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Commercial Video Collections: A Preservation Survey of the  
Avery Fisher Center Collection at NYU

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# COMMERCIAL VIDEO COLLECTIONS

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MONA JIMENEZ

A Preservation Survey of the  
Avery Fisher Center Collection  
at NYU

## INTRODUCTION

The Avery Fisher Center for Music and Media (AFC), at New York University (NYU) Libraries, collects commercially published audio and visual materials used to support various teaching collections within the university's doctoral, graduate, and undergraduate programs. The media collections reflect a broad range of topics within the humanities, sciences, and social sciences that until recently have fallen outside the purview of the library's established preservation program for books and paper collections. A generous donation from philanthropist Barbara Lubin Goldsmith funded an expansion of NYU's preservation program to include nonbook and nonpaper collections, and in 2003, the Andrew W. Mellon Foundation provided support for the programmatic development of a moving image preservation initiative.

Maintaining access and use of the commercially produced video portion of the AFC media collections is a critical area of concern for NYU because, like the library's collection of circulating books, these materials actively support instruction within the ongoing teaching curriculum for many of the university's colleges and graduate programs. Most of the VHS videos held in the collection were produced in the 1980s and 1990s.



**The Video Conversion Station of the Avery Fisher Center for Music and Media. Photograph by Ben Moskowitz.**

Some are more heavily used than others, but all are aging and their condition and usability are compromised with each use because of the nature of the video playback process.

The process of program planning for preserving the commercial video collection requires an analysis of the current state and preservation needs of the VHS videos. For that reason, the Preservation Department conducted a random sample survey of the collection, to evaluate the age, overall condition, replacement availability, and the holdings among sister institutions. Information regarding tape stock and manufacturer was recorded and use information collected as well. The results of the survey revealed that although the collection appears in better condition than was expected despite the heavy use it sustains, the identification and preservation of titles of high research and curricular value will require substantial additional research and resources. The findings, however, will provide a guide to responsible preservation program development for the collection in upcoming years.

### THE VHS COLLECTION IN THE AFC

NYU Libraries' Avery Fisher Center was named after Avery Fisher, an inventor and founder of the consumer electronics company Fisher Electronics. Lincoln Center's Avery Fisher Hall, in New York, is also named after him. "His generous contribution to NYU has helped to make the AFC one of the largest academic media centers in the world."<sup>1</sup> Commercially produced videos form a discrete segment of the media holdings and were identified for preservation assessment because they constitute a valuable resource in support of teaching and research for faculty, students, and scholars at the university. This portion of AFC's collection numbers over fourteen thousand VHS tapes. Overall, the age and condition of the tapes vary and some of the tapes are no longer available for replacement. In book terminology, they are *out of print*.<sup>2</sup>

A random sample survey of AFC videotapes was conducted to assess the overall condition and replacement status of the videotapes in order to direct further preservation planning and maintenance of the collection. The condition and usability of the collection is a concern because of the age and the impending obsolescence of the VHS format as well as potential damage due to use and handling. As noted and explained by Dr. John W. C. Van Bogart:

Tape recording technology consists of two independent components—the magnetic tape and the recorder. Neither component is designed to last forever. Information recorded on a tape can be lost because of chemical degradation of

the tape. However, access to information on a tape can also be lost because the format has become obsolete and a working recorder cannot be located.<sup>3</sup>

A recent report produced by the Image Permanence Institute also identifies format obsolescence as a risk. "Over the years, recording formats and the hardware needed for recording/viewing/copying came and disappeared according to the evolution of technology, market trends, and the decreasing availability of working equipment and experts."<sup>4</sup> Furthermore, the friction through contact between the tape and video head during playback is a factor in the wear and tear of a video. A commercial videotape collection that supports teaching and research, then, is vulnerable to degradation caused by rough or careless handling, chemical decay in the binder material, or other damage to the magnetic layer that holds the content and is dependent as well on working playback equipment.

The AFC began acquiring VHS tapes in 1982 and continues to acquire and support this format. Titles, however, are only acquired in VHS when they are not available in DVD. The collection includes many subjects and genres, and videos were purchased from many different sources, including large commercial companies such as Facets Multimedia, nonprofit distributors, and individual producers and collectors. Almost all tapes, with the exception of a few NYU-produced programs, were acquired through purchase, although some were acquired as gifts from faculty and donors.

Tapes with playback problems—such as an unstable or distorted image or heavy dropout—that cannot be attributed to machine failures are marked to indicate to the patron that the image or sound quality has been compromised and that the tape is fragile. These playback problems are typically reported by patrons. Tapes that are unviewable are repaired on site where possible, for example, when a tape comes off its spindle or the cassette is damaged. Replacement is sought for these titles in VHS or DVD. If staff determine that a particular distributor has gone out of business and replacement is impossible or unlikely, they remove the tape from circulation. A copy is made of the original tape and the original removed from the active circulation and stored separately. (Unfortunately, it has not been possible to add this information to the Machine Readable Cataloging [MARC] record. Documentation, however, is kept by AFC staff.)

As a proactive maintenance measure, staff members also periodically analyze use patterns of the collection both to identify titles that may have significant research or curricular value and to discover titles that may have value but are not being utilized.

## PRESERVATION CONCERNS

The ½" VHS video format has been manufactured since 1976.

**The first purchase of VHS tapes in the AFC was made in the early 1980s. Because age is a factor in the deterioration process, older portions of the collection are likely to be deteriorating accordingly.<sup>5</sup>**

Damage due to poor handling is far less of a problem because the AFC was deliberately constructed to restrict handling and playback of tapes to the AFC staff. A bank of playback equipment resides behind the AFC circulation desk, and students view their selected video remotely at viewing stations equipped with monitors, headphones, and limited playback controls. All AFC staff members are trained in proper operation of the players and to identify problem tapes. Also, the players are well maintained and replaced at the first sign of failure. Nonetheless, as noted above, playback of a videotape results in physical wear and tear of the tape, even in this carefully controlled setting, and heavy demand on portions of the collection eventually results in a subset of worn-out, unusable tapes.

