

# Film Records Management

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FILM records management is still in its infancy. The National Archives years ago established the record character of photographic materials, developed record copy concepts, made valuable studies on the storage and flammability of nitrate film, and explored the field of finding aids. Until recently, however, the influence of the National Archives was not felt to any large degree within those units of Federal or State governments that produce film records. Such units are usually part of technical organizations that are more interested in the current use of records than in their historical evaluation or permanent preservation. But with the recent recognition of the tangible and intangible benefits of records management, archival concepts are being adopted and procedures for the handling of film records are being developed by such organizations as the United States Air Force Motion Picture Film Depository at Wright-Patterson Air Force Base.

As such agencies meet and solve the problems posed by the centralization, evaluation, and handling of film records, data for the guidance of other organizations will become available. Some scattered data on technical problems already can be found in special journals, such as that of the Society of Motion Picture and Television Engineers. Much information is being collected, too, by new groups that serve as focal points for the centralization of knowledge about the scope of pictorial holdings. Among the groups active in this field are the Picture Division of the Special Libraries Association, which publishes *Picturescope*; the Graphic History Society of America, which publishes *Eye to Eye*; the George Eastman House, which publishes *Image*; and the Society of American Archivists Committee on Audio-Visual Records, which was established in 1953. While these organizations have not yet reached the point of recommending what can or should be done to preserve

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America's pictorial records, their work in gathering and centralizing knowledge about pictorial holdings is of great value and points to the need for further specialized studies.

Pictorial holdings raise special problems for the archivist because their administration not only requires technical knowledge and special equipment and storage facilities but also involves high overall maintenance costs.

The photographic medium is a delicate thing. We deal with a film — a film of chemicals on a thin base. The chemicals making up both the base and the filmy emulsion are often not very stable and therefore will deteriorate. Aside from this, older still and motion picture film is on a nitrocellulose base, which is inflammable and emits poisonous gases when burning. For these reasons, film records require watchful handling and special storage. Such storage and handling are costly.

Specialized equipment is needed, particularly for the handling of motion pictures — reels, projectors, viewers, scanners, meters, counters, splicers, and the like. The use and maintenance of this equipment require trained technical personnel. This creates problems in personnel management. In organizations where subprofessional and technical people must work with professional archivists, the nonarchivists are likely to become frustrated since they normally have slight chance of being considered for top administrative positions. At the USAF Depository this problem has been met successfully by reserving the storage and preservation functions as an "outlet" for the technical people. Recruitment of technical personnel also is a problem, particularly in communities where motion picture or still picture production is limited. The only solution to this problem seems to be the establishment of a training program for bright young people without photographic experience who, after a period of instruction, can be assigned to specific technical duties in accordance with their special capabilities. Of course such a program is possible only if the organization involved has a nucleus of well-qualified technical supervisors and the archivist-in-charge has sufficient technical knowledge to direct training activities effectively.

The archival management of photographic records presents certain special problems not normally met in paper records management. These include the difficulty in establishing the archival *fonds*, the difficulty of records analysis, the complexity of records descriptions, the lack of established disposal procedures, the scope of and

restrictions on service, and the preservation of records on a temporary medium.

The establishment of the archival *fonds* is the first problem encountered. Usually a large Government agency has a central motion picture and still picture production activity. The Signal Corps, for instance, performs all photographic work for the Department of the Army. Therefore, all photographic records of the Army are consolidated and have come to be considered as records of the Signal Corps. But they actually may be records of medical or engineering activities which are in no way related to the basic functions of the Signal Corps. At certain periods, too, the Government has tended to centralize photographic activities. Thus the Farm Security Administration and later the Office of War Information did much of the photographic work of agencies that lacked photographic facilities. The basic pictorial records of the agencies thus served are therefore found with the records of the producing organization. The same situation prevails in the Navy and the Air Force, where centralized film production centers exist.

It is often impossible, therefore, to attribute photographic records to the agency or activity that requested that they be made to document its activities. This is particularly true of older films and photographs because information on their provenance is frequently lacking. It is therefore necessary to designate them as records of the largest *fonds* — for example, such older records in the custody of the USAF Depository are considered simply as records of the Air Force. As more recent film records are accessioned, however, it is possible to determine their origin by referring to the project authorizations. These records show what command requested the making of a motion picture and thus indicate the record group to which it should be assigned.

