

PGF Hoax Analysis - A Series of Discussions of Specific Topics Related to the Claim of a Hoax

The goal is to take individual issues and study each, one at a time. Anticipated topics include: Editing and Splicing, Film Processing, Bob Heironymous, Film Provenance and Copies, The Suit, The Trackway, Hollywood Connections, Storyboard Artwork, The Profit Motive, Conflicting testimonies, and other topics possibly added as this progresses.

PGF Hoax Study - Part One - Editing and Splicing Section 3.5.5.1

INTRODUCTION

There are claims that the PG Film is edited or spliced, and these claims usually occur in discussions of a hoax to suggest some material (which would have made the hoax more obvious) was deleted or otherwise hidden from public view to lessen the prospect of a hoax being detected. There is an alternate theory that the film was edited because of an alleged "massacre", but that theory relies on the presumption the filmed subject was a real biological entity, and so it would belong in a separate discussion.

So this discussion will focus on editing and splicing only in the context of whether or not it supports claims of the film being hoaxed with a person in a fur costume.

FOUNDATION MATERIAL

Starting with basic terminology and concepts, necessary as the factual foundation for arguments, the terms "splicing" and "editing" will be defined and explained.

Splicing refers to the mechanical process of joining two pieces of film. Tape and Glue are the two most common devices for attaching the pieces. In either case, inspection of the film, frame by frame (or inspecting a copy after this is done), will generally reveal the indications of the process (a discussion of what is termed "an invisible splice" is addressed later in these notes). However, because film is generally projected at 24 frames per second, the splice is generally never seen during normal viewing of a film.

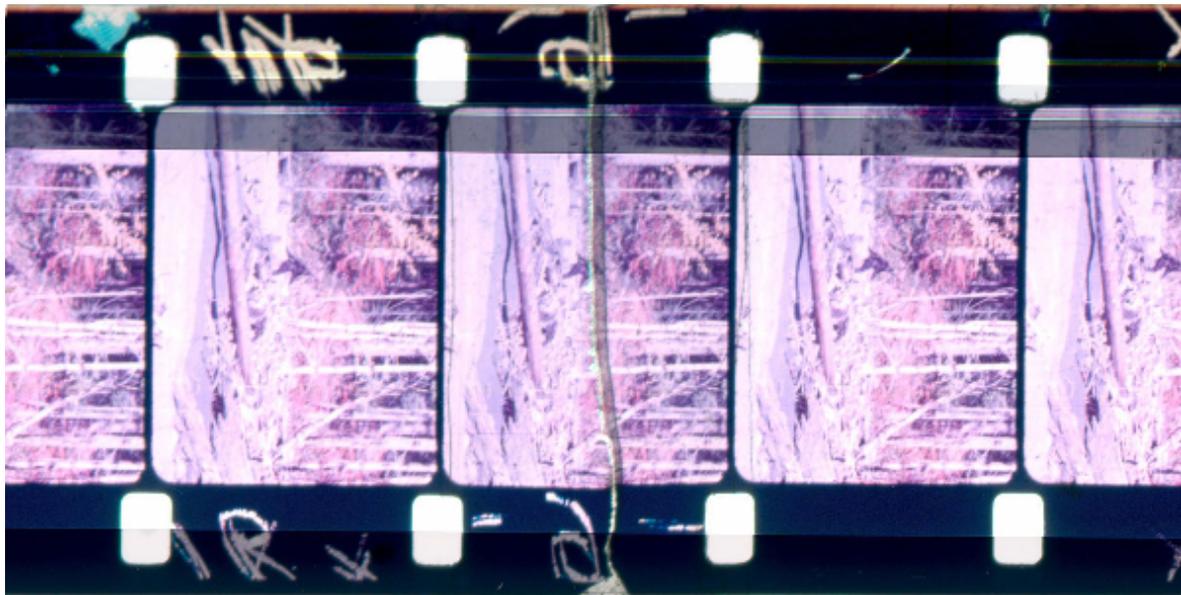
Splicing is a routine process, and every film is spliced multiple times. The film lab processing the film must make two splices just to process the film, either by splicing the film roll to the one before and after it so these joined rolls of film go through the development machine and chemicals in a continuous motion, or the film roll must be spliced to head and tail leader (blank film stock) to run it through a developing machine alone.

Two more splices are made if the first option is used (splicing one roll to another) because the film for one customer must now be cut from the other rolls and head and tail leader spliced on to it for delivery to the customer.

So, in general, most rolls of 16mm film have been spliced at least 4 times just in normal processing.