Prior to the survey, subjective estimates projected that roughly 10 percent of the collection had been viewed over one hundred times and that 10–15 percent had not circulated in five years. At the same time, it was believed that approximately 20 percent



The circulation desk at the Avery Fisher Center for Music and Media. Photograph by Paula De Stefano.

of the collection could still be acquired and replaced in a VHS format and that approximately another 30–40 percent could probably be acquired on DVD. Staff, however, speculated that a significant portion of the collection, estimated to be 40 percent, was out of print, or unavailable, although copies are sometimes available in the secondary tape market. Considering the problems of the limited life cycle of videos and the difficulty of replacement, a program for long-term preservation of those videos with high research and curricular value is clearly needed.

## PLANNING THE SURVEY

Methods of evaluating the collection were considered in the early stages of planning. In a library setting, date parameters have been useful in the past in order to delimit areas of book collections. Correlating video formats to particular patterns of degradation, however, is difficult because production techniques and the materials used to produce videotapes have varied from manufacturer to manufacturer throughout the history of their production, making it very difficult to isolate useful date parameters.

The physical and chemical properties of each component part of videotape, that is, the base, magnetic particles, and various coatings and lubricants, combine to produce characteristics that ensure successful playback when the tape is new but also have an impact on the stability of the tape over time.<sup>6</sup> A highly competitive market for videotape production resulted in consistent changes, in order to continually produce stronger, denser, or higher-quality tapes. Thus, between manufacturers and even between tape stocks, production techniques and chemical formulations have varied.<sup>7</sup> “The time and expense involved in the development of a video tape is enormous,” says Gordon White, and “accounts for the secrecy with which a manufacturer guards his production techniques.”<sup>8</sup> Unfortunately for libraries and archives, little information is available from manufacturers about the formulation of the videotapes. The authors are unaware if any conclusive research has been published that associates manufacturers or specific tape stocks with observed rates of decay.

Another difficulty in using date alone as an indicator of risk is that commercially produced tapes are often difficult to precisely date when separated from their original packaging. Unfortunately, in a library setting, packaging is often replaced with a more durable plastic box and is labeled only with an identification number.<sup>9</sup> The videotape cassette itself does not exhibit a production date, as published paper materials do, and therefore, the catalog record becomes the only source for dating videos.



Commercially produced videocassettes at the Avery Fisher Center are usually separated from original cardboard containers and rehoused in durable plastic boxes, which often makes dating of the tapes difficult. Photograph by Paula De Stefano.

Unfortunately, for several reasons, the production date recorded in the NYU Libraries' catalog record for video titles cannot necessarily be used to accurately estimate the age of the tape. For videos, the production date does not give a reliable indication of age. A production could have been completed in 1942, but the particular VHS tape may have been recorded in 1991. One could assume that a tape is recorded close to the time of acquisition—a reasonable but not entirely reliable assumption—and could use the date of acquisition as an indicator of a tape's age. In many cases, especially for videos acquired in the 1980s, however, the acquisition dates were not noted in the MARC record.

Also, as mentioned above, over the years some tapes were replaced with newer copies, or duplicated for safekeeping. Therefore, a video may have been originally produced and acquired in the 1990s, recorded as such in the catalog record, but years later the tape may have been reordered or copied for replacement purposes. Using the date in the catalog record would result in a miscalculation of the age of the tape because the date may not represent the actual date of the stock. Because the tapes themselves have no artifactual value, the Libraries' catalog record for the title was not updated and documentation of the action was not routinely or consistently kept.<sup>10</sup> When a tape is replaced, the practice is to assign the same call number as the old item, which is adhered to the new tape.



This issue of establishing the age and date of a video may seem tedious and trivial to those with experience in magnetic media preservation, but in the library setting this issue needs clarity. Traditionally, preservation decision-making and prioritizing have been assisted by—and, in some cases, predicated upon—the ability to assess the age of an artifact and to use the age of the artifact as a criterion to prioritize the item for preservation treatment. For example, date parameters are often used to identify known periods of poor paper production. Beginning in the 1850s, wood pulp replaced cotton rags in the papermaking process and production techniques used to make paper changed. These changes resulted in highly acidic paper that becomes brittle and too fragile to handle without breaking pages. Beginning in the 1960s, research library administrators found that a preponderance of their book collections with acidic paper fell into the date parameters associated with the onset of chemically unstable paper. Examining collections using date parameters became, and still is, a logical approach to identifying these fragile materials in time to reformat them and save their content. For the reasons noted above, date parameters are not as useful a guide to evaluating preservation needs of library media collections.

**It is important that librarians and preservation administrators consider information other than age when evaluating collections and setting preservation priorities.**

Ideally, the process of evaluating the condition and playability of the AFC videotape collection would involve evaluation at the item level. The collection itself, however, is far too large to examine item by item; thus, a random sample survey strategy was chosen to collect data regarding physical condition and practical replacement options of the holdings. The two basic goals of the survey were (a) to identify the percentage of tapes within the AFC commercial VHS collection that are likely to be in poor physical condition or at risk of deterioration and (b) to estimate the risk of loss among the collections' holdings. The latter objective was especially important with regard to the percentage of titles for which a suitable replacement is unlikely because the distributor is out of business and the title is not widely held by other institutions for copying.

## **SURVEY INSTRUMENT**

Random sample surveys are a common method for assessing book collections in libraries and have often been used for condition assessments by large research libraries.<sup>11</sup> The AFC video survey was designed to be consistent with this type of survey, in which a scientifically valid sample population of the overall collection is determined

based on confidence and tolerance levels and the items sampled are randomly chosen for statistical validity. The results of a scientifically valid random sample survey are used to extrapolate from the survey findings to the whole collection and impart statistically valid, useful information regarding the scope of a perceived problem. In the AFC, the primary concern is continued access to the collection for teaching and research, so the survey was used to answer questions about the overall age, condition, use, and replacement availability of the collection as a whole.

