restore it.

Sometimes a fugitive drawing or document shows up. Without a set of records in which to incorporate it, it can be listed only as a single item with simple architect, building, date, and description until its provenance can be established. They can be collected, however, over a long period of time and from diverse sources in various states of preservation. Each accession should be handled properly, with receipts and deed of gift to establish ownership, as well as archival principles.

Architectural records come in all sizes and formats, but mostly they are in large piles or rolls of extremely large sheets. They often are left in piles on open shelves or on top of file cases, or they are placed in bins or shelves in rolled sets, usually with no protection and with no records for reference except the drawings themselves.

#### Cleaning and Mending

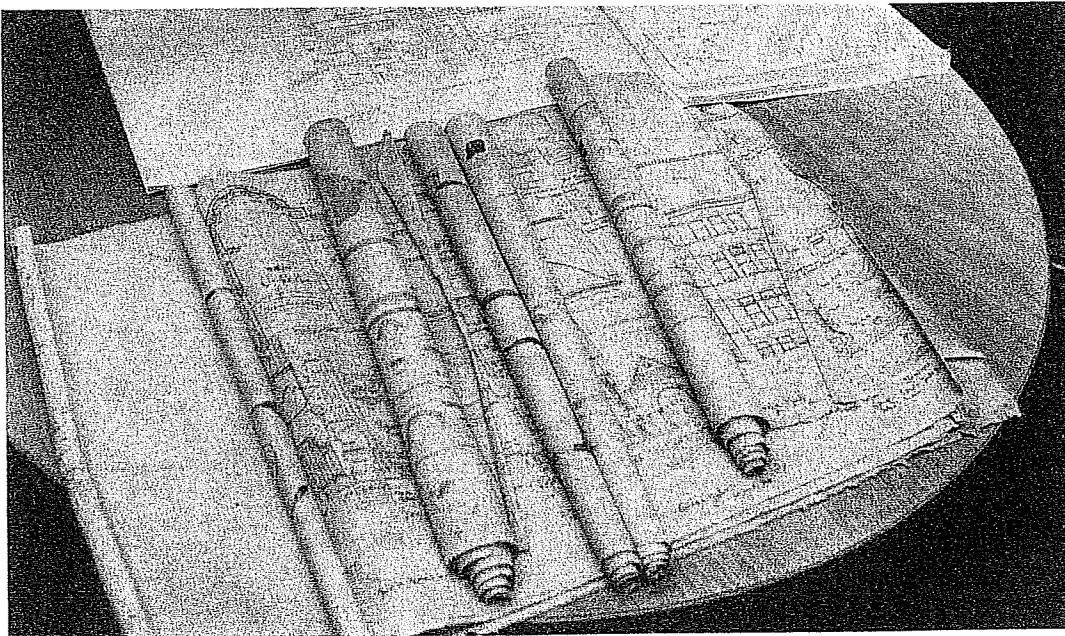
Like any other paper archival material, architectural records should be cleaned,

fumigated, humidified, flattened, mended if necessary, and, after cataloging, placed in proper environmental storage.

Quite possibly the drawings are dry and brittle, and if so, they should be humidified. Either store them for thirty days in an area at 60 percent relative humidity—up to 68 percent for quicker humidification, or place them, loosely rolled, in a plastic garbage can with a pint of tepid water in a plastic container in the center. Twenty-four to forty-eight hours in this closed humidifier will make them pliable for flattening and cleaning without damage.

To flatten and straighten documents, lay them on a formica or glass surface on large sheets of white blotting paper that have been covered with waxed paper. Several drawings can be piled up, sandwiching each between waxed paper and blotting paper. Florists' white waxed paper facilitates drying. A board and weight are placed on top. After twenty-four to thirty-six hours, the drawings are flat, straight, and almost completely uncurled. If not, repeat the process.

Cleaning is accomplished most easily with an opaline cleaner and a soft brush. Begin by blotting the cleaner in the center of the drawing and work to the edges. If the opaline does not suffice, try art gum. Art gum works particularly well on older linen drawings with a starch finish.



Original renderings, like these linen drawings of "Old Main" at the University of Denver, may need to be humidified before they can be flattened.

Mend paper records on the back using torn Japanese tissue and flour, rice, or wheat paste. Mulberry or Sekishu tissue are best for small mends, but if a drawing is in very bad shape, it should be mounted on a large sheet of tissue. Two people are necessary for this process.

Cut the tissue slightly larger than the drawing. Then smooth it onto a formica or glass table and lightly fasten the corners with masking or pressure tape. Apply paste to the entire surface of the tissue, starting in the middle and brushing lightly. When paste is applied evenly, the two persons very carefully place the drawing on the tissue, press it into place by hand, and roll it down with a brayer. After a few minutes of drying, cover the drawing with waxed paper, blotters, and a board. Place the weights on top. After twenty-four to thirty-six hours, remove the dry drawing from the table by pulling on the tissue corners. Trim away excess tissue with a knife.

Identification and Description

While these processes are under way, make an identification and description of each item to avoid handling and to provide a preliminary

control inventory. This establishes numbers of items, type, and enough information to make the records accessible even without further cataloging. It also establishes the basics needed for complete cataloging.

An inventory form from the Committee for the Preservation of Architectural Records gives good guidelines. The inventory is listed in the name of the building; for the use of cataloguers, the inventory form is accompanied by three concise pages of instructions and definitions of categories listed. Knowledge of these definitions is essential to working with architectural records.

- *Name of the building* is printed on each drawing sheet and, in library processes, corresponds to the title of a book. Occasionally names change in the course of time.
- *Architect or architectural firm* corresponds to the author of a book in processing. Usually one person or firm is indicated, but occasionally this will change.
- *Scale* is the proportion that the representation bears to the building, such as one inch to one foot. The scale is written on each.

