Are Libraries Effectively Monitoring the Condition of their Microfilm Collections?

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ARE LIBRARIES EFFECTIVELY MONITORING THE CONDITION OF THEIR MICROFILM COLLECTIONS?

by James Gross
A growing number of libraries are concentrating on digital imaging. While this may be of benefit to both in-library as well as off-site patrons, care should be taken to avoid neglect of a more traditional information format, the microfilm. In today’s fast paced world of gigabit data streams, microfilm may be seen by both patrons and librarians as “old news”. This would be a mistake. A large quantity of data, much of it unique, currently exists solely in the microfilm format. In this short piece, we will discuss the preservation issues facing microfilm. We will discuss the options that exist for library management to check and monitor the status of their film collections.

**Introduction**

In the United States, a sizable percentage of libraries house microfilm collections. A number of these microfilm collections are relied upon by scholarly users for reference and research needs. Microfilm collections typically consist of a mixture of new as well as older film rolls. Usage of these films by patrons can be affected due to accidental tearing or bending of the film. Older film which has become brittle has an even greater potential for tearing. And, library users, even if they are trying to be careful, are not always knowledgeable regarding usage of the film readers.

This is exacerbated by the number of libraries with varying brands and models of film readers. If the rolls in these collections became damaged, replacement or repair of the damaged film would be needed. However, in today’s economy, library budgets are stretched to the limit and funding for replacement film collections, even if needed, could be prohibitively expensive. What steps can library staff take to avoid this potential problem? In this short article we will examine some issues facing microfilm collection preservation and share some thoughts on possible solutions.

**Are Library Patrons Afraid of Microfilm?**

First, we should be honest regarding the usage of microfilm by the public. Many librarians will privately share how their patrons see microfilm usage as a format medium to be avoided. They generally cite the additional time required to master the film reader. Few patrons relish the prospect of having to use microfilm. In this age of instant gratification, library patrons prefer to locate their information with the quick search and download of online data. The textual or book format is typically utilized only if absolutely necessary.

Well, as the reader is probably aware, there is a substantial amount of reference material stored on microfilm. While some researchers may prefer the speed and convenience of accessing data via electronic files or paper, it is widely acknowledged that a sizable percentage of library collections are stored on the microfilm format. Microfilm has a long history of usage in libraries and will likely remain with us in the near future. The latest trend in data storage is a migration from existing media, including microfilm, to scanned images. While this trend is acknowledged, the purpose of this article is to make the reader aware of a growing problem, deteriorating microfilm. If important microfilm collections are not analyzed for preservation needs, some libraries could potentially find themselves in the possession of damaged or unusable film rolls. If these film rolls became unusable, would a replacement roll, via microfilm or digital version, even be possible?

For severely decomposed film, salvaging it could prove to be extremely questionable, if not impossible.
The Ticking Time-bomb

The Library of Congress Information Bulletin referred to the issue of damaged or unstable microfilm collections as a "ticking time bomb" [1, pp. 97]. There are a number of major educational institutions in the country which house sizable microfilm collections. These include university libraries, such as the University of California at Berkeley, Cornell University, and Yale University. Also, there are the large city libraries such as the New York City Public Library and the Philadelphia Free Public Library. The majority of preservation issues do not manifest themselves in the newer microfilms. Most of the preservation problems deal with the older films. For example, when older films start to deteriorate, they begin to give off a strong vinegar smell. This acetate decomposition is caused by a chemical deterioration known as the "vinegar syndrome" [2, pp. 19]. Once this deterioration accelerates, the film on the reel can become brittle and break apart in ones hand. If left unchecked, the film itself will eventually begin to stick together. For severely decomposed film, salvaging it could prove to be extremely questionable, if not impossible.
Cellulose Nitrate Film

Prior to the 1950’s, experts were aware of the problems associated with cellulose nitrate film. This type of film had been used for motion pictures, and was known to be extremely unstable [3, pp. 118]. Due to this instability, films were transferred to a cellulose acetate-based film. Acetate based film was later found to be unstable and steps were taken to transfer the film to a polyester based film [3, pp. 119]. Thus, the vast majority of film deterioration issues have been with nitrate and acetate based film. As noted above, the instability of nitrate and acetate based film led them to be phased out and/or transferred to polyester-based films. Polyester-based films have a shelf life of over 500 years if processed and stored correctly. Microfilm instability is not new. Institutions such as the Library of Congress and the George Eastman house (affiliated with Kodak film), have been long aware of film preservation needs. So, if some institutions are aware of film preservation concerns, why hasn’t there been a concerted effort to create and implement a film collection preservation plan?

