Digital Mythbusting – Save the Originals

Approved by the Advocacy Committee, May 2015

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Archivists and collectors have seen the atrocious effects of time on film materials that have been stored under unsuitable conditions. The archival community learned from these multiple tragedies, that in order to maintain our film heritage we need to store materials in an environment with controlled temperature and relative humidity. But this lesson is sometimes confused with an incorrect statement: that once copied or transferred, an original film print or negative is ready for retirement and has no longer use. On the contrary, nitrate and acetate materials, when stored properly, are stable and provide not only the chance of watching the film in its original medium, but also an excellent image quality.

Why Save the Originals?

As stated in FIAF's Code of Ethics para 1.8:

"Archives will not unnecessarily destroy materials even when they have been preserved or protected by copying. ".

Original film elements carry unique information on the history of that object that cannot be duplicated. As professionals in the field of film preservation, we must keep in mind that we are trying to preserve not only the content of the film, but also the history of the media. A reel of film is a physical artifact in itself, holding information regarding its original presentation and its physical past, providing a window into this artifact's personal history, the time period in which it was produced, and the methods employed in its production. We must guarantee the opportunity of further study of these unique items in their totality for future generations.

Moreover we should not disregard what future technological improvements may offer as regards copying and transferring. A huge advantage of the advent of digital preservation, is the opportunity to adjust and repair a degraded image in ways impossible through analog preservation. As technology progresses and the quality of digital images improve, the possibility of returning to the original element is fundamental. Without it, additional information held only in this copy will be lost forever. Destruction of original elements is entirely unacceptable. For comprehensive and truthful preservation, the original element is the absolute key to future efforts.

The Dangers of Digital

While digital technology has given us exceptional new tools to aid our preservation efforts, we should never blindly trust new preservation methods. Digital preservation's promise of additional storage space may be alluring, but we must be prudent. It is safer to deal with the established limitations of the carriers we have been working with for decades, than to trust all our assets to an unproven new technology. To fight the flammability of nitrate, films were copied to acetate. However, the second half of the twentieth century taught us that acetate was susceptible to vinegar syndrome. Those films whose original nitrates were discarded and whose acetate preservation copies decomposed, are now lost. It

would be great folly to blindly trust new technology again, without positive assurances of said technology's longevity.

While digital preservation tools have given us fantastic new opportunities for restoration and preservation, digital methods are far from being perfect or safe. We already know that data can become corrupted and information can be lost through migration. But additional problems may appear as archivists venture into new and challenging digital preservation projects. Unique originals should always be retained, and digital files should be migrated in a responsible and programmatic way. Destruction or alteration of information at any stage in the chain of preservation is an irreversible act which innately alters future access and preservation efforts.

What about Nitrate?

Maintenance of nitrate is a serious issue from the point of view of both safety and economics, but destruction of unique and original materials must be avoided at all costs. Preservation of nitrate requires the preparation of separate and significantly fortified vaults, and entails the provision of a collection manager for these vaults. A staff member must also undertake training to be certified to send nitrate materials. These costs can prove to be utterly prohibitive for many institutions. One alternative for smaller organizations in possession of nitrate holdings, is to remove said holdings to a larger facility. Coming to an agreement on long term preservation at these facilities is a far more cost effective and less labor intensive route to the permanent safety of nitrate collections.

Regarding safety worries, National Fire Protection Association guidelines laid out in Standard for the Storage and Handling of Cellulose Nitrate Motion Picture Film, 1994 Edition (NFPA 40) must be strictly adhered too. Again in these cases, institutions with a proven track record of safely storing large quantities of nitrate can advice on steps to preserve smaller collections. These institutions can also work as a guideline for your own institution.

"Where it is legally or administratively possible and safe to do so, they will continue to offer researchers access to nitrate viewing prints as long as the nitrate remains viable"

FIAF's Code of Ethics para 1.8

While access to nitrate materials must be closely regulated and observed, it is important that we, as a community, continue to allow access to nitrate elements for research and viewing purposes as time progresses. Nitrate was the first mode of filmic information, and its premiere carrier for the first half century of moving image history. It is of paramount importance that those handling nitrate materials are fully trained in film handling best practices, or are provided with expert guidance by an experienced film handler. Film is stable and durable when maintained in correct environmental conditions and handled correctly. Therefore nitrate should remain accessible, provided all the necessary safeguards are in place, and trained archive staff is available to oversee those handling nitrate materials. Access must cease if the nitrate's viability is in question. At this point, priority must be placed on immediate stabilization of the material, which would require removing it from circulation or access, until a point is reached whereby the film can be returned to a safe state.

Copying nitrate to polyester film is still the preferred method of preservation for nitrate materials. While the cost can be prohibitive, film to film preservation followed by conservation in a climate controlled environment remains the only entirely assured form of preservation.

Conclusion

By neglecting our original film materials, we are closing the door for future, and potentially better, preservation techniques. Film to film preservation is the gold standard for preservation, but responsible digital preservation, and attention to migration and storage of digital copies must also be made a priority. Digital copies are an incredible resource, particularly regarding the provision of access.

> *To balance the priority of protecting the physical integrity of objects/artifacts with facilitating safe and non-discriminatory access to them.*
>
> AMIA Code of Ethics

Digital preservation must not be seen as an enemy of the analog, but as a marvelous asset to be used in conjunction with analog preservation.