#### ACCESSIONING PROCEDURES

The accessioning process for motion picture films is basically identical with that for paper records except that in the case of the former often only one record item, that is, one film subject, constitutes an entire accession. An edited film is usually accompanied by a script, music clearances, and a copy of the production contract. Only caption or photographer's data sheets are received with unedited film. A single subject accession normally includes all film called "preprint" material — the camera original, master prints, duplicate negatives, and the music, narration, and sound effects tracks. All these must be identified and synchronized. If the film

is unedited and lacks a title, a tentative one can be assigned by consulting the caption sheets or by scanning the film to determine its subject content. In the case of older film records it is necessary to determine whether they are on nitrate or acetate (safety) base, so that each film will be stored in the proper vault. It is also necessary to determine the condition of older film so that preservation measures may be initiated immediately if required. When the accessioning process has been completed, the film is assigned an identification number (unless received under a specific series number), properly "canned," and assigned a location in the vaults. At the USAF Depository all this information is entered on a control card. Subsequent movement of the film from and to storage as well as the purpose of such movement is noted on the card. Thus any film in custody can be located at any time. Documents received with a film are filed separately under the identification number given to that film and thus are available for later reference.

Film records that are subject to short-term disposal schedules need not be minutely inspected or specially "canned." They should be scanned quickly and checked against the transmittal documents; then the entire accession should be stored in boxes or packages on which the disposal instructions, the authorized date of disposal, and the authority for disposal are clearly indicated.

Accessioning still pictures is simpler. These are usually received in series. Serial numbers assigned to items by the creating activity should be retained. Negatives should be matched with prints received, and where prints are missing they should be reproduced from negatives to complete the print series. When original negatives are lacking, duplicate negatives should be made from existing prints.

#### ARRANGEMENT PRINCIPLES

The archival arrangement of motion pictures is not always a simple matter, since they are rarely received in complete series and individual subjects come from many sources. Most agencies have certain established series of training, information, or news films to which new items are constantly added. Such items are numbered serially by the creating agency and these numbers must be retained by the archivist. But a large proportion of film records received are unedited materials not created as part of a continuing production program. They are identified by the creating agency only by miscellaneous project numbers, which are neither constant nor uniform. Therefore it is necessary to give each new subject of this kind an

archival identification number in a continuing and uniform series during accessioning. At the USAF Depository a USAF number is assigned to each subject, and cross-reference cards are made to the project or can number found on the records as received. Additional cross-reference cards are made to title, alternate title, and photographic activity that produced the film, so that any film can be found quickly, no matter how it is requested.

The physical arrangement of motion pictures in a depository can be identical with the numerical arrangement by identification numbers. Where established series are often broken and a great number of series are stored, however, it is more efficient to adopt an arbitrary system. Because the USAF Depository found that 30 percent of its space was wasted in "honeycomb" storage, it assigned a specific location number to each vault, shelf, and reel space. As each reel of film is accessioned a location number is assigned to it, marked on the film can, and posted on its control card. As a result, a training film can be filed next to a news reel without creating confusion.

The physical arrangement of still pictures usually is not much of a problem, since prints can be filed so that they provide a visual index to the numerically organized negatives to which they relate. It is only where a poor agency filing system was not improved as a collection grew that the archivist has a problem to solve. A print file should never be arranged in the same manner as its negative counterpart; the two should complement each other. Where such an arrangement does not exist, the archivist should retain the negative file in its original order and rearrange the related print file to afford most efficient reference service.

Aerial photographs are basically comparable to still pictures. Prints can be arranged by mission or flight and thereunder in numerical sequence or by geographic coordinates with index maps to the pictures. Aerial negatives are normally in rolls and can be stored in numerical sequence or by any other method that does not duplicate the file arrangement of the prints.

