

Mantik Responds to My Zapruder Film Article

I expected that Mantik would eventually respond to my article about the Zapruder film which proves the authenticity of the Zapruder film. After all, if I were to succeed in proving that the Zapruder film is authentic, that throws out many of the bizarre theories from Assassination Science. David Lifton has joined him in the attack. However, it appears that neither of them had the courage to send me their criticisms. It was forwarded to me by another researcher. I will answer each point (even though they refuse to do the same) interspersed and directly below each point to make it easier for the reader to follow.

But most of their issues can be answered by the fact that I have something which they don't. Exemplars! Examples of everyday, ordinary 8 mm home movies shot by amateurs with similar cameras and film, under similar conditions (outdoor lighting) which show the same type of ghost images as described in the Zapruder film. Dr. Mantik states, if we are to take him at his word and I see no reason not to, at the bottom of page 339 of Assassination Science that his home movie frames do not show ghost images. And David Lifton told me that he has no exemplars with ghost images such as mine. I have sent samples of these exemplars to other researchers. Even before I wrote my article, I offered to share my research with Dr. Mantik. He refused to answer my e-mails. I would have gladly sent Dr. Mantik a sample of the exemplars. I did not include them in my article **only** because I had no way to scan them into my computer. I tried a couple of computer stores, but the smallest width their scanners could handle was 35 mm. So, until I can find a way to scan them into my computer, you have to take my word that they exist. Below is the Mantik-Lifton letter with my answers.

GHOST IMAGES IN THE INTERSPROCKET AREA: A RESPONSE TO TONY MARSH

David W. Mantik and David S. Lifton

Introduction. By purporting to explain the ghost images in the intersprocket (i.s.) area, Marsh claims to have proved Z-film authenticity. These images are best seen in frames after Z-309. In particular, in the upper portion of the i.s. area, Z-327 clearly shows the front of the motorcycle on the right side of the limousine. Marsh claims that this particular image is exposed simultaneously with the immediately preceding frame. This ghost image is supposedly transmitted via a partially open area in the film mechanism and therefore becomes a superposition when the next frame is exposed. His original comments are at <http://www.boston.quik.com/amarsh/zapruder.htm>. Our response follows.

-

Marsh's proposal is hardly new. Weatherly proposed it to us (with diagrams) well before ASSASSINATION SCIENCE (AS) was even written. And it is likely that the idea existed long before that. We suggest that answers to the following questions will help to clarify the issue of the ghost images even further. We encourage all students to cooperate in answering them.

I did not know that Weatherly had proposed the explanation I gave. I had asked a few other researchers and no one had heard of such a complete explanation as I gave. If Weatherly indeed

agrees with my discovery 100% (and he has not stepped forward to say that he does) then I would gladly attribute the discovery to him. I had never seen my solution anywhere before. NEVER. If it indeed was proposed before my article, I would like to see proof of that. None has been offered. Further, if Weatherly had already proposed this solution, why wasn't that included in Assassination Science? Because Mantik and Fetzer were biased against the discovery and wanted to hide that fact from the reader. It would disprove many of the bizarre theories that they wanted to promote. Fetzer saw fit to include articles from his little clique which included totally fabricated witness statements and he himself captioned one illustration incorrectly which left a false impression in the mind of the reader. And the book is full of the most ridiculous speculations, yet when Weatherly supposedly stumbles onto the truth, Fetzer and Mantik decide to withhold that truth from the reader.

1. If Marsh is right, then why don't we see such ghost images in the home movie portion of the Z-film? Mantik did not see these, nor did Livingstone, et al., as recently reported in THE FOURTH DECADE (July 1998), pp. 34-36.