The survey designers took into account the degree of variability in media-specific attributes of the collection, and this particular collection of videotapes was considered to be homogeneous enough to expect a random sample to produce meaningful data. The videos are all of the same format (VHS) and all commercially produced, and all have been subjected to the same macro- and microenvironmental conditions, that is, they are all housed in plastic cassette boxes and stored and used in the same controlled, secure area. Because resources were limited, the sample size needed to be manageable, but, at the same time, confidence in the data was important. Therefore, a high confidence level of 99 percent was chosen to reinforce the certainty of the data and a moderate tolerance level of  $\pm 5$  was adopted because a fairly small weakness in precision was more acceptable than a weakness in confidence. A sample size of 634 videotapes was established following the approach suggested by M. Carl Drott for accurate calculation.<sup>12</sup>



Compact shelving housing the collections of the Avery Fisher Center for Music and Media. Photograph by Paula De Stefano.

The videotape collection is located in a discrete area of the AFC, and the videos are shelved much like books on compact shelving. A map of the area was designed and a list of random numbers generated to select each unit of the sample.<sup>13</sup> Each tape in the sample was visually inspected for physical characteristics, such as tape wind and pack; physical deformities, such as edge curl and stretching of the tape, stickiness, evidence of odor, and dust; and the general condition of the tape's housing. Distribution and production information associated with each video was documented, as was circulation information, and the number of Online Computer Library Center (OCLC) libraries that also owned copies of the title. Library preservation administrators will recognize the similarity of the elements of this survey to those used for books.

## THE SURVEY

Call numbers for the sample population were used to extract bibliographic data from the library's online MARC records for each of the 634 titles. Survey operators used the software Endnote to export selected fields including title, production date, distributor, and physical description information. For the most part, this efficiency allowed the surveyors to circumvent the time-consuming rekeying of data and to also avoid inputting errors. In some cases, however, fields did not translate neatly to the survey database and took more time to cut and paste, or manually insert.

Once the database was populated with data extracted from MARC, a physical inspection of the 634 videos began. As is necessary in any survey, the surveyors were trained together and supervised to ensure consistency of data collection. An inspection checklist was devised to guide the surveyors as they visually inspected the tapes. Each tape was examined through a set of standardized steps, including visual inspection of the tape container and the cassette housing for signs of poor condition, such as breakages, water damage or contamination; visual inspection of the wind for problems, such as uneven wind or edge damage; visual inspection of the tape for deformation, such as stretching or curling of the tape; visual inspection of the interior posts for residue that could indicate shedding of oxide; a notation of whether the tape was rewound was recorded; as well as a notation of whether the record protection was active or inactive.

In addition to condition data, preservation decision-making also requires replacement information. This is especially true when materials are not artifactually valuable because replacement of an item is almost always less expensive than other preservation choices. The survey captured replacement data to use in conjunction with condition data in order to determine levels of risk.

In practice, the AFC staff use numerous strategies to determine whether a particular video can be replaced. Their strategies are based on years of experience and knowledge about the fluid market for audiovisual material. For the purposes of the AFC survey, a lengthy search process for 634 titles was not possible. Instead, the surveyors simply relied on information about whether the entity named in the distributor field of the MARC record was still in business and, theoretically, able to fill a replacement order. The fastest way to do that was to search for each distributor or publisher in the Google search engine. Even though this search is an imprecise and flawed measure of videotape availability, it provided a way to loosely determine, or assume, how much of the video collection is replaceable through reordering channels.<sup>14</sup>

Another piece of information deemed helpful for preservation decision-making by the survey designers was whether a video title is widely held by other libraries. There are several reasons to consider the accessibility of videos outside of the home institution. A high degree of availability may reduce the item as a preservation priority; or, conversely, a low degree of availability may greatly increase its priority. Yet another reason to investigate holdings outside of the home institution affects preservation decision-making. For example, in a library setting, out-of-print books that are no longer available to purchase can be borrowed from other institutions and, with permission, copied to replace a book that is damaged and can no longer be used. It is unclear whether video libraries cooperate in the same way, or whether it is appropriate or desirable to do so, but theoretically when video distributors and publishers are no longer in business an alternative way for a video library to replace an unusable video might be to ask another institution to copy it for the video library.<sup>15</sup>

With this availability in mind, the sampled videotape titles were searched to determine whether other libraries held them, and in what quantity. Each title was searched in the OCLC using WorldCat.<sup>16</sup> As one finds when searching for book replacements, different versions or editions of the same video title were found, some with different production dates or a different publisher. For the purposes of the survey, the date and publisher information needed to agree before the WorldCat record and the AFC tape in hand were considered the same tape. For our purposes, tapes for which there were fewer than twenty copies in OCLC were considered to be of greatest concern.

Because playback is a major factor in the degradation of videotapes, use data were collected for the sample. Three instances of use were included: (a) the entire sum of uses, that is, the total number of times the video was requested for viewing; (b) the last date used; and (c) the number of times the video was requested in the last six months of 2005 (the period during which the survey was conducted). In addition, survey designers

incorporated subject information in the data collection and hoped to correlate levels of use with a subject analysis in order to establish research values. Surveyors requested collection development librarians to review sampled titles that fell into the librarians' subject area. Unfortunately, with few exceptions, the subject area librarians were unresponsive. This is probably indicative of a general unfamiliarity with media materials and how to evaluate them as well as a cultural bias among librarians preoccupied with books. It is interesting that although librarians are becoming more literate and comfortable in the area of collection development of modern electronic media, in the past, skills required to develop multimedia collections were not typically cultivated.<sup>17</sup>

The planning and visual inspection of the survey sample occurred from May 2005 through December 2005, and additional distributor and bibliographic data collection followed until June 2006. Funding contributed by the Andrew W. Mellon Foundation provided a steady workforce of graduate students from NYU's Moving Image Archive and Preservation Program, in the Cinema Studies Department of the Tisch School of Arts. Working part-time, the graduate students collected data and added a great deal to the reliability of the results. In sum, although the planning, development of the survey instrument, and the visual inspection of the tapes were very straightforward, the compilation of data associated with the bibliographic and circulation records, distributor status, and OCLC searching was painstaking and time consuming.