Architect or Engineer	Name of Building	
Location	Date	
Scale	Original	
Number of Drawings	Revision	
Size of Drawings	Number of Sheets	
Category of drawings (check or circle)		
Interior	Site Survey	Structural
Rooms	Mechanical	Elevations
Floor Plans	Plumbing	Electrical
Grounds	Heating	Exterior
	Detail	
Type of drawings (check or circle)		
Renderings	Specifications	Other (specify)
Shop Drawings	Contract Documents	
Item description (original, blueprint, etc.)		

A sample catalog card for architectural drawings.

sheet and is essential for cataloging.

■ *Number* can be the accession number, but also should be the architect's number.

■ *Date* includes the original date, dates of subsequent work of revision, and any dates of alteration.

#### Materials

Original or primary architectural records come on many materials. The chief materials used are:

■ *Paper*. Sketch paper is white or yellow and of various weights and qualities. Tracing paper is all rag and white, but is fairly thin. New copying machine techniques produce records on chemically sensitized paper whose qualities of permanence are somewhat unknown. Blueprints are an early copying process that shows white lines on a blue paper background, often muslin backed. Blueprint cannot be copied by xerography and must be reproduced by photography or a blueprint machine. Blueprint is seldom used nowadays, superceded by xerography and mylar techniques. Drawings on paper are either blackline or blueline. Blueline is harder to copy than black.

■ *Cloth*. Most early primary architectural records are on cloth, either linen or muslin. Originally they were starched with a water soluble coating, but in the 1950s, an indestructible plastic coating began to be used. Drawings on cloth are in very black, India-type ink, but starched ones often are very yellowed and dirty. The starch attracts vermin. Cloth has been superceded by mylar.

■ *Mylar*. Depending on the use to be made of the drawings, mylar is matte or clear, sepia or sensitized. Mylar is bought in pre-cut sheets and drawn on in India ink. It can be projected, photostatted, xerographed, and photographed. It does not attract dirt, is almost permanent, and is easy to store.

■ *Microfilm*. Original drawings often are microfilmed or placed on microfiche in sets for the protection of the originals and for space saving. A microfilm original can be reproduced in the original size, or in half or quarter size for study. The half-sized sets often are photocopied for general use. The negative film is an original document—the copies are not.

A full "set" of architectural renderings contains many or all of the following records:

■ *Preliminary sketches*. These show the initial design and concept and give horizontal drawings to scale. They include the mechanical, heating, plumbing, exterior, structural, and electrical specifications and the ground or site survey.



*Blueprints like these in the Center for Study of Library Architecture at the University of Denver are seldom used these days.*

■ *Plans*. These may include *layouts* of interiors and rooms; *reflected plans* that show ceilings; *sections* that show vertical drawings; *details* of portions needing large depiction; *elevations*, the straight forward views of all exterior walls of a building, usually from across the street, and sometimes interior walls; *perspectives* that show design, finishes, and surroundings; *mockups*, the scale models or preliminary constructions for testing; *renderings*, the elaborate drawings prepared for client approval; *specifications*, the written construction requirements spelling out details such as quality of work and materials; *contract documents*, prepared by architects and engineers for bids by contractors; *permit sets*, the documents submitted to government agencies for building permits, and usually including the issued permits; and the *construction record*, a set of plans showing actual construction, with all changes from the original plan recorded. "As built" records and photos often accompany the construction record.

After a set of architectural records has been inventoried and described, it can be arranged and stored, then later cataloged without handling the records.

#### Cataloging

You can rely on the inventory listing and description of architectural records listed in your holdings under architect and building. Or, if the inventory sheet has been filled out carefully, you can work from the inventory sheet to make catalog cards.

In making the catalog card, the information listed will be precisely the information on the inventory sheet, but as it appears at left. Simple or single-item cataloging stops after entering the number of drawings. More detailed

information, such as the category and type of drawing, is not necessary for every drawing in the set.

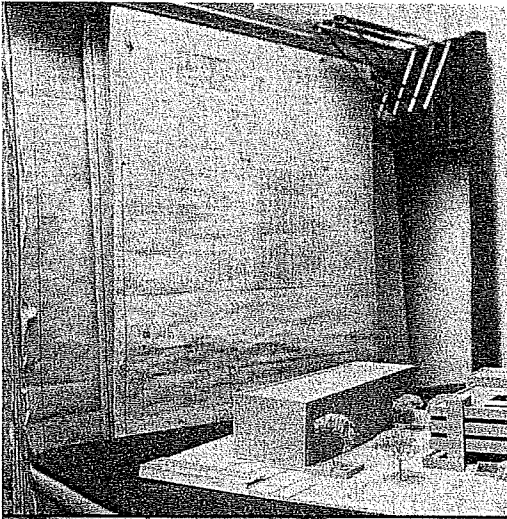
In the Anglo-American Cataloging Rules II, the library cataloging rule dealing with architectural materials is not comprehensive and appears as an optional addition for general material description. The rule uses the term "rendering" to mean a pictorial representation of how a building will look and "technical drawing" to designate a form of graphic art to be described as an art original or picture. This

definition and procedure are not adequate for control and retrieval of sets of architectural records, so archival techniques are better employed.

Inventory of the collection, listing by set under the architect's name as author and the building name as title, is much more comprehensive and complete. The use of a finding aid such as an inventory or a guide will facilitate reference, research, and retrieval. The use of a finding aid also will save wear and tear on the records themselves by providing an overview of the scope of the collection and eliminating examination and handling of the records themselves.

If a card catalog is in use, cross-reference cards are made from the inventory, again using the architect as author and the building or project name as title. Changes in name are recorded as "see references." "See also" references are used if an architect is responsible for more than one building and the records are not all filed together, or if there are other facts of history or construction that should be traced.

Describing and cataloging architectural records in depth and detail should be planned only for large collections by one architect or firm or for structures that are important, either esthetically or historically. Usually a simple listing of architect, building, builder, description of record, and date will suffice for retrieving



*In some storage racks now available, above, drawings can hang vertically. The rolled drawings in the bottom photo will be cataloged and stored in drawers similar to these at the Center for Study of Library Architecture at the University of Denver.*

and using either a single drawing or a set of drawings.