Who says that we do not see the ghost images in the home movie portion? What is the source for that declaration? Triple hearsay? If someone visited the National Archives and reported that he viewed the home movie portions of the film and saw no ghost images, he could not be correct. The earliest part of the second 25 feet (before the motorcade) should show the ghost images and I would be willing to bet that it does. But no researcher is allowed to just waltz into the National Archives and examine the original film. It is kept in a temperature and humidity controlled vault under strict security. That has been our problem all these years, not being allowed to see the original film. Maybe a sloppy researcher visited the National Archives and reported seeing the original film, but was only shown a COPY.

If someone reports that he bought a COPY of the first 25 feet of the original camera film from the Zapruder family, what are the guarantees about what copying process was used? The ghost images would be there in the camera original print, but may be lost by the processing of copies of copies of copies of the original. The ghost images in the original may have been so faint, as they are in many motorcade frames, that they are not easily seen by an amateur, but might be easily seen by a careful researcher. There is no explanation offered of the source examined.

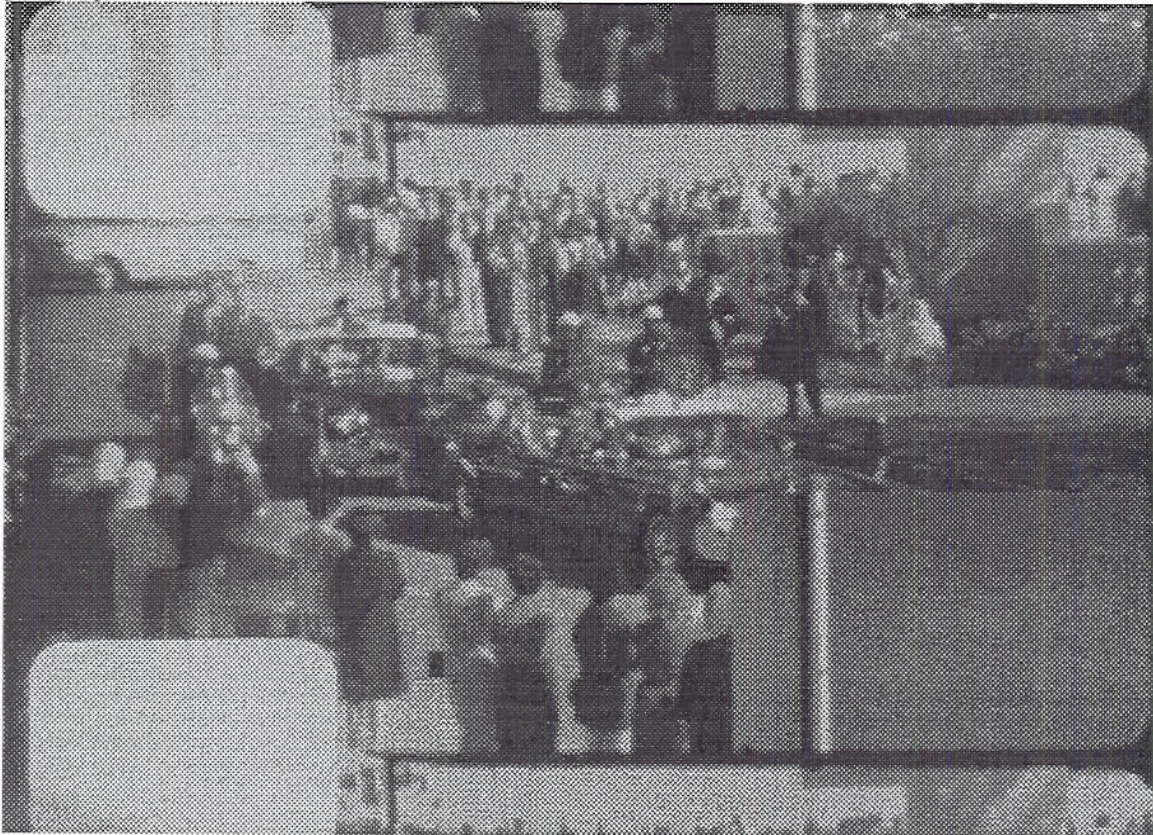
2. Why are they not seen in a recent film shot in Dealey Plaza by Brian Edwards through a camera virtually identical to Zapruder's (same brand, same type, close serial number)?