Other reasons for splicing include joining short rolls (like a 50' magazine roll or a 100' camera roll) onto a larger reel for viewing. One example of this was John Green filming Jim McClarin in summer 1968, re-enacting the PGF walk, and John used a magazine type camera which holds a 50' load. He took two magazines of film then, and after receiving the processed film from Kodak, John spliced the two 50' rolls together onto one 100' reel. That 100' reel, with a splice joining the two 50' segments, was scanned by me in February, 2009. I observed the physical tape splice on the film at that time.

And splicing can be done to repair broken film. An example is shown below, from Copy 9 PGF.



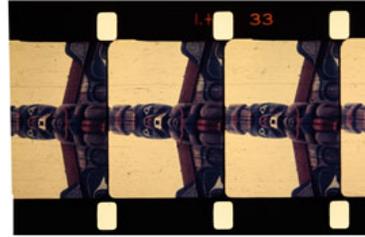
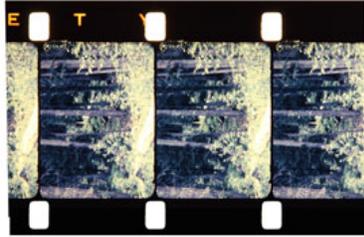
Finally, splicing is done when film is edited, as described below.

So when we say that "a film has been spliced" the term obviously encompasses a variety of normal circumstances which do not imply any hoax has occurred, but rather are simply routine steps in the process of all film handling.

Splicing Process, common tape splice:

Tape Splicing Description

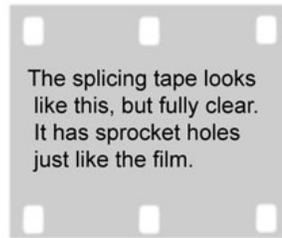
Assume the two segments at right are to be spliced together.



1. Each piece is cut precisely on the line between the frames.



2. Below, the two pieces are butted together.



The splicing tape looks like this, but fully clear. It has sprocket holes just like the film.

3. At right, you can see how the splicing tape is placed on the two film segments to join them. It may be put on one side only, but putting a piece of tape on each side, to "sandwich" the film between two tape pieces, is generally the most secure splice.



4. The result of this makes a strong splice but it leaves a line across the film image on each end, through the visible portion of the frame (marked with red dots to show you which lines I refer to).



This above is the double fine line of the two tape pieces, one on each side of the film, from the end of Bob Gimlin's personal copy of the PG Film.

Editing refers to a "re-assembly" of film, and may be adding footage, removing footage, or re-arranging the sequence of footage. All are routinely done in almost all film handling. Editing is not just for dramatic or fictitious films. Almost all documentaries and news footage is edited as well. So to say a film is "edited" also does not convey any inherent suspicion of hoax. And when film is edited, the re-joining process is done by splicing, as noted above.

One other term of importance is "Outtakes" which refers to film shot but not used in subsequent presentation.

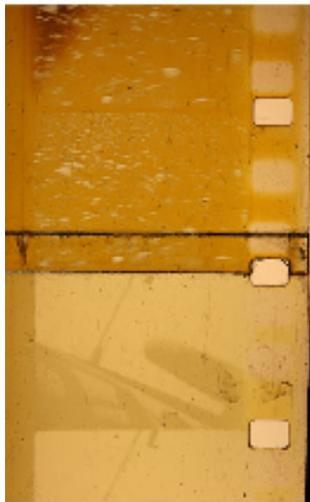
ILLUSTRATIVE EXAMPLES

Appearance of a Glue Splice - It generally will be physical overlap of two pieces of film, from a frame line to a narrow portion away from the frame line.

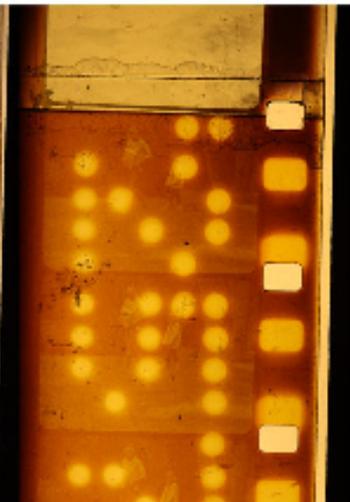
Appearance of a Notched Splice - This type of splice, where the film is cut in a notched line instead of a simple straight line, is a more sophisticated cutting process, most likely done only by film labs and professional editing services. Most routine cutting and splicing is a straight cut on the frame line between images.

Splicing Examples

Glue Splice



Glue Splice



Notched Tab Tape Splice



Appearance of a Tape Splice - It is mainly evidenced by the line where the tape ends, but if it is on the actual film scanned, you may also see the tape irregularly around the sprocket hole. If tape is put on both sides of the film strips, which is the more secure method, you may see two fine lines where the tape edge on each side doesn't quite match up, as shown here (at the bottom of the chart).