#### Storage

Placing architectural records in protective storage is the greatest preservation aid. If the only storage available is flat commercial shelving, the records should be arranged and wrapped. Flat storage boxes are available, or good kraft or acid-free paper can be used to wrap sets of records that are supported on acid-free board.

Flat map cases used for storing large cartographic records are excellent for storage of architectural records, though this might prove expensive if there are numerous records. In some records storage cases now being made, records and drawings placed in a film casing can hang vertically. These are quite expensive and not thoroughly time-tested.

Wrapping sets of rolled records in kraft paper or plastic sleeves and storing them on utility shelving, properly labelled, is adequate storage. Storing the drawings rolled but unwrapped is not, for these reasons: they attract dirt and vermin, and they get too worn and tattered through handling to identify them. Records always must be rolled with the drawings on the outside; the paper will not flatten easily if it is rolled with the drawing to the inside.

While both paper wrappings and tubes—properly labelled—protect the drawings, they can lead to acid migration from the protector. Good quality plastic sleeves, with a clearly visible label inside and sealed on both ends with wire-and-paper twists, is the best storage for large rolls of drawings or sets of drawings.

For smaller sets of records, several suppliers make acid-free storage boxes and folders. Some folders come up to thirty-six by forty-eight inches. These can be wrapped in paper, if necessary. Some of the storage boxes, such as those made to contain newspapers, come with drop fronts.

All items in storage should be labelled on the outside, given only to researchers who have been instructed in their use and care, and collated upon return and before reshelving.

Architectural records are proving to be very useful in research fields far removed from their earlier art emphasis. Their collection and care can illuminate history and enrich a repository and its researchers.

Photographs by Richard W. Purdie from the University of Denver.

#### Sources for More Information

##### Articles

- "Architectural Records Given to Library of Congress." *Wilson Library Bulletin* 54(1980):349.
- De Lorge, Cathy. "Architectural Cataloging." *The American Archivist* 43(1979):198-99.
- Huxtable, A.L. "Place of Genuine Joy: Avery Architecture Library at Columbia University." *New York Times*, 2 April 1972, Sec. 2, p. 21.
- Lathrop, Alan K. "The Provenance and Preservation of Architectural Records." *The American Archivist* 43(1980):325-38.
- Peatross, C. Ford. "Architectural Collections of the Library of Congress." *Library of Congress Quarterly Journal*. 34(1977):249-84.
- \_\_\_\_\_. "Documenting a Legacy: 40 Years of the Historic American Buildings Survey." *Library of Congress Quarterly Journal* 30(1973):268-94.
- Seamans, Warren A. "Restoring and Preserving Architectural Drawings: An Economical Method for Treating Embrittled Documents." *Technology and Conservation*, Winter, 1976, pp. 8-10.
- Wisconsin Architectural Archives. "Pocket of Procedures, Policies, and Forms." Milwaukee: Milwaukee Public Library, 1980. A folder of information on processing, care, and handling of architectural records available from the library at 814 West Wisconsin Avenue, Milwaukee, Wisconsin 53233.

##### Books

- Calderhead, P., ed. *Libraries for Professional Practice*. New York: Architectural Press, 1972. Available from Cane Russak & Company, 52 Vanderbilt Avenue, New York, New York 10017.
- Lewis, Jack R. *Architects' and Engineers' Office Practice Guide*. New York: Prentice Hall, 1978.
- McKee, Harley J. *Recording Historic Buildings*. Washington, D.C.: Government Printing Office, 1970. States standards for recording buildings.
- Powell, John. *Handbook of Architectural Practice and Management*, 4th ed. Forest Grove, Oregon: International Scholarly Books Service, Inc., 1979.

##### Journal

- Architectural Record*  
Available through publisher McGraw Hill, Inc., 1221 Avenue of the Americas, New York, New York 10020.



Organizations

American Institute of Architects, 1735 New York Avenue, N.W., Washington, D.C. 20006.

Committee for the Preservation of Architectural Records, Inc., 15 Gramercy Park South, New York, New York 10003.

National Trust for Historic Preservation, 1785 Massachusetts Avenue, N.W., Washington, D.C. 20036.

Hollinger Corporation, P.O. Box 6185, 3810 South Bour Mile Run Drive, Arlington, Virginia 22206.

Light Impressions, P.O. Box 3012, Rochester, New York 14614.

Photofile, 2000 Lewis Avenue, Zion, Illinois 60099.

Talas, Division of Technical Library Service, 104 Fifth Avenue, New York, New York 10011.

Suppliers

Bro-Dart, Inc., 1609 Memorial Avenue, Williamsport, Pennsylvania 17701.

Conservation Materials, Ltd., P.O. Box 2884, 340 Freeport Boulevard, Sparks, Nevada 89431.

Conservation Resources International, 1111 North Royal Street, Alexandria, Virginia 22314.

Gaylord, P.O. Box 4901, Syracuse, New York 13221, or P.O. Box 8489, Stockton, California 95208.

Hazel, Bindery Division, 1200 South Stafford Street, Washington, Missouri 63000.

Highsmith Company, Inc., P.O. Box 25, Fort Atkinson, Wisconsin 53538.

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**American Association for State and Local History**

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# Technical Leaflet

Technical Information Service

American Association for State and Local History

## Nitrate Films in the Public Institution

by Christine Young

The increased recognition of photography as both art medium and historic document has made the collection, reproduction, and display of photographs an important function of many museums, historical societies, libraries, and archives. In keeping with the broader missions of these institutions and the training of their staffs, the primary criteria for selecting photographic acquisitions have traditionally been subject matter and/or photographer. The technical aspects of the photographs themselves have generally gone unrecognized or unappreciated as the collection has been built. As a result, images are being gathered into these institutions with little regard to the physical nature of the objects.

For those collecting negative images and motion picture films from the latter portion of the nineteenth century and the first half of the twentieth century, the failure to recognize and identify the photographic material type may have some very serious repercussions. Cellulose nitrate plastic is the most unstable and potentially damaging of all photographic materials and should, therefore, be the most quickly identified.