## DATA ANALYSIS

### Condition and Use Factors

**The results of the AFC VHS survey revealed a very small percentage of the commercially produced videos with any visible damage or deterioration, and there was no apparent correlation between a video's visible condition and the amount of times it was used.<sup>18</sup>**

Only 3.3 percent of the sampled videos showed signs of physical problems such as sticky residue or binder residue on the cassette's transport posts or warping at the beginning of the tape. Tape packs were good for 92 percent of the sample. The rest were slightly uneven, but fewer than 1 percent exhibited pack slip. Nevertheless, when measured against the whole of the collection, 3.3 percent of the AFC's fourteen thousand videotapes is not an insignificant number: 462 tapes could be damaged. Although not all may be priority tapes for preservation, remastering of even a portion of the 462 would be a substantial undertaking.

It would be remiss not to emphasize that, in the absence of playback, survey data based on a visual inspection are of limited value. Although the collection *appears* to be in a stable physical condition despite the active use and wear and tear it receives, the information on condition is useful only up to a point. Tapes exhibiting sticky residue may be stabilized and remastered with virtually no loss in signal, and conversely, a tape with no apparent physical problems may be unable to be duplicated because of problems that are not evident until the tape is played back. The degree to which remastering is possible or impossible for the AFC materials surveyed is unknown because the survey did not include playback. In spite of the limitations of visual inspection, the real strength of the compiled data rests in the important homogenous factors surrounding these commercially produced videos as a collection; that is, when data elements are combined and correlated, a portrait of the collection begins to emerge that can be used to direct future planning.

For example, storage conditions are consistent in the AFC, and staff members observe clear standards for care and handling of videos. The end results of these factors are evident in the data: 99 percent of sampled tapes were rewound and 100 percent were write-protected. Further, 90 percent of the sample was stored with an even wind, and fewer than 2 percent showed pack problems. Although the wear and tear of use is a concern, the low incidence of damage among heavily used tapes in the sample suggests, as was expected, that playback decks are well maintained and that the staff is careful in handling the videos. Whether playback to verify signal stability would bear the same conclusions will be tested and reported later this year.<sup>19</sup>

The survey was also useful in providing a snapshot of use.<sup>20</sup> Use data showed that only a small percentage of the collection is heavily used, but that smaller subset is more heavily used than was expected. Subjective estimates of use prior to the survey projected that 10 percent of the video collection had been viewed over one hundred times since acquired, but survey results showed that only 2.5 percent of videos were requested over one hundred times. Within this small segment of tapes, however, 31 percent were requested more than 150 times. When correlated with condition data, this same small subset showed no visible signs of damage or physical deformation. The fact that high use does not correlate with poor condition is mentioned, here, only incidentally—because this finding is interesting and counterintuitive. Based solely upon a visual inspection, without playback, the intersection of use and condition did not provide purposeful information.

### **Age and Replacement Availability**

It is a relief to know that the current condition of the collection appears to be stable, but condition changes over time and merits monitoring because of the natural deterioration

process of video. Ideally, statistical information about the age of the collection coupled with information about the manufacturer and tape stock would help inform preservation planning. As noted above, however, definitive information about tape age could not be obtained because a tape's production date was all that could be obtained from the MARC record.

Nevertheless, data collected regarding production date were analyzed, and according to the catalog record, the greatest proportion of the videos sampled was produced in the 1990s and the lowest percentage was produced, not surprisingly, after 2000. More specifically, 33 percent were produced in the 1980s, 42 percent in the 1990s, and 2 percent after 2000.<sup>21</sup> Although it may be encouraging that 44 percent were produced in the relatively recent past, the life expectancy of magnetic tape has been estimated to be between ten and thirty years.<sup>22</sup> Considering the size of the AFC VHS collection, it is daunting to contemplate the magnitude of the preservation challenge ahead.

The range of tape manufacturers, tape stock, and batch numbers was recorded for each of the sampled videos, and the wide range of each is extensive and too numerous to report here. It is sufficient to say that all, if not most, of the manufacturers represented in the AFC collection are familiar to most collections of this type. Research is being undertaken in the media preservation community to develop a database of tape brands and their known problems. As these commercial videos continue to age, correlations between age, manufacturer, and tape stock may help predict preservation and replacement actions before significant losses occur.

Replacement data were more difficult to determine, and conclusions about replacement remain tenuously balanced on the dependability of the Google search for distributors still in business. Without actually placing an order, it is difficult to verify that a video title is still available for replacement from a distributor even if the distributor is still in business. The Google searches retrieved 76 percent of the distributors represented in the sample. Whether the companies still own the master of a given video is not guaranteed, and this survey did not probe further because of time constraints. True replacement information must be postponed for now, but this issue warrants further study, especially for the 24 percent of videos for which current distributors were not found. In addition, the exercise could be taken a step farther to determine how many of the videos might be replaced in DVD format. AFC staff have reported that replacement titles on DVD are more likely for feature films than for other genres.

As stated above, sampled video titles were searched in the OCLC's WorldCat database to determine how widely held the titles are among other libraries.<sup>23</sup> The search of 634 titles sampled revealed that for over half of the samples the titles were held in

other OCLC member libraries; this, however, leaves a substantial number of videos that are not shared in the OCLC network. Of greater concern, however, is the 9 percent of the sample, for which there are fewer than twenty copies represented in OCLC and for which no distributor was found in the Google search. Subject to an evaluation of value, this category of videos represents a subset of videos that appear to be rare and very difficult to replace and, thus, may be urgently in need of preservation. Extrapolated to the larger collection, the 9 percent represents over 1,260 videos, a substantial number when considering limited resources for preservation.