Again, hearsay. Supposedly someone named Brian Edwards claims that he took film under virtually identical conditions. Not stated: what camera. Not stated: what film. Not stated: what settings. Not stated: what lighting conditions. Not stated: what developing process. Not stated: what quality control at the developing lab. Which lab still remembers how to develop regular 8 mm reversal film today? The name of the lab and contact information? The fact remains that I possess film examples which do show the ghost images. It is a natural process. If Brian Edwards really does exist and really does have exactly the same type of camera as Zapruder used, let him open it up and take a picture of the aperture plate and then upload it to me and others so that we can see for ourselves what his camera is like. The aperture plate is the decisive factor. If his aperture plate is like the illustration I created in the computer (although his will have a rounded corner on the bottom edge of the open area where it goes from the normally projected frame into the sprocket hole area) then his camera must be creating double exposures. It is simply a matter of physics. We don't know what type of film he used. That is one thing that should always make the reader suspicious of these claims of duplicating something. Could he have used the exact same type of film which Zapruder used, vintage 1961? I seriously doubt it. Let him come forward and state that if that is true. If he instead used modern film, that film may not record double exposures as well as Zapruder's 1961

Kodachrome II.

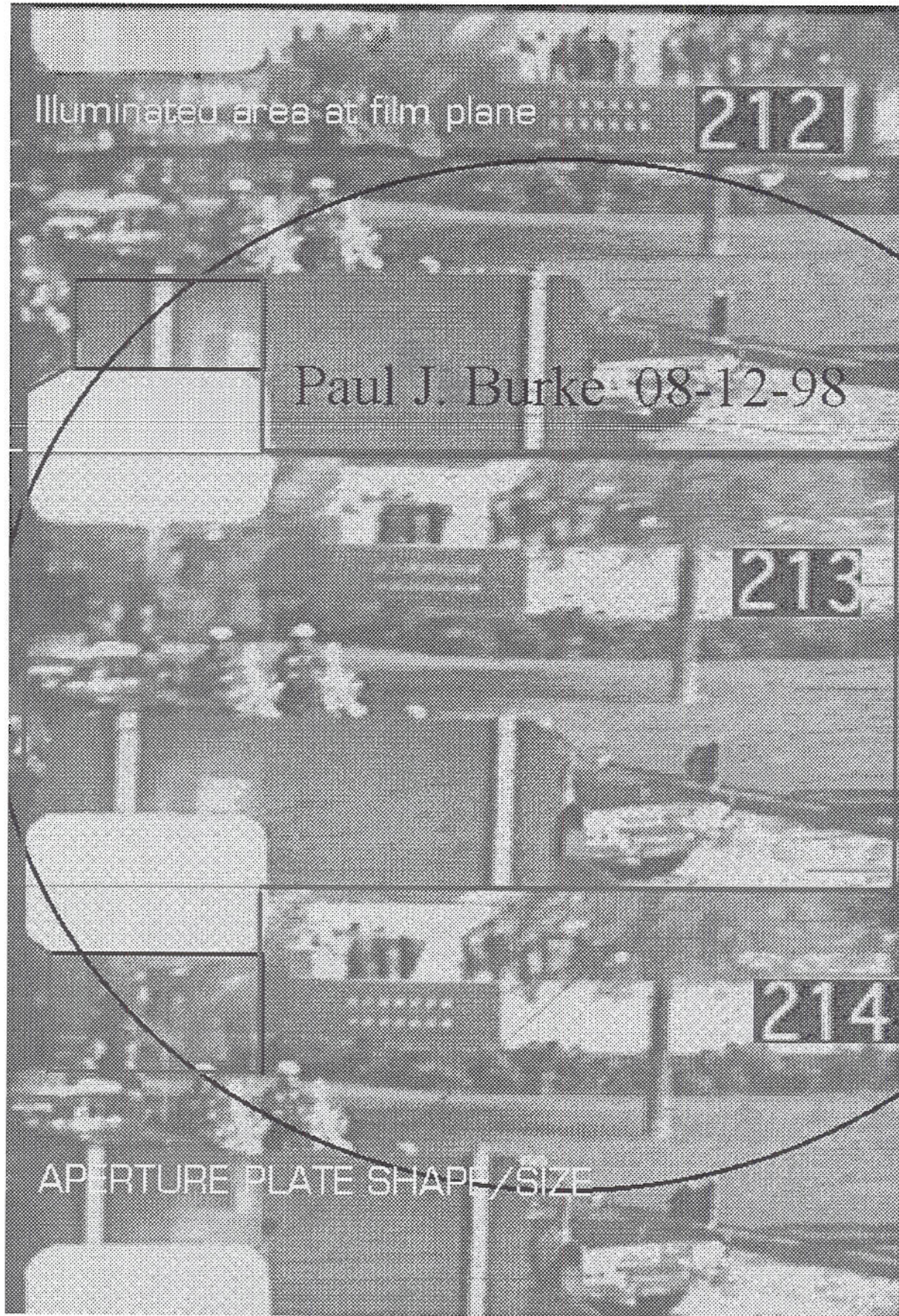
3. Marsh predicts that bright objects on a dark background are more likely to show up as ghost images, which seems reasonable. In that case, why is there no obvious ghost image of the post on far side of the Stemmons freeway sign, or of the waving man with the white shirt?