### Properties and Characteristics of Cellulose Nitrate

Cellulose nitrate was the first plastic with sufficient clarity and strength to be used as a photographic emulsion support. Introduced to the

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*Christine Young is paper conservator at The Nelson-Atkins Museum in Kansas City, Missouri.*

commercial market in 1889, the light-weight and flexible plastic opened the door for both cinematography and amateur photography. Nitrate film base came to be used for all photographic formats—amateur roll, professional sheet, x-ray, and motion picture films. The dates for the discontinuation of nitrate vary by format, manufacturer, and country, with dates for United States products ranging from 1933 (x-ray) to 1951 (motion picture).

Serious instabilities in nitrate films became apparent by the turn of the century. The ready flammability of nitrate was evidenced by major fires erupting in movie theatres and studios. In addition to rapid and intense flame, burning nitrate produces a variety of lethal gases. In one case, the toxic gases were responsible for the deaths of 125 persons who were not directly exposed to the fire. These same gases are emitted gradually during aging and deterioration. Combined with moisture in the air, they form acids that destroy photographic images, embrittle papers and textiles, and corrode metals.

High flammability and emissions of toxic, acid-forming gases are problems that increase with age and deterioration of nitrate films, both negatives and positives. The potential for rapid destruction by fire is not far-fetched; the slow destruction of collections by acidic vapors is a certain and ongoing process. The risks associated with the collection and casual storage and the use of nitrate are tremendous.

Institutions which collect photographs from the period 1890-1940 are likely to have cellulose nitrate films in the possessions. If these films are not identified, segregated from the general collections, and

housed safely, the building and its contents are at risk. There are a number of different ways to reduce or to eliminate the dangers associated with the collection of nitrate films.

Coming to grips with the nitrate problem is a multi-step process. First, it is important to become familiar with the material itself and to learn how to recognize it. Once the nitrate has been identified and its condition assessed, decisions on use, storage, duplication, and deaccession can be made. For the preservation of other collections, it will be necessary to segregate the nitrate film materials. To attempt the preservation of the nitrate itself, a specialized storage environment to retard the rate of deterioration will be required. Once the issues of safety have been addressed by identification and separate storage, options such as duplication or printing, and long-term storage or deaccession, can be considered.

### Manufacture of Cellulose Nitrate

Cellulose nitrate is the generic name for several plastics. These plastics are differentiated and specified according to the degree of nitration. Nitrocellulose, with a nitrate concentration of approximately 10.5%, is a common base for lacquers and adhesives; collodion, which was a common photographic emulsion in the nineteenth century, is also a low concentration cellulose nitrate. The materials with low nitration appear to be quite stable. At 12%, the cellulose nitrate used for photographic film base falls in the intermediate classification known as pyroxilin plastic, which is considered highly flammable but not explosive. A nitrate concentration in excess of 12.5% creates a substance which is both flammable and explosive; these cellulose nitrates are classified as gun cotton.

Nitration is the first step in the manufacture of cellulose nitrate. This is accomplished by soaking cotton linters in nitric and sulfuric acids. After washing and drying, the altered cellulose is dissolved in a mixture of alcohol and ether to form a viscous liquid. Plastic sheets can be cast directly from the liquid form. In the making of photographic films, both sides of the plastic sheet are coated with gelatin—one side with anti-curl and anti-halation layers, the other with the light-sensitive, image-forming emulsion.

### Deterioration of Cellulose Nitrate

Cellulose nitrate film deteriorates dramatically from a rugged clear plastic with little inclination to burn to a dry powder that can self-ignite at high, but naturally occurring, temperatures.

Films in the first stage of deterioration can be used for printing or duplication. Depending on the

#### Five Stages of Deterioration

**Stage One:** Discoloration of the film base, eventually emitted by the nitrate.

**Stage Two:** Sticky adhesiveness of the film base.

**Stage Three:** Embrittlement and loss of physical integrity; formation of gaseous bubbles on the surface.

**Stage Four:** Conversion of the plastic to a viscous liquid, similar in appearance to molasses; frothiness.

**Stage Five:** Turning of film base to dry, acrid powder.

specific degree of deterioration, some films in the second stage are usable. Films in the later three stages of deterioration have ceased to be functional and have no potential for restoration or reproduction. These are also the films most threatening to the well-being of other materials.

### Factors Affecting the Rate of Deterioration

It has long been noted that the rate of deterioration is erratic and unpredictable. Some films deteriorate steadily and slowly from the outset while others may show no deterioration whatsoever for fifty years, then reach stage three or four deterioration in a few months. As a rule, several different stages of deterioration may be observed simultaneously in a single film. The factors that determine deterioration rate are numerous, with no single cause appearing predominant.

Temperature plays an important role in the deterioration of all materials since heat serves as a source of energy for chemical reactions. It is estimated that the deterioration of cellulose nitrate is accelerated by a factor of 4 for each 10°C rise in temperature (approximately double for every 10°F rise). Conversely, cooling the environment will reduce the rate of deterioration in the same proportions.

Humidity is also significant because water is a necessary component for the formation of acids and other deteriorants. High humidity accelerates the rate of deterioration dramatically. The maximum humidity level recommended for the storage of nitrate is 40%.

Gases emitted by nitrate attack nitrate in turn. Exposure to the gases of deterioration increases the rate of further deterioration significantly. Because of this phenomenon, the deterioration of nitrate is described as autocatalytic. Anything which impedes

the escape of gases away from the film will enhance autocatalytic reactions.

Interestingly, the format and mass of the film affect the mobility of these gases. Professional sheet film is the thickest plastic, with a nitrate base of 8 mil (8/1000 of an inch); consequently, it has the least inherent stability. At 5.5 mil, motion picture film has a thinner nitrate base,<sup>1</sup> but motion picture film is stored tightly rolled on itself, vastly increasing its relative mass and has proven by experience to be the least stable of all film formats. Similarly, sheet films stored together without individual sleeves deteriorate more rapidly than sleeved or interleaved negatives. These varying stabilities do not reflect any difference in chemical composition, but rather they reflect the relative ability of gases emitted during deterioration to escape from the film.