Appearance of a Spliced copy and same frame with no splicing, indicating the splice was on a copy, not the original. Described in more detail, below.

To examine evidence of splicing, we must compare various copies of the film, in the same frame. Another researcher sent me the frame below left, with a splice mark. I identified the exact frame and verified other copies have no such splice marks (shown right), indicating the splice was done to a copy, but not to the original.



The "Invisible Splice" - To explain the "invisible splice" concept, first we should review the common industry standard way a tape splice is done (illustrated above, about two pages back) for comparison. Standard splicing tapes cover two full frames of film, and slightly more than three sets of sprocket holes. The idea is that where the tape crosses the width of the film, it is solid and thus more secure. The cut of the film is usually centered so the splice tape covers one frame plus a little extra on each side of the cut. This standard type splicing leaves a thin line in frame on both sides, and that thin line will be seen printed through on copies.

The concept of the "invisible splice" is to use a continuous roll of clear splicing tape so the user can cut it to any desired length. It is commonly used for film repair, because the repair may be a diagonal crossing several frames, and a standard two frame splice tape may not be long enough.

The "invisible splice" seeks to eliminate the line of the tape across the visible frame portion that the usual splicing leaves. So the cut length of the splice tape is aligned exactly with the separation line between frames. The advantage of this is no tape edge in visible frame across the width of a frame. But the disadvantage is that the sprocket hole is also at the line between frames, so the tape is cut across the holes in the splicing tape as well.

So now you have a splice tape edge that has three sections of edge. The main body edge crosses the frame line. The two outside tabs are small pieces which wrap halfway around the sprocket hole. The problem is that these small tabs on the outside of the sprocket hole are not very secure, and can easily lift and fold back while the film is being run through a projector or printer. Thus the risk is greatly increased that this folded back tab may jam the projection or printing mechanism.

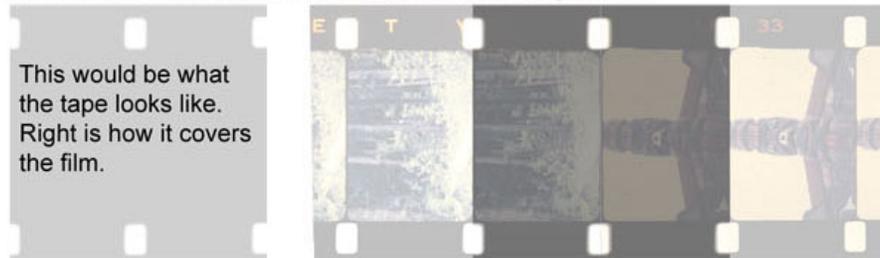
The single unified tape edge which goes across the film width past the sprocket hole zone is a far more secure splice, far less prone to an edge folding back and bunching up to jam a projector or

printer, so that is why it is industry standard. So while the "invisible splice" concept can be done, it does not enjoy any popularity in professional use because of the increased prospect of jamming projection or printing equipment. Such a jam can result in severe film damage.

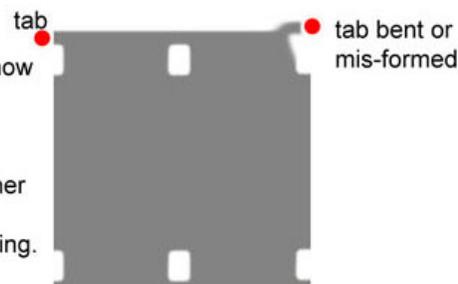
The "invisible splice" is diagrammed below.

The Invisible Splice

5. The concept of an "invisible splice" cuts the splicing tape exactly across the frame line, so there is no tape line in frame to see. It is hidden in the dark line separating frames.



6. The problem of this type of splicing is that you now have these little tab portions of tape which are easily rubbed by the film gate and folded back or rubbed aside, resulting in a mal-formed tab that can easily jam projectors or printers. Jamming either can ruin the projected film or the printing process. So this is not usually done in professional film editing.



Now an interesting derivative of this concept is how it has been used by a skeptic to try and prove something by impossible circular logic. The argument is that "Of course, the PG Film is spliced, but it was done with those invisible splices, which is why you can't find them." This claim fails to acknowledge that to say film has been spliced, you must have some visual indication, which means it isn't actually invisible. A truly rational appraisal of this concept is to say, if we cannot see a splice, it may be because of one of two alternatives: First, it may not be spliced at all, or second, it may be spliced but in an invisible manner. So how do we discount the prospect that if we cannot see any splices, it is because there aren't any?

So claims of "invisible splices" places a rather extraordinary burden on the claimant, to explain how he/she can detect something we cannot see. Absent that revelation of how the "invisible" is detected, all presumption must go to the fact of no such thing is in evidence. In other words, if we can't see a splice, most likely there isn't one.