*I covered the reason why the ghost images do not show up in every frame in my article. It is a battle between the forces of dark and light. If the tab being exposed has bright information and then that portion of the normal sprocket hole area where the double exposure will take place has dark information, then that double exposure ghost will be easier to see. We can see that clearly in the lower sprocket hole area of frame 183 where the double exposure from the other frame's sprocket hole area is **only** visible in frame 183's sprocket hole area where it overlaps the dark clothing of the spectators lining the north curb of Elm Street. Notice that the double exposure from the building in the 500 block of Elm Street disappear or fades away as the clothing of the each spectator gets lighter. This effect does not depend on the height of the image. It depends only on the lightness or darkness of the spectators' clothing. This effect could not be duplicated back at the CIA's laboratory. It depends strictly on what clothes those particular spectators chose to wear. Obviously if a man is wearing a white shirt, the very bright exposure from the white shirt will swamp out the much darker exposure from the adjacent frame. I have explained that several times. That is an elementary fact from photography which any photography student is expected to know. Examine frame 183 for yourself to see what I mean:*



Paul Burke has contributed an illustration which he feels shows what the design of the aperture plate would expose on a typical frame with the tabs above and below the frame. He also outlines the extent of the exposure area which came though the aperture. While I am not endorsing his illustration 100%, it may be very close to reality. It may answer Dr. Mantik's questions about why the ghost images did not extend farther to the left. That would be a combination of the fact that the

groove narrowed into "wells" at the top and bottom of the sprocket hole area and the light hit the film only inside the area indicated by the partially shown black circle. Due to technical reasons, I don't feel that we can state with 100% confidence that the actual area of exposure is a perfect circle, and the extent which Burke has shown may be slightly too small.



4. If Marsh is correct and if the image in some randomly chosen frame (n-1) is blurred (e.g., Z-199), then the ghost image in frame n (e.g., Z-200) should also be blurred; likewise when one image is sharp, the other one should also be sharp. Sometimes such consistency is seen, but sometimes it is not. Why is this?

Here Mantik tries to lend his criticism an air of scientific inquiry by referring to frames as (n) and (n-1). Fine. I have already shown a very clear example of frame 313, which I would hope that any reasonable person would agree is very blurred, where the ghost image of the motorcycle from the tab of frame 312 is exceptionally sharp. And frame 312 itself is exceptionally sharp. If Dr. Mantik can find examples where the ghost image is blurred, but the frame from which the tab came is clear, let him specify and document his source. All I have seen so far is speculation.