Films from the same manufacturer, processed by the same photographer, and stored side by side often exhibit distinctly different rates of deterioration. This phenomenon remains unexplained.

### Hazards of Deteriorated Film

Undeteriorated nitrate self-ignites at approximately 350°F. This critical temperature drops progressively as the film deteriorates. An epidemic of film fires in New York City during the summer of 1949 prompted investigation by the National Bureau of Standards.<sup>2</sup> Those experiments demonstrated that deteriorated nitrate can undergo spontaneous combustion at temperatures as low as 106°F. Furthermore, the scientists concluded that, because of the small sample size, it was likely that 106° did not represent the lowest possible point of self-ignition.

Once ignited, cellulose nitrate burns extremely efficiently, leaving almost no ash. While the heat produced is somewhat less than that of burning wood, nitrate is consumed sixteen times faster than wood burning under the same conditions. The speed and efficiency of burning can be directly attributed to the fact that oxygen is a by-product of nitrate combustion. As a consequence, nitrate fires are self-fueling at the point of the flame, and they can proceed in the absence of air. Small fires sometimes can be extinguished by massive amounts of water. Large nitrate fires are rarely able to be controlled, and generally they must burn to completion. Normal sprinklers, dry chemical and foam extinguishers, Halon and carbon dioxide systems, and other common forms of extinguishers are ineffective in controlling or extinguishing nitrate fires.

In 1929, the National Chemical Warfare Board conducted an investigation into a fire at the Cleveland Hospital Clinic.<sup>3</sup> This fire originated in the x-ray storage room and resulted in 125 deaths by

toxic poisoning. The follow-up investigation revealed that burning nitrate film produces a number of lethal gases in a surprisingly large volume. The primary gases produced by nitrate are carbon monoxide (47%-59%), carbon dioxide (21%-24%), and nitrous compounds (7%-9%). On the average, twenty-five cubic feet of carbon monoxide are released by five pounds of nitrate (the equivalent of one reel of motion picture film or 125 8" x 10" negatives).

The gases emitted by combustion and deterioration pose an additional threat during a fire. High concentrations of gases combine with the high temperatures to produce explosion. Proper ventilation of storage units and areas can help prevent explosion when a fire is small and contained. Large fires, however, are routinely accompanied by one or more explosions.<sup>4</sup>

The presence of nitrate compounds the hazards associated with fire, regardless of its cause. Once the flames contact the nitrate, the intensity of the fire will increase dramatically. The rapid and voluminous release of toxic fumes and/or accompanying explosion may endanger the lives of firefighters. It is important to make local fire departments aware of nitrate collections and to familiarize them with the location of the films.

### Cellulose Nitrate in Public Institutions

Historically, production and use of cellulose nitrate-based films was discontinued only when substitute plastics became available and when a sufficient number of disasters forced action. X-ray film was the first to be replaced in 1933. However, because of its superior strength and dimensional stability, cellulose nitrate remained the preferred support for motion picture films until 1951. The storage and use of nitrate film has been regulated by fire codes since 1909. These regulations have been specifically designed for professional photographic studios and the motion picture industry studios, processing and handling areas, distribution centers, and movie theaters. In short, the burden of responsibility for the safe use and care of the film was placed on the commercial producers and users, who were, for the most part, aware of the properties of the film.

Today, the bulk of extant nitrate film is held by public institutions rather than professional photographers or commercial film enterprises. The ramifications of this situation are numerous. First, the primary handlers and users tend to be less aware of the films as a physical entity. In many cases, the hazards posed by cellulose nitrate are completely unknown or are not fully acknowledged. This lack of awareness may be reinforced by insurance companies and local fire fighting agencies who feel that

the nitrate problems were solved when the film ceased to be manufactured. These groups are often unaware of the continued presence of nitrate. In fact, the National Fire Protection Agency has not updated the code for professional film since 1936. The code pertaining to motion picture film has been updated as recently as 1982, but it remains focused on film distribution, splicing, and projection—the handling of the film within the film industry. To date, no code regulates the storage, handling, or use of nitrate base films in the context of public collections.

The risks being taken in the collection of nitrate are significant. Films that were once in small studios scattered throughout a region are being centralized in public repositories. Once in the institution, the films tend to be stored with other collections. While vaults designed with ventilation exhaust, explosion panels, automatic deluge sprinklers, and the like have been required for the commercial storage of nitrate motion picture films for many decades, these same films may be stored in public institutions without special precautions of any type. Regular inspections of nitrate films to identify and to remove those in poor condition rarely are mandated in the public collections. Finally, most of the films entering these collections are decades old (sheet film was discontinued forty-five years ago), and many may have begun the deterioration process even prior to receipt.

Most historical societies, libraries, archives, and museums operate under a mandate to collect. Much unique visual information is recorded on nitrate film; therefore, the collection and retention of these films may be very desirable, and for some institutions, unavoidable. The nitrate issue becomes one of responsibility, balancing the hazards of the material with the importance of the data contained on it. The first step in responsible management is the identification of nitrate films and the objective evaluation of their condition and usefulness.

### Identification of Cellulose Nitrate

There are several methods of identifying nitrate films; some or all may be useful:

- **Specific dates** associated with the film indicating the date of manufacture can serve as a rough guide. It is usually desirable, however, to use another method in conjunction with dating. There was often a considerable transition period between film types, and the possibility of supply stockpiling by photographers also must be considered. Dates also vary by manufacturer and nation—nitrate was discontinued earlier in the United States than elsewhere. The dates given below pertain to discontinuation of nitrate by Kodak in the United States only:<sup>5</sup>

### Discontinuation of Manufacture Dates

1933 x-ray film  
1938 roll film, 35mm\*  
1939 portrait, commercial sheet  
1942 aerial film  
1949 film pack  
1950 roll film, sizes 616, 620, 828, etc.  
1951 motion film (35mm)\*\*

\*Some distributors rewound 35mm motion picture film for use in still cameras; therefore, there may be 35mm format until 1951.