RELEVANCE TO CLAIMS OF HOAX

The Arguments of Splicing and Editing - How does this pertain to a claim of Hoax?

Claims are often made that the PGF is edited or spliced, and people who are aggressive in claiming the film was hoaxed use the words "edited", or "spliced" as if they were an absolute proof of hoax. But as noted above, both processes are perfectly normal aspects of most film handling, and carry no inferred or substantial proof of hoax. More is needed to claim that any editing or splicing supports a hoax theory.

Issues:

1. Distinguishing between the splicing or editing of a copy and the actual camera original.

For this, more foundation material is needed.

One basic principle of film copying and analysis of film image data is that what is on the original conveys to all copies, but what is on copies does not necessarily convey back to the original. A second general principle is that a flaw or image anomaly on one copy, but not on another copy, indicates the flaw is not on the original. Thus a splice found on one copy, but not another, indicates the splice was not on the original. The larger the sampling of varied copies is, the more reliably we can ascertain what the original consisted of, if it is not available for inspection.

Thus, to look at one copy, and see a splice imprinted into it (meaning it was on the generation before, as opposed to a physical splice on the copy at hand), one could not say if the original was spliced or not. Most people look at one copy and there is their confusion.

To look at two copies of the film, same frame (verified by a true frame inventory, such as I have), if the splice is on one copy only but not another, then the logical deduction is that the original was intact (unspliced) when the intact copy was made.

If you have an inventory of all frames, at least two, and preferably more copy versions of those frames, then IF (emphasis added) you find any evidence of a splice which is on all copies of that frame, you may deduce that splice must have been on the original, to convey to all copies.

There is no such splice or similar image anomaly in the film, across the various copies I have in my inventory, that gives any reason whatsoever to support or even suggest that any splicing of the original occurred before these copies were made. Absent proof to the contrary, the conclusion is that the original was intact when the copies were made.

Thus the burden of proof for any claim of the original being spliced falls to the person making such claims.

Such is the manner in which determinations are made about the condition or characteristics of an original or source object, when all we have are copies or duplicates, and are trying to make a determination about the condition of the original (in its absence).

2. Claims of splicing or editing (with intent of implying hoaxing) are more challenging.

Because the processes are routine and common in normal film handling, to claim a hoax on this basis, one would need to specify the particulars of a claim, hopefully show evidence of how the claim was determined, and then explain how the claim specifically supports a conclusion of hoax.

So what is needed is to first explain or determine, was some footage taken out (deleted), was some footage added, or was footage re-arranged, (or some combination of these options)? Then the claimant would need to show some evidence of the determination of the act (add, delete, or re-arrange)? How was it discovered, determined or identified? If someone has any such evidence, it is welcomed in this discussion. Finally, the splicing or editing may or may not actually alter the fundamental fact of whether we are seeing a real biological entity or a human performing in a costume, so the claimant must explain how the editing or splicing alters our perception of the subject of the film.

The burden of all this proof falls on the person making the claim that splicing or editing proves hoaxing. In more than two years of study of this film, I have not seen any proof that supports any claim of a hoax as determined by film editing or splicing. I would welcome any such evidence and arguments in this discussion.

Splicing Analysis of the PGF, and the Question of the Camera Original

It is often claimed that because the camera original of the PGF is currently not known, that it must be hidden for some suspicious reason, and that reason is likely that it was edited and spliced, and an examination of the original would confirm this. And the argument is kept alive by the claim that we cannot tell if the camera original is spliced by examining copies, because the splices can be invisible and not apparent on copies.

To understand this issue, some foundation information is necessary.

A film may be copied in two ways, (in general terms), either on a contact printer or an optical printer.

A contact printer presses the copy film stock against the source film stock, and shines a light continuously through the source film stock to expose the copy film stock. The process exposes all the frame image, the fine line between frames (where a splice cut would likely be) and may expose the sides (where the sprocket holes are), if the intention is to copy over some numbered edge code from the source so editing can be done more effectively (to match the source film to the edited workprint).

With contact printing, we have the best possibility of analyzing any suspected splices on the source film.