On the basis of the number of distributors in business, and the number of tapes held by other libraries, however, replacement of the majority of the commercial VHS videos appears to be fairly optimistic, whether that action involves reordering or collaborating with another library to obtain a copy.

**A preservation process, as opposed to simple replacement, is usually much more complicated than simply dubbing VHS tapes.**

Because the vast majority of the videos are viewing copies, best practices for preservation would dictate finding a high-quality tape to use as a duplication master. This process can be very time consuming, and an analysis of issues of ownership and copyright will be needed to ensure that the activities fall within fair use or other legal/contractual provisions.

Also very problematic is the fact that the moving image preservation community is in the midst of tremendous change in technology. Today, preservation planning for videotape collections not only entails questions regarding what tapes are of high priority but also raises questions regarding the most appropriate destination format for remastering. The decline of magnetic tape as a production medium and the rise of digital formats add to the complexity of an already difficult and unfamiliar set of decisions for libraries.

The duplication and preservation issues only become more difficult as VHS is replaced by DVD as a primary medium for access to video and film titles. With DVD, AFC will not have the same ability to simply duplicate the titles. The formatting of DVDs makes duplication more time consuming, and the technical issues associated with maintaining the integrity of digital data are not simple.<sup>24</sup>

## **CONCLUSION**

It would be remiss not to point out that a random sample survey may not be appropriate for all magnetic media collections. Although the methodology is sound and works well



when applied to book collections, serious questions relating to its application to videotape collections were raised during this project. The AFC commercial video collection is more homogeneous than most magnetic media collections, and the results of the survey reported here are sound. Collections that contain unique content or contain a variety of formats or were derived from a variety of professional and nonprofessional creators to fulfill diverse needs, however, are not homogeneous and may contain too many uncontrolled variables to permit valid sampling.

Random sampling may have been more valuable with a subset of the collection the size of AFC—such as those tapes that are identified to be of high research and curricular value. Analysis by selectors could be a first step, followed by a random sampling survey. This subset would represent those tapes that would be more likely candidates for preservation than those in the general collection.

Further study and testing of sampling methodology for videotape is now underway at NYU, with funding from the Andrew W. Mellon Foundation. The project, entitled “Developing Principles and Methodologies for Moving Image and Audio Preservation in Research Libraries,” seeks to develop methodologies for assessing the condition of archival magnetic media based on visual and playback inspection and the use of random sampling in order to prioritize the relative need and appropriate pathway toward preservation.

In closing, the AFC, at NYU Libraries, will continue to collect commercially produced audiovisual materials to support teaching programs within the university. The random sample survey of the AFC commercial video collection is the first step in developing a plan to preserve AFC’s content and maintain access to these materials. With the data collected, the newly developed moving image preservation program established in the library’s Barbara Goldsmith Preservation and Conservation Department can begin to formulate a strategy to address the preservation needs of these materials. Similarities to the preservation procedures and administrative processes that ensure access to the library’s printed collections will be explored with the intention of creating similar decision-making paradigms and workflow for preserving high-priority AFC videos. Valuable information regarding the age, overall condition, replacement availability, and holdings among sister institutions, for the commercial videotape portion of the AFC collection, will be used to implement an appropriate level of preservation processes to keep the collection serviceable for teaching and research purposes. The use of random sample surveying and analysis of the condition and replacement characteristics of the collection offered one methodology to assess the state of the media.

More globally, the custodians of commercial videotape collections must continue to examine, understand, and manage these materials. As is aptly noted by

Alan F. Lewis, in “Current Video Preservation Practices: Promoting Awareness and Education,” videotape technology

is wholly based on a commercially driven marketplace, one that serves the needs of the television and video makers, not television and video preservers. Therefore, all decisions inherent in the development and marketing of the medium and its formats are not necessarily reflective of the needs of the preservation community.<sup>25</sup>

Lewis emphasizes the need to raise awareness, study these materials, and share information about them. It is in the spirit of that admonition that the AFC survey results are reported.

Also, commercial video collections represent but one category of the types of video collections held by cultural institutions.

### **Preservation strategies for commercial video collections will differ from the strategies and methods used for unique performance videos,**

for example, where only single instantiations of the work exist. In the short term, the possibility of replacing commercial videos in support of support teaching and research, as is the case with the AFC collection, by purchasing available copies and reformatting those that are unavailable, will maintain the viability of the collection for its intended purpose. Long-term preservation, however, will require more complex strategies. How to proceed and prioritize the titles that will be replaced and reformatted, as well as those for which NYU will take on long-term custodianship, is the subject of further study at NYU and, hopefully, by others faced with maintaining similar collections.

**Appendix I – Avery Fisher Center Survey Table**

<i>Field Name</i>	<i>Type</i>	<i>Size</i>	<i>Description</i>	<i>Notes/Instructions</i>
ID	Auto-number		A number automatically generated by the software for each record.	
Call_number	Text	50	VCA number—acquired from MARC 852 \$h, \$t.	For the purposes of this survey, this field combines the call number and the copy number.
Barcode	Number		Acquired from MARC 852\$p.	The barcode is useful for cases where there are multiple tapes for a particular call number.
Title	Text	255	Acquired from MARC 245 \$a, \$b.	
Alternate title	Text	255	Acquired from MARC 740 \$a.	
Date_Prod_Distribution	Text	255	Acquired from MARC 260 \$c.	
Extent	Memo	—	Acquired from MARC 300 \$a and describes relationship with any other tapes with same VCA number.	It was not possible to extract the actual Extent field from MARC (i.e., one videocassette of nine). The 300 \$a field will tell us if the tape is part of a series by showing the total number of tapes with that VCA number, that is, nine videocassettes.
Subjects	Memo	—	Acquired from MARC 650\$a, \$v, \$x, \$y.	
Personal_Corporate_Names	Memo	—	Acquired from MARC 700 \$a and 710 \$a and useful for replacement research.	
Publisher_distributor	Memo	—	Acquired from MARC 260 \$c.	
Other_VCA_No	Text	50	Another copy of the tape as VHS in AFC catalog.	Care must be taken to verify that this tape is the same version as the one in the Call_