#### STORAGE CONDITIONS

Normal archival storage conditions with relative humidity (RH) at 50 percent humidity and 70 degrees Fahrenheit are ideal for photographic prints, negatives, and motion picture film — provided that the negatives and film are on safety (acetate) base. The records should be protected from light, particularly prints that will fade and color prints that will lose color definition if exposed. If

cut negatives or motion picture film are on nitrate base, the vault temperature must be kept between 40 and 60 degrees Fahrenheit. Humidity higher than 50 percent will accelerate film decomposition and shrinkage. Low humidity will warp film and make it brittle. Temperature variations, particularly in the lower ranges, are not quite so dangerous. In experiments conducted by the USAF Depository to determine the temperature limits for safe storage, films were kept in an outside shed at the University of Alaska for 2 years without ill effects. But film stored in a chamber with high temperature and humidity showed chemical deterioration, much shrinkage, rust on and in the cans, separation of splices and leaders, and fungus infestation after only 3 months.

Particular care must be exercised in the case of nitrate film. It must be stored in small vaults equipped with "blow-out" panels and escape hatches to remove gases, outside ventilation, an alarm system, a sprinkler system, and floor drains to carry off water that may be released by the sprinkler system. When nitrate film is to be taken from storage vaults to warm working areas, it should be brought up to the higher temperature gradually by keeping it briefly in a conditioning room to prevent "sweating."

Motion picture film is stored in cans. Nitrate film is best kept in "breather" cans equipped with lids that permit gas fumes to escape. Safety film can be kept in tight-fitting round or square cans. Those made of aluminum are best for permanent storage, since the less expensive tin cans will rust over the years and release corrosion particles that may injure the film. All new film will shrink some, but well-processed film will shrink only to a fixed percentage and then level off. Experiments conducted by the USAF Depository indicate that initial shrinkage can be retarded by taping the cans shut with masking or aluminum tape. It must be repeated that only safety film can be kept in tightly closed containers; nitrate film must breathe.

Film is usually stored on reels. For permanent storage either stainless steel reels or plastic cores should be used because other types will rust and injure the film. Fire protection specialists usually recommend that film on reels be stored vertically or on edge, so that, in case of fire, water from the sprinkler system will run down the sides of the cans and drain away. But if film is stored long in the vertical position, it will sag and the layers on the under side will adhere to each other. For this reason, film is usually stored flat.

Most organizations that store large bodies of film use open



racks, even for nitrate film, rather than expensive individual cabinets. If the film is nitrate, these racks are placed in small vaults so that if a fire occurs it will be confined to a single vault containing a limited amount of material. Some organizations, including the USAF Depository, store negatives, masters, and prints in separate vaults so that the film record will in all likelihood be preserved in some form. Safety film can be stored in large vaults fitted with banks of open racks. As nitrate holdings are converted to acetate base, film storage will become more efficient. Film vaults can then be located close to the use areas and much time will be saved in the transportation and handling of film.

Still picture prints can be stored vertically in file cabinets equipped with compressor devices that prevent sagging. Swing-front type cabinets are especially desirable. Prints can be filed compactly in them because the flexible drawer front makes easy access possible. Very valuable prints, particularly those for which no negatives exist, should be copied before filing. A contact print from this duplicate negative can then serve as a reference print and the valuable original can be stored flat in special equipment. Glass negatives, if very old and heavy, are best stored flat (they often warp otherwise) or vertically in slotted boxes with an identification on the upper edge of the negative. Smaller glass negatives can be stored vertically in file cabinets if stiff supports are provided at frequent intervals in the drawers. The same type of equipment is suitable for the storage of film negatives.

All negatives should be protected by jackets of sulfide-free Kraft paper, translucent glassine, or cellulose acetate. Cellulose acetate jackets are excellent because, being transparent, they permit one to view enclosed negatives without danger of getting finger prints on them or scratching them. Acetate and glassine jackets are slippery, however, and will not stay in position in the file unless the drawer is exactly the right size. Such jackets also are hard to handle if picked up in bunches. DuPont now is experimenting with a jacket material that will be less slippery but equally transparent. For large collections, of course, both glassine and cellulose acetate jackets may be too expensive.

Jackets with side seams are best for archival storage of negatives. Pressure marks will appear on negatives stored in the same position for any length of time in jackets with center seams. If center-seam jackets are used, the base, or shiny side of the negative should be placed against the seam to protect the emulsion, or dull side. Negatives should never be packed too tightly; pressure should

always be avoided. If jackets are a little larger than the negatives it will not be necessary to force negatives into them and, for permanent files, it is best to have all jackets the same size, irrespective of the size of negatives in the collection. Finally, adhesive tapes or gummed labels must never be used on negatives or prints; they will injure and discolor both.

