

CASABO FAMILY FILMS:

An Account of the Film Preservation Process

Preservation Project Background

In 2009, while on a South American tour performing “film missionary work,” Bill Brand and Katy Martin were entrusted with two 400 foot reels of black-and-white home movies from a Uruguay family, believed to date back to the early 1930s. As a component part of Brand’s NYU-MIAP course, *Film Preservation with Bill Brand: Education You Can’t Refuse*, nine graduate students and Brand inspected the films and prepared them for analog preservation at Colorlab. In April, 2010, new prints of the films were screened as a part of the 7th Orphan Film Symposium in New York City. New preservation elements and prints were returned to Cristina Casabo family in Uruguay.



Film Reel #1: [A Day in the Country]

General Condition

The first reel contained no protective film can, so a bronze metal Kodak can was provided. The film reel had annotations suggesting the attributed title, [A Day in the Country]. The film had no original leader attached.

The film on the first reel consists of two main portions:

- R1-Part 1: Kodak Safety Film, with edgecode SQUARE-TRIANGLE (1927)
Black-and-white, with blue/green tinting; silent double-perf
- R1-Part 2: Kodak Safety Film, with edgecode CIRCLE-PLUS (1931)
Black-and-white; silent double-perf

Extant Damage

A strong odour of camphor is present, suggesting that the film base is made of di-acetate material and is in a state of advanced physical decay. This is in keeping with many other films from this era.

R1-Part 1 of this reel contains changes in the texture of the film's surface, suggesting the presence of ferrotyping—the result of tightly-wound film being stored in humid conditions. What transpires in the ferrotyping process is a change in the surface characteristics of the gelatin emulsion, and resulting altered form when pressed up against the film base it is wound with. Visually, ferrotyping appears on a film print as a shiny, oily-shaped blob, however it usually has no effect on the duplication of the film. Ferrotyping is usually invisible when light is shone through an affected film print.

R1-Part 1 of this reel contains only a few broken perforations.

Throughout R1-Part 2 of this reel, there are recurring small punctures on the emulsion side every 5 frames that suggest the film underwent damage by sprockets during projection. R1-Part 2 also has consistent perforation damage, including several completely ripped perforations.

Reel 1 contains a total of 16 original cement splices. Shrinkage is 1.1%.

Repair and Prep Work

White, light-struck, double-perforated leader was added to the head and tail of the film with cement splices.

Only one tear in the film was repaired, via cement splice, which resulted in the loss of two frames of image towards the start of the reel. Multiple perforation tears were notched with an Xacto blade to avert further damage to the perforations. One extant tape splice was cleaned up, and extra tape cut away. Cement splices were checked for strength, and several were reinforced with tape splices.



festa - baile -
Mucha gente
Muy Buena calidad de B/W -
~~pero no problemas de hongos -~~
No limpiar

Film Item #2: [Untitled]

General Condition

Like Reel 1, the film on the second 400 foot reel is comprised of two sections:

- R2-Part 1: Kodak Safety Film, with edgecode TRIANGLE-CIRCLE (1926)
Black-and-white; silent double-perf
- R2-Part 2: Kodak Safety Film, with edgecode CIRCLE-PLUS (1931)
Black-and-white; silent double-perf

Inside the original Ektachrome metal can, is a handwritten paper note that reads:

“Fiesta-Baile- mucha genta - Muy Buena calidad de B/W – no limpiar”

which translates, as:

“Party-Dance- many people – very good quality black and white – do not clean”

A scratched out on this note reads:

“small problem with mold”

Annotation on the leader reads:

“Baile”

Extant Damage

A strong odour of camphor is present, suggesting that the film base is made of di-acetate material and is in a state of advanced physical decay. This is in keeping with many other films from this era.

R2-Part 1 contains heavy vertical base scratches throughout. Depending on a film’s ability to undergo a wet-gate optical printer, it is often possible to alleviate base scratches. Normal wear lines (presumably, from projection) are present on both the base and emulsion sides of the film. Warping in R2-Part 2 is moderate, and more significant than warping in R2-Part 1.

Reel 2 contains a total of 6 cement splices. Shrinkage is 0.8%.

Repair and Prep Work

White, light-struck, double-perforated leader was added to the head and tail of the film with cement splices.

Cement splices were tested for strength. Several tears in the film are present in Reel 2, and were repaired with tape.