Neglected Microfilm

The reality is microfilm collections often suffer from neglect. As a storage medium, it just doesn’t have the budgetary appeal that other storage formats, such as electronic databases, do. Also, libraries and archives, for the most part, have limited staff and budgets. Their staff is empowered to focus on taking care of the current patron workload. They may not even have a qualified staff person dedicated to the microfilm room or collection. Debra Madsen pointed out that these large film collections, usually a large institutional investment, were often, "staffed by low level employees such as paraprofessionals and students" [4, pp. 103]. Madsen also suggested that if a
Unless the library or archive has a trained person to examine and maintain the collection, nothing will be accomplished.

Gracy and Cloonan, quoted by De Stefano [5], were even more critical of the technical expertise of library staff. They stated, "There is a lack of technical skills [...] among library professionals in their basic understanding of film". In addition, they pointed out, "in libraries, specifically, the lack of qualified personnel is [...] substantial" [5, pp. 120]. De Stefano, in echoing the comments of Gracy and Cloonan, stated "there is an absence of experience and expertise resident in libraries to preserve these [microfilm] collections" [3, pp. 122].

Image 7. Film drawer with assortment of old film boxes.
Possible Solutions

What about possible solutions? An essential first step is for the library or archive to realistically examine their long-term collection priorities. They must determine if the age of their microfilm collection warrants a professional examination. The second step would be for the library management to seek outside expertise. This expertise could be utilized to either perform a collection appraisal and/or conduct microfilm preservation training for the library staff. Unless the library or archive has a trained person to examine and maintain the collection, nothing will be accomplished. One possible option would be to contact the state archive, the Library of Congress, or the National Archives for technical assistance. A trained microfilm consultant can go through a collection and list which films need leader, which need to be re-boxed, and which films are suffering from advanced decomposition. The decaying films could then be set aside for additional preservation efforts.

Preservation Plan

Libraries and archives house valuable microfilm collections. These collections can be best served if a preservation plan is in place. This plan should include an analysis of the film collection and a list of those films in need of special attention. A preservation survey of the film collection would be a practical first step. A review of the environmental conditions of the film room and the film drawers would also be in order. Depending on the size of the film collection, the microfilm specialist could first make an overall macro assessment of the collection by checking each film series and then later perform a micro analysis by carefully examining every film box and roll. Generally, deterioration caused by age and film composition would most likely to develop in specific collections. The microfilm specialist is the person whose knowledge and experience make him or her, the best candidate to identify those film rolls in need of re-boxing, and those film rolls in need of preservation.

Conclusion

In closing, it is clear that some libraries and archives need to spend more time and effort if they wish to ensure the long-term survival of
their microfilm collections. A. M. Scham, as quoted by Jonathan Bengston, noted "it is with the greatest reluctance that library administrators are beginning to face the unpleasant fact that books and archival materials are not indestructible" [6, pp. 199]. In any library or archive, an investment in qualified staff would probably be an essential step for addressing collection preservation integrity. And, while many institutions are currently exploring the feasibility of converting from microfilm to digital, the vulnerability of digital media is still an acknowledged issue. As Suzanne Dodson cautioned, "all of these electronic media are short-lived and are not suitable for preservation purposes" [2, pp. 21]. Regardless of future digitalization plans, unless microfilm collections are housed in environmentally safe conditions, checked for the usage of acid-free boxes, and periodically monitored for film decomposition issues, the director of a library or archive may one day be faced with a microfilm preservation catastrophe.

References


[2] S. C. Dodson, "Film is a Film is a Film - or is it?... Microfilms - How to Evaluate for Use and Purchase", Microform & Imaging Review, 34 (1), 2005, pp. 18-21


Further Reading list


James Gross is a Micrographic Specialist, having worked for four years at the National Archives in College Park, MD in the Special Media & Preservation Lab. While there, he handled duties such as microfilming original records, microfilm preservation, as well as re-organizing the microfilm collection in the Master Film Library. His duties also included re-organizing the microfilm cabinets and repaired microfilm rolls requiring preservation.

He is currently assisting microfilm preservation efforts at the Historical Society of Pennsylvania while pursuing a Master’s degree in Library Science at Drexel University in Philadelphia, PA.

Photo credits:

All pictures taken by James Gross.

Image 1 and 2: National Archives, College Park, MD, photos of microfilm preservation work being conducted by Kathy Miller, Preservation Specialist, National Archives & Records Administration.

All other images: Historical Society of Pennsylvania, Philadelphia, PA, photos of microfilm boxes selected for preservation re-boxing.