<i>Field Name</i>	<i>Type</i>	<i>Size</i>	<i>Description</i>	<i>Notes/ Instructions</i>
Other_VDL_No	Text	50	Another copy of the tape as laser disk in AFC catalog.	number field. Note any other versions in the Distribution_notes field. Care must be taken to verify that this laser disk is the same version as the one in the Call_number field. Note any other versions in the Distribution_notes field.
Other_DVD_No	Text	50	Another copy of the tape as DVD in AFC catalog.	Care must be taken to verify that this DVD is the same version as the one in the Call_number field. Note any other versions in the Distribution_notes field.
AFC_OOP_status	Text	255	Indicates that AFC has designated this tape <i>out of print</i> .	This field records a designation made by staff and implies that the original purchase has been pulled from the shelf and replaced with a copy. The original purchase is stored in the out-of-print cabinet. If the tape has not been designated out of print, through this process, leave this field blank.
AFC_history	Memo	—	Records if and when the tape has been replaced and other information important to an understanding of history of tape.	
Distributor_status	Memo	—	Indicates whether or not the original distributor	This field is for the status of the business (continued)

**Appendix I – Avery Fisher Center Survey Table (*Continued*)**

<i>Field Name</i>	<i>Type</i>	<i>Size</i>	<i>Description</i>	<i>Notes/ Instructions</i>
			is currently in business or not.	from which the original purchase was made. Begin this field with "in business (year)" or "out of business (year)" and go on to give any other relevant information, such as if the collection was transferred or the business was acquired or merged. The date is the year that you acquired the data for this field.
Publisher_ status	Memo	—	Indicates whether or not the original publisher is currently in business.	This field is for the status of the business that originally published the tape. Begin this field with "in business (year)" or "out of business (year)" and go on to give any other relevant information, such as if the business was acquired or merged. The date is the year that you acquired the data for this field.
VHS_ availability	Memo	—	Records source of new VHS tape, if any.	Record the name of the source and the item number, if known; that is, Facets D4528. Separate sources with semicolon.
DVD_ availability	Memo	—	Records source of new DVD, if any.	Record the name of the source and the item number, if known; that is, Facets D4528. Separate

<i>Field Name</i>	<i>Type</i>	<i>Size</i>	<i>Description</i>	<i>Notes/ Instructions</i>
Distribution_ notes	Memo	—	Records any additional information relating to availability, as well as the process of determining availability.	sources with semicolon. Record any information relevant to the distribution and replaceability of the tape that is not appropriate for another field. Record the places you looked for the replacement, the date of your research, and the source; that is, as per telephone conversation with Sam Smith of XYZ Film Coop (2005), VHS copies will be available through January 2006.
OCLC_ availability	Memo	—	Through research in WorldCat, records the number of libraries in OCLC that have the item.	
RLIN_ availability	Memo	—	Through research in RLIN, records the number of libraries in RLIN that have the item.	
Total_ Circulation	Text	50	Acquired from Advance system.	
Circulation_ 2005	Text	50	Acquired from Advance system.	
Last_ Circulated	Text	50	Acquired from Advance system.	Record in the following format: 2/4/2003.
Circulation_ notes	Memo	—	Records any additional information concerning circulation.	
Manufacturer	Text	50	Records the name of manufacturer of the tape.	
Stock_Brand	Text	255	Records the full stock brand of the tape.	

(continued)

**Appendix I – Avery Fisher Center Survey Table (*Continued*)**

<i>Field Name</i>	<i>Type</i>	<i>Size</i>	<i>Description</i>	<i>Notes/ Instructions</i>
Batch_ Number	Text	50	Records the batch number of the tape, if any.	
Housing	Text	50	Records the material of the container and any bags, paper, and so on, in tape container.	Begin the entry with the housing type; that is, plastic container.
Item_ Annotations	Memo	—	Records any annotations on the item or its labels.	Record verbatim and indicate location on item; that is, spine: VCA 239 copy.
Container_ Annotations	Memo	—	Records any annotations on the container or its labels.	Record verbatim and indicate location on item; that is, spine: VCA 239 copy.
Video_Speed	Text	50	Pull-down menu to indicate standard playing (SP), long-playing (LP), or extra long playing (SLP).	
Generation	Text	50	Pull-down menu to indicate the highest-quality version of the tape purchased.	
Condition_ container	Memo	—	Records the condition of container based on video inspection form.	See video inspection form.
Condition_ tape_cassette	Memo	—	Records condition of cassette based on video inspection form.	See video inspection form.
Condition_ tape_contam	Memo	—	Records contamination of tape surfaces or interior of cassette based on video inspection form.	See video inspection form.
Condition_ tape_deform	Memo	—	Records deformations of tape based on video inspection form.	See video inspection form.
Condition_ tape_pack	Memo	—	Records condition of tape pack based on video inspection form.	See video inspection form.
Condition_ notes	Memo	—	Additional information about condition, including anecdotal	

<i>Field Name</i>	<i>Type</i>	<i>Size</i>	<i>Description</i>	<i>Notes/ Instructions</i>
			information from AFC staff.	
Record_ protect_status	Text	50	Status of record protect.	
Wind_status	Text	255	Records whether the tape is stored rewound to the beginning.	Use the Condition_ notes field for any other information.
Selector_notes	Memo	—	Records evaluation/ recommendations of selector.	To be filled in after the work of recording the other information is completed.
Preservation_ rating	Text	255	Records relative priority for preservation and why.	Rating scale to be determined.
First_ cataloger	Text	255	Records the full name of the person who created the record.	
Date_first_ cataloged	Date/ Time	8	Records the date the record was created.	
Revisions_ cataloger	Text	255	Records the full name of the last person to revise the record.	
Date_revised	Date/ Time	8	Records the date the record was last revised.	