Preservation Work

Making New Preservation Elements

Creating new film copies and printing elements (which will allow future film prints and copies to be more easily and uniformly made) is a complex process. Depending on the condition of existing film prints, their generational relationship to the original negatives, and budgetary concerns, the duplication and preservation processes can take many forms.

In the case of these home movies, positive reversal camera-original prints are the only existing copies. As such, duplicate negatives of each reel were made on black and white negative stock. Whenever creating a duplicate negative print from a black-and-white reversal original, there is the danger of introducing an excessive amount of contrast. With this in mind, color timing technicians at Colorlab took great care to ensure that prints made from the new fine grain master approximated the original reversal film as nearly as possible.

From this new duplicate negative, an answer print was made. Answer prints allow for the verification that the duplication process approximates as closely as possible the original reversal prints. Based on a judgment of the answer print, small adjustments (such as contrast and density) can be made in the creation of additional positive prints. It is important to document these adjustments, for the sake of future duplication efforts.

Prior to any duplication, the films were carefully hand-cleaned, to remove dirt and other particulate, using film cleaner. Because of the labeling on the reels, a precaution against mold was taken and the film did not undergo the “re-washing” process—wherein film is rewashed using developer. Mold can make emulsion water-soluble, endangering the stability of the image on the film.

Due to the high degree of shrinkage on Reel 1 (1.10%) and warping, it was initially unclear as to whether the film could be run through a contact printer. This shrinkage, caused over long periods of time where the film actually physically shrinks due to the loss of unstable components that make up the film’s physical material, can pose challenges in the duplication process. To alleviate the shrinkage problem, Colorlab subjected the prints to a non-destructive process called ‘re-plasticization’—whereby, moisture is induced into the original reversal to improve flexibility and printing resiliency. This remedy, however, is a temporary one and may need to be repeated if any new duplicate negatives are to be made from the reversal original. Additionally, the effects of other physical decay such as warping and cupping may impact the original’s ability to lie flat in the contact printing process, resulting in occasional loss of focus and jumping of frame lines. (Both are slightly apparent in the duplicate negative made of both Reel 1 and Reel 2.)

Final Preservation Elements Created

To facilitate ease of future duplication, it is important to note that the duplicate negative made in this preservation project should never be projected. Not only will the duplicate negative provide an inverted image, but there could be the risk of damaging the element. It is also strongly suggested that the original reversal print not be projected, save for exceptional circumstance and by a qualified projectionist on clean and calibrated equipment.

The following overview explains the new preservation and exhibition elements created through this project.

- 2 duplicate negative prints
 - one for each original reel
 - to be used to generate future positive prints, for exhibition
 - should never be projected
 - should only be handled at a film laboratory
 - should be stored on a film core, in a metal can to avoid contamination
- 2 positive answer prints
 - one for each original reel
 - used to determine quality of duplicate negative
 - a close approximation of how final exhibition prints will look
 - should be used as ‘workhorses’ of exhibition—namely, for researchers and those not preeminently concerned with the highest visual quality
- 4 positive release prints (for Uruguay)
 - two for each original reel
 - one set for exhibition
 - one set not-for-exhibition, but used to assess quality of future prints made from duplicate negative
- 2 positive release prints (for NYU)
 - one for each original reel
 - to be used for research purposes, and in case of any loss of prints in Uruguay
- Digibeta PAL of telecine
 - telecine scan made at duplicate negative stage
 - for protected passive storage, as additional backup
- Uncompressed 10-bit video file (corrected for 18 frames per second)
 - for the creation of video derivatives
- Access PAL formatted DVDs & VHS
 - to serve as the main access copies of the work
 - easily duplicatable, yet the lowest visual quality

Recommendations for Storage

Having made new preservation and exhibition elements of the home movies, it is crucial to note that long-term future storage, thereof, will directly impact their longevity. The Image Permanence Institute recommends storing film elements below 40 degrees Fahrenheit, between 30% and 50% relative humidity. While warmer temperatures are not recommended, they are a practical reality of most environments. If this is the case, it is important to take note that fluctuations in relative humidity have more negative effects on the film than fluctuations in temperature. If possible, store the elements in a cool and dry place.

The films are being returned already in appropriate storage containers. Original film elements and negative elements should be stored on film cores. There is debate over whether or not vented cans are ideal, but if there is any chance that the film elements may encounter liquid contamination (ie. a cellar flood) sealed metal cans may be preferable over vented inert plastic ones. These cans are designed to be stored horizontally. Exhibition prints can be stored on reels, inside of cans.