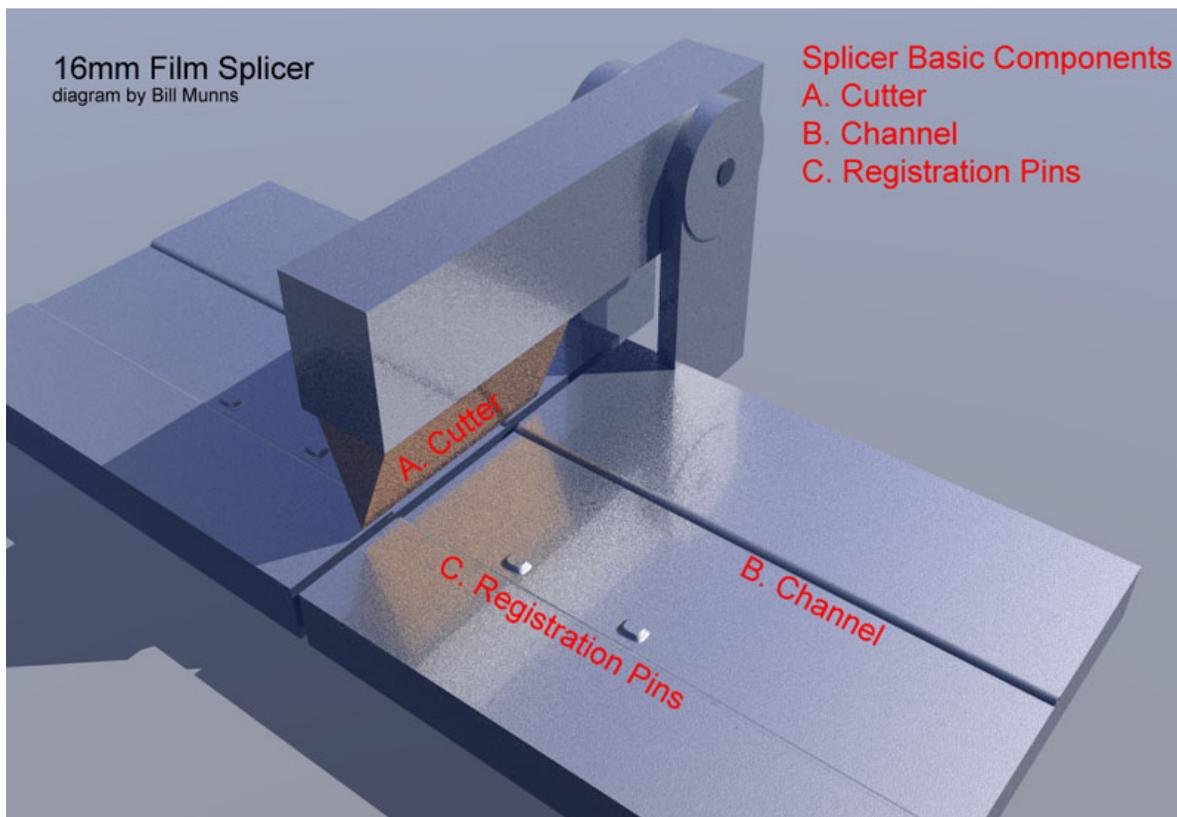
An Optical Printer differs from the contact print process in that the Optical Printer uses a projector shining into a camera, with a lens in between, and the copy (taken in the camera) has a

camera aperture window on the camera side which blocks off the fine line separating frames on the source film (where the splice cut would be), so an Optically Printed copy has a lesser chance of producing a copy which could be used to find evidence of splices.

So, to look for splices on the camera original of the PGF, a contact print is the preferred type of copy to use. I have scanned a contact print and thus have the best type of copy for the analysis of this splicing controversy. My scans are 4K resolution (4272 x 2848 pixels) and slightly overscan to include the frame dividing line and traces of the frame above and below, so these scans do capture the area where a splice cut would have occurred on the original, if it were spliced.

Why would an "Invisible Splice" be visible?

You may wonder how we can detect splices that are intended to be undetectable. In essence, if the splicing equipment is not in perfect working condition, it may produce splices that are not perfect. To understand the possible imperfections of a splicer, start with the basic component diagram below:



The three basic mechanical components we are concerned with are A. - The Cutter, B. - The Channel, and C. - The Pins.

If the cutter edge is dulled, worn, or has any other imperfections (and cutting edges do wear with time and use) then the cut it makes may not be as clean and sharp as ideal. If the cut isn't

perfectly sharp, there may be imperfections that allow light to shine through when the two film pieces are joined.

If the channel is worn, the film may seat irregularly, with a slight drift right or left, or a slight angle so the frame line is not true parallel to the cut line, this might result in a slight misalignment of frame sides of the two assembled pieces.

If the registration pins are worn down at all, they may not register the film exactly each time, so two cuts have slightly different positions in relation to the frame dividing line and cutter edge. Then, when the two pieces are re-assembled, the resulting frame line may be slightly fatter or narrower than the intact frame separation lines.

Suffice to say, newer and better splicing equipment is presumed to make more precise splices, and older, used and poorly cared for equipment is more likely to yield imperfect splices.