## Appendix II – Avery Fisher Center Survey Analysis

<b>Container Condition</b>	<b>Extrapolation<sup>1</sup></b>
1.41 percent damaged/broken.	197 damaged/broken.
1.10 percent with traces of sticky residue.	154 with traces of sticky residue.
<b>Cassette Tape Condition</b>	<b>Extrapolation</b>
3.3 percent show signs of damage.	462 show damage such as sticky residue or binder residue on post or loose piece of cassette hitting tape or odd smell or warping at beginning of tape.
<b>Contamination of Tape</b>	<b>Extrapolation</b>
0.16 percent (one tape) shows contamination.	224 tapes with sticky residue.
<b>Deformation of Tape</b>	<b>Extrapolation</b>
0.16 percent (one tape) with deformation.	224 tape edges are wavy at the beginning.
<b>Tape Pack</b>	<b>Extrapolation</b>
8.66 percent slightly uneven.	1,212 tape packs are slightly uneven.
0.31 percent uneven.	434 tape packs are uneven.
0.16 percent pack slip.	224 tape packs show pack slip.
<b>Generation</b>	<b>Extrapolation</b>
2.83 percent are duplicates.	396 are duplicates.
<b>Tape Wind</b>	<b>Extrapolation</b>
0.79 percent not rewound.	1,106 are not rewound.
<b>Record Protect</b>	<b>Extrapolation</b>
100 percent are record protected.	Fourteen thousand are record protected.
<b>Maintenance History<sup>2</sup></b>	<b>Extrapolation</b>
17.01 percent contain cleaning record from 1991.	2,380 were cleaned in 1991.
0.63 percent contain cleaning record from 1992.	882 were cleaned in 1992.
1.57 percent contain cleaning record (date unknown).	220 were cleaned (date unknown).
<b>Condition Notes<sup>3</sup></b>	<b>Extrapolation</b>
0.79 percent show some dropout at beginning of tape of no longer than 7 or 8 minutes.	Not applicable.
One tape viewed more than ninety-seven times.	
One tape with note stating "Poor Dub from Master" on the container.	
One tape with note stating audio problems but that a new copy has been ordered, in 2004.	
<b>Condition Overview</b>	<b>Extrapolation</b>
85 percent of the videos are original tapes, not dupes; cassettes are in good condition; tapes have no contamination;	11,900 of the fourteen thousand VHS videotapes are original tapes, not dupes; cassettes are in good condition; tapes have

tapes have no deformities; tape packs are good.

#### **Circulation/Use<sup>4</sup> in 2005**

41 percent circulated at least once in 2005.

58 percent did not circulate at all in 2005.

15 percent circulated twice in 2005.

5 percent circulated more than five times in 2005.

2.5 percent circulated more than one hundred times in total.

83 percent circulated in the last five years.

#### **Distributor Availability<sup>6</sup>**

76 percent of distributors were found in Google searches.

#### **OCLC/RLIN Availability**

7 percent of titles were recorded separately in OCLC and RLIN.

More than 100 OCLC records for 30 percent of titles.

More than fifty OCLC records for 44.5 percent of titles.

Fewer than twenty records for 37.5 of percent the titles.

#### **Production Dates**

33 percent were produced in the 1980s.

42 percent were produced in the 1990s.

2 percent were produced between 2000 and 2002.

no contamination; tapes have no deformities; tape packs are good.

#### **Extrapolation**

5,740 videos were used in 2005.

8,120 videos were not used at all in 2005.

2,100 videos were used twice in 2005.

Seven hundred videos were used more than five times in 2005.

350 videos were used more than one hundred times total.

11,620 videos have circulated in the last five years<sup>5</sup>.

#### **Extrapolation**

10,640 videos *maybe* are available for replacement.

#### **Extrapolation**

980 titles are shared by institutional members of OCLC and RLIN.

5,250 videos available through OCLC?

#### **Extrapolation**

4,620 videos were produced in the 1980s.

5,880 videos were produced in the 1990s.

280 videos were produced between 2000 and 2002.

<sup>1</sup> The random sample population was 634 videos out of a total population of fourteen thousand. Confidence and tolerance levels were 99 percent and  $\pm 5$ , respectively.

<sup>2</sup> Documentation of cleaning was found on notes inside the cassette cases.

<sup>3</sup> The researchers themselves did not make these observations; rather, these observations were derived from notes attached to the containers or through conversation with library staff. Many of these notes were prefaced by qualifiers such as "apparently" and therefore might benefit from further confirmation.

<sup>4</sup> Circulation data were obtained from the library's OPAC system.

<sup>5</sup> This should more correctly read as follows: There were 11,620 circulations of videos in the last five years. Circulations were concentrated to a narrower group of titles than this statement implies.

<sup>6</sup> Distributors were searched in Google and determined to be in business when found; individual titles, however, were not searched to determine ordering or replacement availability.