\*\*16mm motion picture film was never manufactured on nitrate base.

- **Edge stamping** of film was initiated with the introduction of safety films. During transition periods, films were labeled as either nitrate or safety. The absence of edge stamping is an almost certain sign of nitrate; however, if the film has been trimmed, another method of identification must be used.

- **Burn tests** are fairly accurate. By this method, a sliver of film (1/8" x 1") is trimmed from a non-image margin. Holding this strip upright with tweezers, a lit match is touched at the top. Nitrate will burn rapidly and constantly. Safety films burn more slowly or not at all and commonly self-extinguish. It is good to experiment with some edge-stamped films so that the burning characteristics can be accurately and readily identified and that all burn tests be conducted in a well-ventilated area away from the collections.

- **Float tests** rely on the different densities of the plastic films for identification. These tests use clipped corners of film or punched samples (paper punch) dropped into a container of trichlorethylene. Since nitrate film is the most dense, it will sink to the bottom while safety film will float or remain suspended mid-way down the liquid. Float tests should be done in well-ventilated areas since the solvent used is toxic. Also, fingers should not be used to retrieve tests sample from the solvent.

- **Presence of deterioration** is an excellent method of identifying early flexible films. The appearance of nitrate during deterioration is very specific. In addition, beyond the earliest stages of deterioration, sufficient gases are emitted to create a very powerful and distinctive odor. The smell is unique to deteriorating cellulose nitrate and can be a very reliable method of identification.

With the exception of motion picture films, nitrate film base was replaced by cellulose diacetate, which also deteriorates in a very distinctive pattern, emit-

ting a very powerful, but different, odor. The acetate base shrinks with age, leaving the unshrunk emulsion tented and raised. Films with obvious standing ridges of emulsion are never nitrate. However, because they emit acetic acid (which produces the odor of vinegar), they too should be isolated from the general collections.

### **Examination of Cellulose Nitrate**

The first step in gaining control over nitrate films is examination for condition. As previously mentioned, nitrate film in poor condition cannot be printed successfully and cannot be restored; furthermore, the health and fire hazards increase in proportion to the degree of deterioration. All nitrate that is unusable should be discarded for the welfare of the collections, the building, and its inhabitants.

Often deterioration seems to occur "overnight." It is very important that a regular inspection program be instituted, with the film being fully examined for deterioration. Motion picture film must be examined over its full length by rolling it slowly onto a second reel. The temptation to do random sampling of the films should be avoided since there is no guarantee that skipped films are in the same condition as those sampled. The time frame for inspections should be determined by both the condition of the films and the condition of storage. For good film in good storage conditions, annual inspections may be sufficient; if film or storage is in poor condition, inspections at three-month intervals would not be excessive. Nitrate film exhibiting stages three, four, or five deterioration should not be stored in any event and should be removed from the collections and discarded.

### **Options for Cellulose Nitrate**

The responsible care and storage of nitrate is not a cost-free proposition. The ultimate disposition of the film will have to be determined by its condition, the importance of the image, the amount and type of usage it receives, the overall quality of the film, and the availability of funds. There are also several basic philosophical issues that must be addressed when considering the ultimate disposition of nitrate film. First and foremost is the importance of the original artifact. If the major reason for collecting nitrate film is the visual image then good prints or duplicates may be perfectly adequate for the purpose. While quality duplication is fairly expensive, it does ensure the retention of the visual data in stable form, and it releases the institution from the liabilities associated with keeping nitrate. Following duplication, the original can be retained or discarded at the discretion of the institution.<sup>6</sup>

If the original film is considered to have value beyond the image itself, then long-term storage, with or without duplication, may be chosen. If this is the favored approach, then the institution is obligated morally (and in some areas, legally) to create a storage situation that will reduce the rates of deterioration and safeguard against fire and the build-up of toxic fumes. If there are more than a handful of films involved, long-term storage will necessitate the construction of a storage vault. The expense of building a vault to the code specified for motion picture films is sizable. Should the cost prove prohibitive, other options should be pursued. An area below code should not be designed as permanent storage; this would simply obscure the problem.

Refrigeration solves nothing as far as venting fumes, preventing build-up of explosive pressure, or providing automatic fire extinguishing. In short, it does not meet fire codes. Refrigeration does, however, provide excellent stabilization for film in good condition because the cool temperature will slow deterioration and eliminate the high temperatures conducive to spontaneous combustion. Most repositories will find this method to be an acceptable short-term solution for small amounts of film until either duplication or vault storage can be arranged.

If the operating budget of the institution is extremely limited, retention of nitrate film may not be a feasible or responsible option at all. After discarding nitrate films in poor condition, those in good condition should be examined for duplicates, near-duplicates, or subject matter that is of no foreseeable interest. Once the hazards of cellulose nitrate are explained, and it has been demonstrated that the quantity of remaining nitrate film is at a bare minimum, most governing boards will see the sense in funding at least one refrigerator. If funds remain elusive, donation of the film to an institution capable and ready to care for the film should be considered seriously. Nitrate films should not be placed in a refrigerator used for food, even on a temporary basis.

### **Storage of Cellulose Nitrate**

All film remaining in the institution should be stored in a manner that will promote preservation and reduce risk to the collection, building, and people. The initial step is to store the film in such a way that gases from deterioration can escape away from the film. Sheet film should be stored individually in buffered paper sleeves or folders (folded sheets of buffered stationery paper will do). Rolled film cannot be sleeved or interleaved; the containers or tins used for storage should be perforated for ventilation.

Controlling environmental conditions is the most efficient method of "stabilizing" nitrate film. An ideal environment will slow the rate of deterioration

dramatically. Deterioration cannot be completely halted, however, so all other precautions must be observed as well.