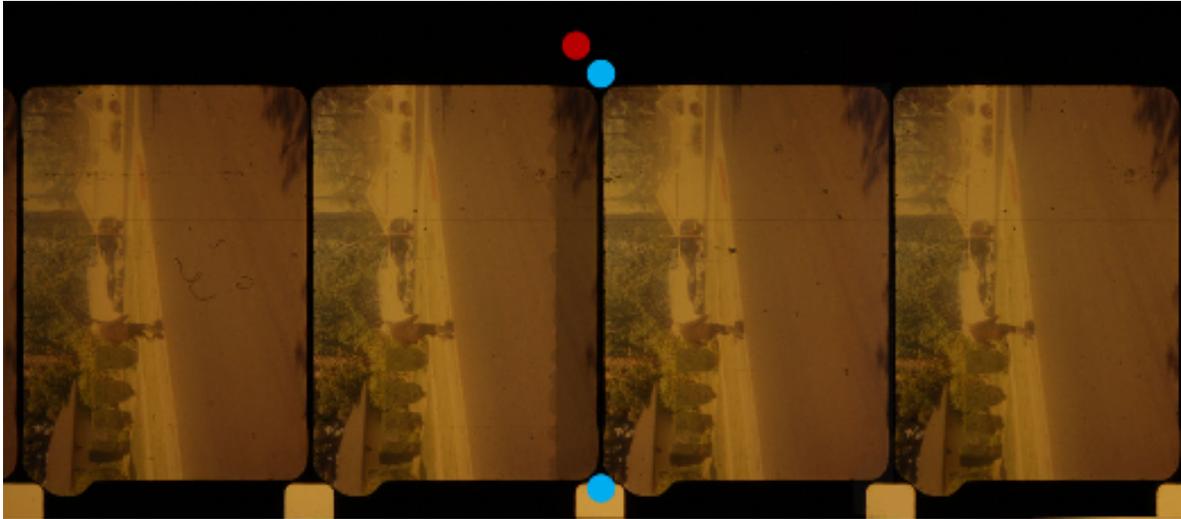
Examples of splicing equipment. They have different features for different levels of professional use and durability.



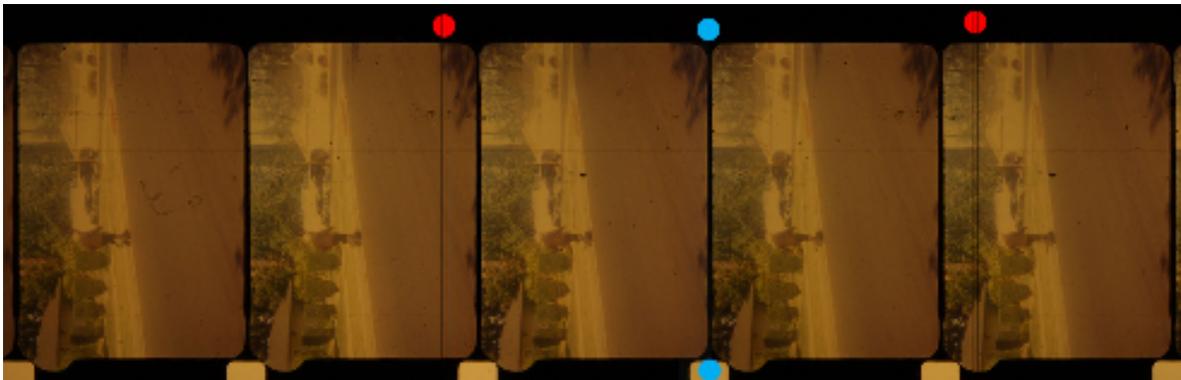
With that in mind, the following are possible imperfections that a less than perfect splice might show, and thus what we'd look for when trying to find evidence of splices.

What Do We Look For? (In each example, a red dot or line shows the indicator, and the blue dots are the splice cut line). All the splice examples here are simulated, for illustrative purposes.