5. Marsh claims that the motorcycle man (Chaney) on the right side of the limousine (as seen in the ghost image on frame n) derives from exposure during frame (n-1). Chaney's position with respect to the limousine is therefore easy to appreciate. But why does he appear to be so far from the limousine and so close to the near curb? Do other photographs corroborate such an odd separation?

"Far," as in behind the limousine, or "far," as in next to the limousine? Perhaps Dr. Mantik forgot that Zapruder was filming with a telephoto lens set on maximum telephoto. That distorts the perception of depth of field. Other films such as Nix, Bronson, and Muchmore corroborate the position of Chaney and a full frame copy of the Moorman Polaroid shows Chaney on the right side of the limousine almost abreast of Hargis's position. Given the fact that we can see Chaney on the far right side of Moorman's photo, then we must see him in the sprocket hole double exposure in frames just before, during, and after frame 313. If we did not see his ghost image, that would be evidence of

tampering. Not every motorcycle kept the exact same position relative to the limousine just before, during, and after the shot at 313. In general, the escort motorcycles were gaining on the limousine as it suddenly slowed down and they did not. They all started behind the limousine by a few feet and by the time of the Moorman photo, Hargis had pulled up to almost the rear tire. An exceptionally careful researcher might even be able to examine the films and photos very carefully and find that the motorcyclists had not yet touched their brakes, although Hargis did soon after this and stopped in the left lane of Elm Street.

6. On several frames (those of greatest clarity), ghost images of the limousine trunk seem to lie immediately behind the ghost image of the motorcycle. If this interpretation is correct, then why does the motorcycle appear to be so widely separated from the main image of the motorcycle?

Because Zapruder was filming from an elevated position with his camera set on maximum telephoto, some objects will appear different in relationship to other objects than what we would imagine in a normal view. Again, Mantik does not specify individual frame numbers. What frames contain ghost images of the limousine trunk? Which frames seem to show ghost images of the limousine trunk which lie immediately behind the ghost image of the motorcycle? Is Mantik saying "ghost images of the limousine trunk" when he is actually referring to normal exposure images of the trunk in the sprocket hole area?

7. Marsh claims that the i.s. images on the back of the Stemmons Freeway sign represent the Dallas County Records Building. If so, since neither the sign nor the building is moving and the sun is relatively stationary, why are these images not constant from frame to frame? (The motorcycle images are quite constant.)

Because Zapruder is panning the camera. Objects in the far background move across the frame as a camera pans from left to right. This is a simple fact of photography. Individual frames may also show objects in the far background move slightly from frame to frame due to Zapruder's jiggling the camera and errors in panning.

8. Why does Marsh suggest an odd variant of film alteration that includes removal of

"...a frame or two here and there..." when such irregular removal would easily be spotted? More to the point, what would be seen if frames were removed at regular intervals and the adjacent (remaining) frames in this process were simply allowed to overlap into the adjacent intersprocket area? If such a process employed slightly magnified frames that partially overlapped into the adjacent intersprocket areas, then similar ghost images would result. How then could one discriminate between such a deliberate process of alteration and a naturally occurring event within the camera? The purpose for altering the film in this specific fashion might have been to eliminate bystanders in the foreground whose irregular positions (from frame to frame) would otherwise have divulged film alteration. But there is an even better reason for such a process: when performed with the correct magnification and using just the central image, the entire width (including i.s. area) on the copied frame could be covered with an image. And--this is the critical part--the entire i.s. image of the original would now lie off the edge of the copied frame,

including all images of sprocket holes and all of the edge prints that otherwise would have proved so troublesome. And, where this magnified image overlapped into the i.s. area (when not blocked out), a ghost image of the adjacent frame would appear.