### DESCRIPTION TECHNIQUES

All film records, with the exception of self-indexing print and negative files, need finding aids to make them available for use. There are many methods of describing film records and the selection of the best method is dictated by various considerations. One point should be kept in mind, however: the more informative the descriptions are, the less the need to consult the film itself in searching. Frequent screening of films for reference purposes is expensive, both in time and damage to films. Therefore films should be described precisely, both as to content and quality. Since archival holdings often include unedited films lacking narration or other documentation, the records description task of the archivist is a major responsibility. It is of the greatest importance that his descriptions be accurate, for finding aids not founded on careful research can bring discredit on him and his agency.

Any program of finding aids for the holdings of an archival institution may well begin with a guide, a simple and basic form of description, which analyzes records series by series. In a guide each series is identified by title and its general content, overall dates, size, physical characteristics, and arrangement are indicated. Particularly important components of the series may also be noted.

The next type of finding aid, in sequence from the general to the specific, may be a special list in which each item in a series is described in some detail. Each entry may include such information as the identification number of the item, its title, the name of the producing agency, and the date of its production. Items may be listed in numerical sequence or by subject. Listing by subject is particularly appropriate when a collection miscellaneous in character and uneven in value is involved, and it is also the most useful way to describe still pictures. The USAF Depository has prepared lists of films on the Wright brothers, on aero-medical activities, and on missiles. These films are part of a very large USAF series. They were selected for listing because of the large number of reference requests for them. Sometimes accession lists of new film subjects acquired are all that an institution is able to prepare, but it should



be noted that such lists eventually can form the basis for special lists.

The next step in the description of film records may be the preparation of a card catalog. The standard catalog card developed by the Library of Congress for motion pictures is comparable to its card for books. In cataloging a motion picture collection, it will sometimes be necessary for the archivist to develop a classification scheme under which the entries will be filed. The classification scheme developed by the Library of Congress may be adequate in many instances, but if a collection is large and highly specialized, a more detailed scheme must be developed. If this is done, the archivist must carefully define the nomenclature in common use in the special field to which the records relate.

In organizations where heavy reference use of motion pictures is the rule, it will be necessary to prepare detailed, scene-by-scene catalog cards. Each scene is described by subject, quality, and length. This procedure will increase greatly the size of the card catalog, but it will likewise simplify and reduce the cost of searches for specific scenes.

Another method of cataloging, useful in small depositories or those with specialized collections, is coordinate indexing. Under this method individual cards are set up for each subject heading and the film identification numbers are posted on the appropriate subject card. A variation of coordinate indexing is the Uniterm System, which eliminates much of the need for subject cross references and complicated subdivisions of subject headings.

Still another method of cataloging, typical of this mechanical age, is the punch card system. Its use is frequently suggested to archivists by administrative personnel. Experience has shown, however, that the punch card system is not suited to archival material. It takes too many supervisors to check the punched cards for accuracy. Moreover, incorrectly punched cards are lost to the user forever, whereas a standard catalog card, even if misfiled, can be found whenever the catalog is "read." Punch cards will serve a useful purpose only if the collection is homogeneous and not scheduled for permanent preservation. There are many punch card systems; and, when agencies transfer to a depository records with punch card catalogs, they do not furnish the necessary sorting machines. Few depositories can afford to purchase a battery of such machines. Furthermore, manufacturers of sorting machines bring out new models periodically, so that it is often difficult to

obtain equipment that will sort punch cards made 20 or more years ago.

It is natural that photographic finding aids should be developed for photographic records. Such aids are very useful, but they are also very expensive to produce. One Air Force activity makes microfilm strips of representative frames of each scene in a motion picture for reference use. In the USAF Depository frequently requested scenes from various motion pictures, showing specific aircraft, for example, are reproduced on film. The equivalent of 20 or 30 reels of film can be shown to the searcher on 2 or 3 reels of selected reproductions. For still pictures, the Public Health Service prepares strip microfilm copies of pictures pertaining to a single subject from which paper prints can be made.