1. Any overlap on a frame, indicating a glue splice.



2. Any lines from a standard tape splice, where the tape pieces end in frame (past the sprocket holes).

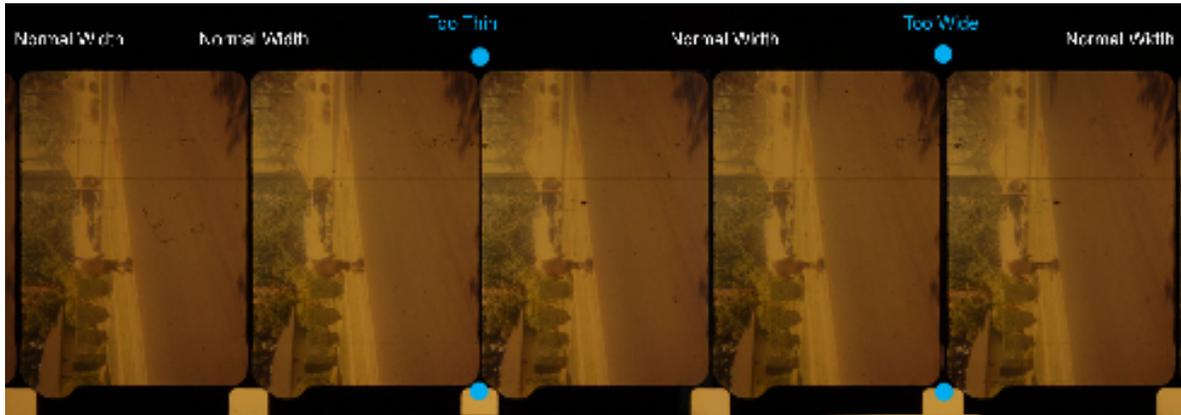


3. Any light print-through from any irregularities in the cut line, which might be caused by a splicer cutting edge which isn't perfectly sharp and might make slight irregularities in the cut line. The example below is simulated, for illustrative purposes, simply to suggest what we would look for, traces of light showing through any irregularities between the two pieces of film edge.



4. Any difference in the width of the frame separation line. It has a standard width, frame after frame, in the camera original, because of the precision of the camera pulldown mechanism as compared to the camera aperture size. When a splice is made, two cuts are made in the film. If the registration posts (which stick up where the sprocket holes are, and hold the film in correct position to be cut) are slightly worn, the film may shift slightly different from one cut to the other, and thus may cut the frame separation portion a bit more or less in one cut than another. When those two cuts are assembled into the splice, they may produce a frame separation line slightly fatter or narrower than the unspliced frame separation lines. Given we are looking for a frame separation line consistently 0.0008" wide, a splice error of even 0.0004" would show a very noticeable different frame separation width we could see in high resolution scan analysis.

Both a frame line too wide and on too thin are shown below, but a single splice would be one of those examples, but not both, as seen here.



5. Any slight mis-alignment of the film frame image sides, because on unspliced film, the frame image side will form a clean straight line on the side, frame after frame. But a frame side suddenly shifted to one side would be an indication of a splice where the two film segments were not precisely aligned on the splicing block when the tape was applied.



6. Abrupt change of position of anything in the frame (indicating a few frames of a continuous sequence were removed).



Nothing in the PGF contact print shows either examples 1 or 2, the obvious splicing processes. But critics like to suggest invisible splices were made, and indicators 3-6 above are what we'd look for, on a contact print, as subtle indicators an "invisible" splice was done, but not perfectly.

There are no such indicators on the contact print I have examined, frame by frame, so I must conclude that there is no evidence to indicate any splicing was done on the source film (the camera original) that made the copy I examined.

Can An "Invisible" Splice Actually Be Undetectable?

It will be a worthy experiment, in the future, to actually examine this issue with real tests. Ideally, one experienced film editor should make several splices in a film sample, with every intention of making them undetectable on a contact print. Then the film would be contact printed, and a film analyst (such as myself) is given only the copy, and examines it to see if splices can be found. Once the analysis of the copy is done, it can be compared to the actual splicing effort of the editor, and we can see if, indeed, an editor can make splices so perfect that they are undetectable on a contact print.

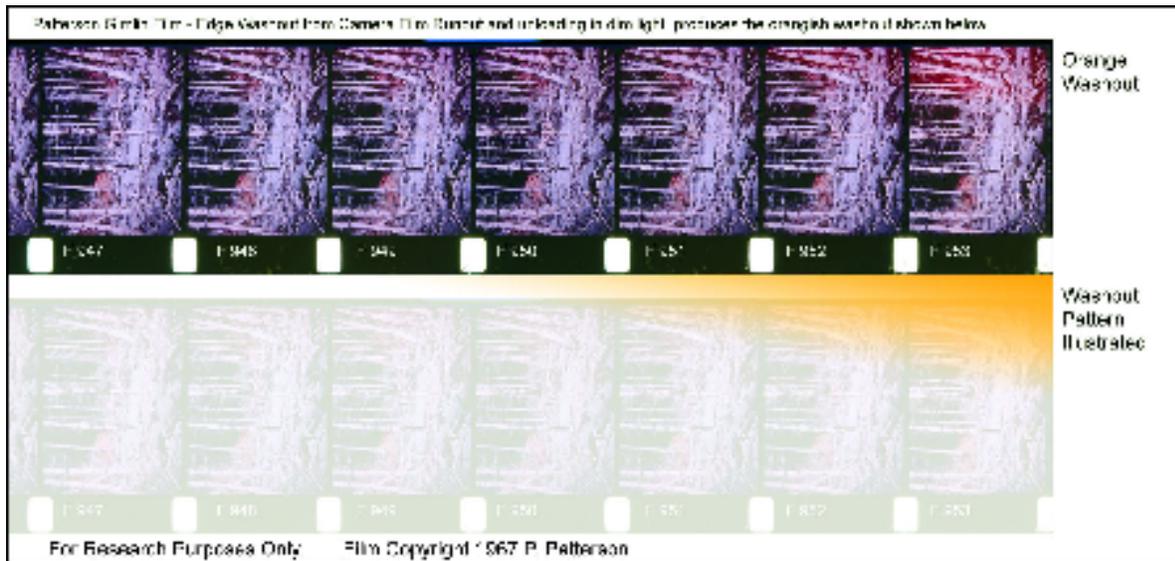
This experiment would go a long way to resolving the suspicions the PGF is spliced in some undetectable way.