It has been demonstrated that cool temperatures reduce the rate of deterioration. The maximum temperature recommended for the storage of nitrate film is 55°F. Dropping the storage temperature from 75° to 55° will slow the deterioration by a factor of 4. Dropping the temperature an additional 10° to 45° will slow the deterioration by an additional factor of 2, causing deterioration to proceed one-eighth as rapidly as it would at 75°F.

It may be necessary to "condition" film prior to refrigerated storage. Conditioning is necessary if any of the following situations exist:

- The room in which film is packaged for storage has a relative humidity in excess of 40%-45%;
- The refrigerator is not frostfree; or
- The storage temperature is less than 55°F.

The conditioning of film for storage entails dropping the humidity below 40% in the preparation area. This step is critical since cooling the air will bring an increase in relative humidity; major changes in temperature can raise humidity so high that condensation will occur. In winter, when humidity is low due to heating, it is often possible to omit dehumidification of the film. During spring and summer, however, humidity tends to be appreciably higher, and conditioning always is necessary. If many films are to be processed or if the films are used frequently, it may be most convenient and practical to dehumidify the room that houses the refrigerators. Small quantities of film can be conditioned by enclosing them for a few days in an airtight chamber containing conditioned silica gel or other desiccant. Once the film has reached equilibrium at low relative humidity, it should be placed into refrigeration quickly.

Sealable bags for the refrigeration of film are marketed by Kodak. The use of these bags for nitrate films is problematic. The hermetic seal has the advantage of maintaining a set amount of moisture within the bag. However, the seal simultaneously entraps whatever gases are emitted by the film. If the refrigerator is truly frostfree (all cooling mechanisms are external to the refrigerator compartment), then the internal humidity of the refrigerator itself should be low. In this situation, tightly sealed bags would serve little positive function. If the refrigerator is pseudo-frostfree (does not require defrosting but has internal cooling coils), the humidity inside will be extremely variable and often quite high. In this situation, maintenance of lower relative humidity may outweigh the concerns of ventilation, and the use of sealed bags would be advantageous. Standard refrigerators that require defrosting have fairly

low internal humidity and can be used for storage of nitrate without bags, provided immediately accessible alternate refrigeration is available when manual defrosting is necessary.

Refrigerated storage will require excellent internal organization of the negatives so retrieval and return can be done with maximum efficiency. Once taken from the refrigerator, the films should be kept in their sleeves, bags, or tins and placed in a closed cardboard box. This will help them to come slowly to equilibrium with the ambient climate of the room. The time required to reach equilibrium will vary from an hour or two for slightly cooled film to a full day for films stored at freezing and lower. If many films are stored together, the acclimation time for the envelope or bag will be longer. After use, films will need to be conditioned to lower humidity once more before being returned to the refrigerator. It is advisable to keep a limited number of negatives in each bag or envelope to reduce the number of items going through environmental shifts when only one piece is really needed.

When the number of films requiring storage exceeds the reasonable limits of refrigerators or when the policy is one of indefinite storage, it will be necessary to construct a vault designed for the purpose. The structural requirements for a vault to house motion picture film have been published by the National Fire Protection Agency as Code #40. For other formats of nitrate film, i.e. negatives, there are no applicable national codes. Until such codes are written, it is best to consult both NFPA Code #40 and any local fire protection agencies. Code #40 specifies environmental conditions of 35°F and 50% relative humidity within the vault. These levels reflect conditions that will be nonconducive to spontaneous combustion. However, for maximum preservation, both the temperature and the humidity should be decreased below the Code #40 levels.<sup>7</sup>

### Copying Cellulose Nitrate

For nitrate materials, a sound and viable condition is only temporary. Consequently, it is advisable to copy all worthwhile negatives, including those in storage and those currently in good condition. If the original is to be discarded after copying, it is advisable to have more than one copy image. While there is every reason to believe that photographic products (including microfilm and microfiche) currently on the market are more stable than previous films, this assumption may be proven wrong twenty or thirty years from now. Depending on the amount of use, a single copy will also come to show the ravages of age and wear. While it increases the work and cost of copying, the system of interpositives with copy negatives is highly advisable as it creates

two copies in different materials, thus doubling the chances of creating a "permanent" record.

The production of copy images of any type must be scrupulously clean and utilize materials and chemicals that are "proven" to be stable. Copies of less than archival quality will prove to be both a waste of time and money.

Copying can be done in several ways. Negative to negative direct duplication will give a modern archivally stable negative with an image almost as good as the original; this process gives only one copy image, however. It is also possible to print the negative, creating file prints; copy negatives could then be made from the prints as needed. While relatively inexpensive, this procedure has several drawbacks:

- Nitrate negatives cannot be safely printed in modern enlargers which use hot, quartz iodine bulbs as the light source.
- The print may be dirtied and damaged by use before a copy negative is made.
- Each step of rephotographing results in an increase in contrast and a loss of highlight detail, with the copy negative being of visibly poorer quality than the original.

There are a number of sophisticated systems currently available for duplication. The two that give the best results utilize scanning laser or cathode ray tube cameras for the initial duplication step. In some instances the images produced by these systems are better quality than the originals. The resulting film interpositive is then used one time to contact print a second film, producing the duplicate negative. Not only does this system provide two copy images of excellent quality, but it allows one of the copies (the interpositive) to be stored away safely and to be protected from use and handling.

Microfilm and microfiche also can be used for duplication. These duplicates will be more difficult to use for subsequent printing than a standard negative, and they also suffer from the alterations of contrast and detail mentioned previously. The single greatest advantage is their small size, creating ease and efficiency in storage. If the photographs receive substantial use for research, microforms can be printed from other types of duplicate negatives to provide easy access to the visual data.

### Final Considerations

Delays in action often are inevitable when dealing with any institution. If funds, equipment, and personnel are approved for a nitrate film project but are unavailable for a few months, then intermediate holding action is required. This means simply improving air circulation around the films (interleaving sheet negatives with paper, punching holes in

film cans, etc.), separating the films from the rest of the collections, putting them in the coolest and driest part of the building, and, if possible, having a fire detector close by. These are truly stop-gap measures and cannot be considered adequate solutions to the problem. These procedures will only make the nitrate film safer than if it were located in an attic or next to a steam pipe.