Visual finding aids are often used in conjunction with standard cataloging methods. The Philadelphia Museum of Art, for example, places a 35 mm. print on each catalog card. The Library of Congress has followed the same practice in cataloging its Survey of American Architecture collection. Punch cards also may be made to accommodate a 35 mm. negative for viewing.

Calendaring — the complete description of the physical characteristics, subject content, and history of each still photographic or motion picture item in a series — is a luxury operation. It should not be undertaken until the permanent value of the series has been demonstrated.

Before choosing the finding aid that will give easiest access to the records within individual budget limitations, these factors should be considered: (1) the availability of personnel, (2) the size of the collection, (3) the age of the collection, and (4) the type of service request. The availability of personnel, of course, dictates the scope of any finding aid program. Even if personnel is not a problem, the size of the collection must be considered. For in an extremely large collection, numbering thousands of items, preparation of anything beyond guides or lists is normally impossible except for selected items. A select list in which important subject groups are selected and described is usually feasible. The preparation of a list that meets professional standards, particularly for motion pictures, always requires viewing the film and usually requires some research into its origin and subject matter. It is often feasible to select and list only the more important subjects in a series.

For collections that are little used, a good descriptive list or standard catalog cards are usually satisfactory. If the collection is

new and timely, measures may need to be taken to avoid damaging the film record by too frequent projection. One such measure is the preparation of a detailed catalog card describing each scene. The amount of detail is governed by the amount of dynamic action shown. With the use of such cards a searcher requiring a view of an F-80 airplane taking off can eliminate other scenes showing F-80's and view only the specific footage containing the take-off. This saves an enormous amount of time in projection and saves all films dealing with other F-80 actions from deterioration through unnecessary projection and use.

It is always desirable to relate a finding aid program directly to the type of reference service in demand. Since not all records are used to the same extent, the most detailed finding aids should be made for those most frequently consulted. Others can be briefly described. A finding aid program should be diversified and flexible to meet the service requirements and the competence of available personnel.

#### REFERENCE SERVICE

In their zeal to protect the valuable records in their custody, some archivists are tempted to resist the demands of reference service. But there is little point in preserving records that are not used. The problem the archivist faces, therefore, is to render the widest possible service on his holdings while ensuring their continued preservation. This problem is especially critical in servicing motion picture records that are used frequently in the making of new productions. Because the best quality prints are always desired by the producer, he naturally wants them made from the original. When such requests come from the agency that created the records, the archivist must honor them. The USAF Depository therefore has developed a policy of keeping an unused master as an archival copy. For items that appear to have limited use potential, such a master is made only after the fourth use of the original. This is a necessary economy measure, but it appears to be satisfactory. The same provisions for protection of an archival copy should apply also to still pictures.

Another problem faced by the archivist, particularly if he has fairly current photographic records in custody, is "cannibalism." Let us say a film was made in 1950 showing the handling of specific types of ordnance. In 1955 it is decided that certain phases of this subject are obsolete and that a new film should be made to show current practices. The motion picture producer may, for economy

reasons, decide that he wants to cut up the 1950 picture, scrap the obsolete parts and substitute new footage in their place. If the archivist permitted this, there eventually would be no historical record of change or development. Frequently, too, there is urgent demand for certain scenes to be clipped out of an existing film subject and incorporated into a new film subject. At the risk of being unpopular, the archivist must insist that such demands will be met by providing reproductions, not by altering the original records.

The principal uses made of photographic records are well known. Still photographs are sought for incidental illustrations to accompany texts, for pictorial works, for historical research into the life of the past, for scientific research, and for legal evidence. Motion picture records are used as a source for stock footage for new productions, for historical and television films, for operation documentation, for legal evidence, and for informational, training, incentive, or planning purposes. They are not often asked for as the record of a given agency because searchers are usually interested in the subject matter of a film rather than in the producing agency or its purpose in producing the film. But the archivist must always be well informed on the origins of film records because of the wide variety of restrictions that may be imposed on their use.