A SUMMARY OF CONSIDERATIONS

1. The PG film has been copied many times and some copies spliced onto other footage by various holders of copies. Evidence of splices in some copies is known and documented. But there is no shown evidence of a splice on a specific frame which is evident in all copies, and thus no evidence that the apparent splicing was derived from a splice to the camera original. So no evidence of the original being spliced within it's sequence has been offered as of this date. There

is, of course, splicing of head and tail leader onto copies, but this is a non suspicious and routine process. And without proof of splicing, the film cannot have been edited, because the edits require splicing to assemble the edited segments.

2. The footage has been studied with sufficient analysis to conclude the camera ran out of film at the end of the Bluff Creek filming. Thus we may reasonably say that there is no missing footage from the end of the sequence.



3. There are copies of the film which have footage of a man on horseback, riding in a wooded area, prior to the start of the Bluff Creek footage. Several versions or copies have been compared and they are consistent as to this prior content before the Bluff Creek footage begins, and in them, the Bluff Creek footage begins on the same frame. This is supportive of a conclusion that the prior footage is part of the footage sequence of the camera original, and any claim to the contrary thus falls to the claimant to show cause to dispute this finding.

Additionally, the Bluff Creek segment has a camera start indication on frame #1, which lends further support to the determination that the immediately proceeding footage was not edited into that sequence, because edits rarely use an exact camera start frame as a splicing location, since the camera start frame is often washed out slightly. To argue the edit was not only "invisible" but that the editor deliberately chose to splice on a camera start (when the capability of discovering the camera start was not even in practice then) gives an expectation of extraordinary foresight to the person hypothesized as splicing the film for hoaxing purposes.

So between points 2 and 3 above, claims there is "missing footage" are currently unsupported by any evidence or logic, and a person making such a claim for the existence of "missing footage" has the full burden of offering evidence to support such a claim. The best proof would be even to show one single frame of PGF footage which cannot be found in the 952 (VFC-2 count) frame inventory. I offer a frame verification service to all researchers, and if you have a frame which you can't identify as to frame number sequence (to know if it's in the 952 frames known), send it to me and I will verify if it is in the known inventory, and if so, what exact frame number it is.

4. The simple exclusion of the footage before the Bluff Creek encounter on most copies and public showings, does not confer any suspicious cause to suspect footage is being hidden. The footage prior to the Bluff creek encounter has no suspicious entity (Patty, as she is called) walking through it, and thus is of no interest to most viewers who want to see the suspicious entity. So the elimination of the prior footage, while perhaps annoying to researchers, is not inherently suspicious in any way. Somewhere, 40 plus years ago when copies were being made, somebody simply may have decided, "who cares about the footage of the guys on horseback riding in the woods?" and not printed it onto copies. People then could not anticipate the extent this film is researched today, and could not anticipate that skeptical researchers want to see the entire 100' camera roll intact. All filming tends to have "outtakes", footage taken but not used or copied. So for someone to regard the pre-Bluff Creek footage (the man on horseback, riding in the woods) as just "outtakes" has no suspicious implication as a presumption.

CONCLUSIONS

Claims of some kind of editing or splicing of the PG Film, as supporting any hoax theory, simply have no merit as of this point in time because there is simply no apparent evidence such as splicing or editing within the film occurred. Nor is there any indication of missing footage, based on analysis of both start and end of the Bluff Creek segment.

People advocating a hoax with discussions of splicing or editing have the burden of proof to show some evidence to even raise the concept from pure hypothetical to suspicious.

Then if they succeeded in doing such, they must explain how the claimed edit/splicing specifically altered our perception of the filmed entity ("Patty") to support the concept of hoax, because one can edit and splice film and not alter the truthful content of figures seen active in the film.

Thus claims of splicing and editing are among the weakest of possible arguments for a hoax to have occurred.

Bill Munns
December 22, 2010