## **NOTES**

1. See <http://library.nyu.edu/afc/> for more information about the Avery Fisher Center and its holdings.

2. For lack of a better term, *out of print* is used to describe a tape's unavailability for replacement. In most cases, videotapes are not published in the traditional sense like books; rather, videotapes are duplicated in small quantities or individually by order. A tape could be irreplaceable for many reasons. A master or dub-master could become unavailable because the work was withdrawn from distribution by the owner, or because the work was considered a low priority for a distributor. Nonprofit distributors are often undercapitalized and are particularly vulnerable to changes in market forces and philanthropic trends. In some cases, the distributors' businesses have dissolved, and their collections bought and sold. All of the possibilities make locating another copy of a tape difficult and sometimes impossible.
3. John W. C. Van Bogart, "What Can Go Wrong with Magnetic Media," Section 1, *Magnetic Tape Storage and Handling: A Guide for Librarians and Archivists* (Washington, D.C.: Council on Libraries and Information Resources, 1995), <http://www.clir.org/pubs/reports/pub54/1introduction.html> (accessed November 7, 2007).
4. Jean-Louis Bigourdan et al., "The Preservation of Magnetic Tape Collections: A Perspective" (final report to the National Endowment for the Humanities, Image Permanence Institute, Rochester Institute of Technology, Rochester, N.Y., December 22, 2006), 4, [http://www.imagepermanenceinstitute.org/shtml\\_sub/NEHTapeFinalReport.pdf](http://www.imagepermanenceinstitute.org/shtml_sub/NEHTapeFinalReport.pdf) (accessed November 7, 2007).
5. Logic would lead one to this deduction. See also Van Bogart, "What Can Go Wrong with Magnetic Media," Section 2, [http://www.clir.org/pubs/reports/pub54/2what\\_wrong.html](http://www.clir.org/pubs/reports/pub54/2what_wrong.html) (accessed November 7, 2007).
6. Van Bogart, "What Can Go Wrong with Magnetic Media," Section 2, [http://www.clir.org/pubs/reports/pub54/2what\\_wrong.html](http://www.clir.org/pubs/reports/pub54/2what_wrong.html) (accessed November 7, 2007). For information on the changes in videotape manufacture, see Marcus Weise and Diana Weynand, *How Video Works: From Analog to High Definition* (Burlington, Mass.: Focal Press, 2004), 166. See also Bigourdan et al., "The Preservation of Magnetic Tape Collections," 59.
7. Gordon White, *Video Techniques*, 2nd ed. (Oxford: Butterworth-Heinemann, 1992), 183.
8. *Ibid.*, 182–83.
9. NYU's AFC uses generic black plastic cases that snap closed, much akin to the boxes or cases used in neighborhood video rental establishments. This is not the case in all libraries; in fact, public libraries that circulate videos often keep the original boxes, or incorporate the decorative packaging somehow into a sturdier plastic case.
10. The practice of replacing damaged tapes with copies is akin to the process of replacing damaged books with bound photocopies of the original. It is common practice in libraries to update the catalog record for the book to reflect this action, but such practice has not carried over to the copying of commercial media collections.
11. See Ronald R. Powell, *Basic Research Methods for Librarians*, 3rd ed., Contemporary Studies in Information Management Policy, and Services, ed. Peter Hernon (Westport, Conn.: Alex Publishing, 1997). For a more specific random sample study used for preservation condition assessment, see Gay Walker et al., "The Yale Survey: A Large-Scale Study of Book Deterioration in

the Yale University Library," *College and Research Libraries* 46, no. 2 (March 1985): 111–32.

**12.** M. Carl Drott, "Random Sampling: A Tool for Library Research," *College & Research Libraries* 30, no. 2 (March 1969): 119–25.

**13.** Mads Haahr, "random.org: True Random Number Service," <http://www.random.org/>.

**14.** Distributors' names change, mergers occur, and sales of collections are just a few examples of problems that undermine this approach. Also, in recent years, AFC has increasingly relied on the secondary market for titles that are no longer in distribution.

**15.** Copyright law allows an institution to replace missing or damaged items when they are no longer available for purchase, with certain restrictions.

**16.** A Research Libraries Information Network (RLIN) search was not carried out because of time constraints. OCLC was chosen over RLIN because of its larger percentage of similar collections.

**17.** Sheila S. Intner discusses the bibliocentricity of library education, collection development, and library budgets in "Recruiting Non-Bibliocentric Collection Builders," in *Recruiting, Educating, and Training Librarians for Collection Development*, ed. Peggy Johnson and Sheila Intner (Westport, Conn.: Greenwood Press, 1994), 69–84.

**18.** Owing to time constraints, the visual inspection procedure did not include playback of the video.

**19.** "Developing Principle and Methodologies for Moving Image and Audio Preservation in Research Libraries" is a three-year project directed by the Barbara Goldsmith Preservation and Conservation Department at NYU, and funded by the Andrew W. Mellon Foundation, to further test survey methods for videotape and to develop guidelines for preservation planning.

**20.** Use statistics were derived from the library's Online Public Access Catalog (OPAC) system where data regarding the number of requests for viewing are recorded, as of July 2005.

**21.** Dates were unknown, or unrecorded, for the percentage of titles unaccounted for above.

**22.** Van Bogart, "How Long Will Magnetic Media Last" *Section 4, Magnetic Tape Storage and Handling: A Guide for Librarians and Archivists* (Washington, D.C.: Council on Libraries and Information Resources, 1995), [http://www.clir.org/PUBS/reports/pub54/4life\\_expectancy.html](http://www.clir.org/PUBS/reports/pub54/4life_expectancy.html) (accessed September 7, 2006).

**23.** WorldCat is available at <http://www.oclc.org/worldcat/>.

**24.** See Howard Besser, "Digital Longevity," in *Handbook for Digital Projects: A Management Tool for Preservation and Access*, ed. Maxine K. Sitts (Andover, Mass.: Northeast Document Conservation Center, 2000), <http://www.gseis.ucla.edu/%7EHoward/Papers/sfs-longevity.html> (accessed August 31, 2004). Also, Donald Waters and John Garrett, *Preserving Digital Information, Report of the Task Force on Archiving of Digital Information* (Washington, D.C.: Council on Library and Information Services, 1996), <http://www.clir.org/pubs/abstract/pub63.html> (accessed November 7, 2007).

**25.** Alan F. Lewis, "Current Video Preservation Practices: Promoting Awareness and Education," in *Playback: A Preservation Primer for Video* (San Francisco, Calif.: Bay Area Video Coalition, 1998), 48.