Still and motion pictures are subject to all of the general restrictions common to textual records, including those arising from security classification. In addition, photographic records are frequently copyrighted by the producer or photographer. Then, too, persons appearing in such pictures have a right of privacy under certain circumstances and can claim damages if pictures of them are used without their permission. Most motion pictures, of course, are not yet old enough to be assumed to be in the public domain under the copyright laws. Furthermore, they are often made under contracts by which the producer retains narrative rights, television rights, or distribution rights in certain areas of the world. Music in films is usually copyrighted separately, so that both music and performance clearances must be obtained before the composite film can be serviced. If the film involved is made by a Government agency, this problem usually does not arise, although there are exceptions.

Service on photographic records is costly and therefore a fee system for various types of services should be set up. But work standards used in establishing fees for the reproduction of documents cannot be used as a basis for determining fees charged for servicing photographic records. Faded prints will require special

reproduction methods — much testing of various photographic papers may be required and possibly the use of ultraviolet light may be essential. Work with glass negatives must be done slowly for the safety of the negatives. Older film often must be repaired before processing, and if it has shrunk it must be reproduced on a step printer by optical methods. Intermediate steps, such as the production of duplicate negatives, are often required to make a desired print. The cost of all these processes must be considered in establishing fees for service on film records.

Service on photographic records is particularly satisfying to the archivist because he can see the results of his work on television, in commercial moving pictures, in popular magazines, and in handsome books. But the archivist should not neglect the information type of services, which may be of greater value in the long run than those more visible types. Certainly, if the reference screening of a motion picture makes unnecessary the rerunning of expensive scientific tests on military equipment or helps an engineer to overcome technical problems in a research and development project, the archivist makes an important contribution to national welfare.

### DISPOSAL PROCEDURES

When the writer was an archival novice, she always wondered why the disposal function was reserved for the more advanced professional personnel, since disposal work seemed such a negative activity. Actually, however, it is one of the most interesting and challenging archival activities. This is true particularly in the photographic records field, for only the most primitive disposal criteria exist and the archivist still has to exercise his own judgment on what is worth keeping and what should be destroyed.

What the archivist contributes to the disposal process is primarily breadth of vision. The official who orders a training or research film produced requests it for a definite need existing at the time. He will normally consider the film disposable when that temporary requirement has been met. The archivist therefore must study the functions of the originating agency in order to determine whether the film may nevertheless be of further use to it or to another agency. He will go to the legal units to determine, for example, whether patent rights or claims may be substantiated by this film or whether the film is in support of an active Government contract. The archivist takes his findings in such matters and adds to them his own judgments on the value of the film as documentation of the agency's organization, functions, development, or opera-

tions. Then he must consider the cost factor of preservation. Certain training films made in several languages, for example, may run as high as 120 reels per subject. The cost of commercial storage per reel is normally \$3 annually; Government storage costs are likely to be two-thirds of this cost. But even \$240 a year for storage of such a subject may not always be warranted. And it must be remembered that to this storage cost must be added the cost of periodic inspection and reproduction for preservation. All these considerations enter into the formulation of the archivist's disposal recommendations. Transfer of films to the National Archives without making such judgments would only place the appraisal burden on that agency, which would be less well acquainted with the background.

The disposal problem was attacked by the Air Force fairly early. The Air Force was one of the first agencies to develop a satisfactory disposal program for motion picture film. A series of schedules was developed and approved. All except one of these apply to unedited film, since it was felt that film without explanation is less useful to future generations than edited film reports and film subjects. The shortest retention periods were provided for instrument panel films and similar types of mechanical research tools. Longer retention periods were assigned to film showing minor equipment items, static tests, or subjects where the results were incorporated in literature or in completely edited films. Unedited films showing new and experimental operations were considered to have permanent value, since future research must be based on them. Finally, the edited picture in a complete film series was studied. A basic principle of archival management of photographic records is the integrity of the film series. But occasionally sampling of a series is justified. For example, the Air Force series of training film grew to such proportions and the individual subjects varied so much in value that selective schedules were developed and approved. Under their provisions, all training films showing principles, theories, and major equipment or operational items are retained permanently. All others are disposable 3 years after the subject has been declared obsolete. At the same time that these schedules were put into effect, all non-Air Force materials in the USAF Depository were returned to the originating agency, and duplicates and ephemeral materials were destroyed.

Only when a collection has been reduced to a permanently valuable, essential core can the expense and work required to preserve, describe, and service the records be justified.