Regardless of what solutions are chosen, there are several steps which are imperative:

- Identify and isolate the nitrate film.
- Discard all nitrate film in poor condition.
- Set up and maintain a regular schedule of inspection.
- Contact the fire department(s) that would respond to fire calls for your building. For their safety and efficiency, the firefighters should know the location and amount of nitrate film present.

These actions require no expenditure of money, and they do not need to be, and should not be, put off until next year's budget.

### Editor's Note

*The following information has been provided by Steven T. Puglia, author of The Care and Duplication of Historical Negative Collections: An Integrated Approach (AASLH Press, 1989):*

The level of hazard represented by nitrate still-camera negatives is significantly less when compared to nitrate motion picture film and deteriorated nitrate film of any type. There are no known instances of the spontaneous combustion of nitrate still-camera negatives. Still-camera negatives are a hazard and, therefore, should be stored properly and handled carefully. Good condition nitrate still-camera negatives of high intrinsic value should be retained if at all possible. These negatives should be stored in acid-free, buffered paper enclosures in conditions of controlled temperature and humidity; lowered temperatures are better, and cold-storage is the best option. Nitrate motion picture film and deteriorated nitrate still-camera negatives should not be retained. Any nitrate materials that are not to be retained should be duplicated using the highest quality methods; and, before the originals are disposed, the duplicates should be carefully inspected and the quality approved.

-JBD



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## Endnotes

1. Calhoun, J.M. "Storage of Nitrate Amateur Still-Camera Film Negatives," *Journal of Biological Photography*, no. 21 (August 1953): 1-13.
2. Cummings, J.W.; Hutton, A.C.; and Silfin, H. "Ignition of Decomposing Cellulose Nitrate Film," *Journal of the Society of Motion Picture Engineers* no. 23 (November 1951): 82-83.
3. "Proceedings of a Board of the Chemical Warfare Service appointed for the purpose of investigating the disaster at the Cleveland Hospital Clinic, Cleveland, Ohio on May 15, 1929." Washington: Government Printing Office, 1929.
4. Lubin Studios, Philadelphia, 1914; George Eastman House-International Museum of Photography, Rochester, 1978; and National Archives Storage Vault, Suitland, 1978. See: "Big Fire at Lubin Plant," *The Moving Picture World*, 27 June 1914; "Lost in Lubin Fire," *The Motion Picture World*, 11 July 1914; "Originals of 329 Movies Burned," *Times Union*, Rochester, New York, 30 May 1978; "\$3 Million Loss in Eastman Fire," *Democrat and Chronicle*, Rochester, New York, 30 May 1978; "Historic Film Destroyed in Archives Fire," *The Washington Post*, 8 December 1978; "National Archives Film-Vault Fire, Suitland, Maryland, December 7, 1978: Fifth Report by the Committee on Government Operations." House Report No. 96-574. Washington: Government Printing Office, 1979.
5. Calhoun, J.M. "Storage of Nitrate Amateur Still-Camera Film Negatives," *Journal of Biological Photography*, no. 21 (August 1953): 1-13.
6. Consult with the Environmental Protection Agency (EPA) and local environmental and fire prevention agencies as to permissible methods of nitrate disposal for your region prior to discarding films.
7. "Standard for the Storage and Handling of Cellulose Nitrate Motion Picture Film." NFPA 40-1982. National Fire Protection Association.

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## Selected Bibliography

- "Big Fire at Lubin Plant." *The Moving Picture World*, 27 June 1914.  
*The Book of Film Care*. H-23. Eastman Kodak, 1983.

Brecha, H.C. "How Humidity, Temperature Affect Motion-Picture Film." *Heating, Piping and Air Conditioning*, no. 22 (September 1950): 106-198.

Brown, C.R. "Safeguarding the Storage of Photographic Motion Picture and X-ray Film," *Radiology*, no. 14 (May 1930): 454; *Safety Engineer* (August 1929): 65.

Calhoun, J.M. "Storage of Nitrate Amateur Still-Camera Film Negatives," *Journal of Biological Photography*, no. 21 (August 1953): 1-13.

Cummings, J.W.; Hutton, A.C.; and Silfin, H. "Ignition of Decomposing Cellulose Nitrate Film," *Journal of the Society of Motion Picture Engineers*, no. 23 (November 1951): 82-83.

"Historic Film Destroyed in Archives Fire." *The Washington Post*, 8 December 1978.

"Lost in Lubin Fire." *The Motion Picture World*, 11 July 1914.

"National Archives Film-Vault Fire, Suitland, Maryland, December 7, 1978: Fifth Report by the Committee on Government Operations." House Report No. 96-574. Washington: Government Printing Office, 1979.

National Bureau of Standards. "Fire Effects and Fire Control in Nitrocellulose Photographic-Film Storage." Building Materials & Structures Report 145, 1956.

—. "Fire Hazard of Nitrocellulose Motion Picture Film." Technical News Bulletin 40 (January 1956): 3-5.

"Originals of 329 Movies Burned." *Times Union*, Rochester, New York, 30 May 1978.

"Proceedings of a Board of the Chemical Warfare Service appointed for the purpose of investigating the disaster at the Cleveland Hospital Clinic, Cleveland, Ohio on May 15, 1929." Washington: Government Printing Office, 1929.

"Regulations for the Storage and Handling of Photographic and X-Ray Nitrocellulose Films." National Board of Underwriters, 1925.

Scribner, B.W. "Summary Report of Research at the National Bureau of Standards on the Stability and Preservation of Records on Photographic Film." National Bureau of Standards Miscellaneous Publication M162, May 1939.

"Standard for the Storage and Handling of Cellulose Nitrate Motion Picture Film." NFPA 40-1982. National Fire Protection Association.

"\$3 Million Loss in Eastman Fire." *Democrat and Chronicle*, Rochester, New York, 30 May 1978.



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