Just magnifying the image in the normally projected area would not create the double exposures. And remember that the appearance of the double exposure is controlled by the difference in darkness and lightness of the two exposures. As seen in frame 183, the slightly dark exposure from the tab of the next frame shows up only against the dark clothing of the spectators lining the north curb of Elm Street. It is not seen when the clothing of other spectators is much brighter. So, whether or not a double exposure appears in a particular frame depends on the realize conditions which existed during and only during the assassination. If one particular spectator had left his dark jacket at home, the double exposure would not have appeared at that location.

The double exposures happen only in the sprocket hole area and go all the way over to the edge of the sprocket hole area almost into the normally projected frame area. If the magnifying process which Mantik suggests were used, then the ghost images would not extend all the way over to the edge of the sprocket hole area where it meets the normally projected area.

9. Necessarily, the first frame in the film cannot contain an image from a prior frame for EITHER sequence. Is this the case for either the motorcade or home movie sequence of the Z-film? And how about other Bell & Howell cameras of this type? Or, if the lens cap is left on while filming, and then is removed, is a ghost image seen on the first frame after restarting? This would actually be a useful test of any similar Bell & Howell camera.

Of course the first frame in the film of a new sequence in the film can contain an image from a prior frame. Dr. Mantik does not know this because he is not familiar with and has not examined similar films. In my exemplars is an example of an ordinary home movie where someone filmed three sequences. In each transition (in-camera jump cut) a tab from one sequence is exposed into the first and last frames of the other sequence. And in one case, it appears as though the person did almost exactly what Dr. Mantik suggested and exposed one blank frame. It is totally white and the white tabs are very clearly visible above and below this frame going into the adjacent frames' sprocket hole areas. In another example, at the end of the film, the tab from the last frame extends down into the unexposed black film. The same would be true for the first frame of a reel exposed. There is no marking or mechanism on the film which says, "The first frame must start here!" The leader is the same type of unexposed film which records the normal exposures. So, it can be pre exposed or post exposed by a tab just like any normally exposed frame. So, the test has already been done. Only Dr. Mantik's hubris prevented him from finding out.

10. An analysis of the vertical position of the fender of the ghost motorcycle (AS, p. 312) shows erratic movement. This cannot be explained by either the movement of the limousine (which follows the curb with surgical precision despite gunshots and Greer's turn to the rear) or by erratic vertical tracking of the camera. Once this behavior is looked for, it becomes obvious even to the naked eye. Why does this occur?

Chaney was riding a motorcycle and did not maintain the same speed or the same orientation as the limousine. Motorcycles are notorious for fluctuations in the front wheel. That is the way they are designed. The Lincoln is famous for holding the road. Whether we want to blame Greer for the assassination's success or not, he drove well. As I explained earlier, Chaney did not maintain the same position relative to the limousine just before, during, and after the head shot at frame 313. With

same position relative to the umbra just before, during, and after the head shot at frame 313. With a telephoto lens, slight movements might be exaggerated. We also need to analyze this problem by studying the newly released MPI videotape and DVD. These apparent discrepancies may disappear when careful measurements are made on something better than a copy of a copy of a copy of a copy.

11. It is widely assumed that Zapruder's camera captured a full image within the i.s. area. Yet the only evidence for this is the motorcade sequence. Such is not the case for the home movie portion, where the image often fades out toward the left edge, as it also does in my father's old 8 mm movies. These observations of the home movie have recently been corroborated by Livingstone, et al. (THE FOURTH DECADE, July 1998). Although it may initially seem astonishing, currently available information cannot exclude the possibility that film alteration itself has produced the full i.s. image in the motorcade sequence.

Different cameras record the images in the sprocket hole area in different ways. I have examples where the image fades out in the sprocket hole area. I have examples where the double exposures do not extend all the way over to the right edge of the sprocket hole. The width of the claw is only about 2/3 the width of the sprocket hole. Different film records differently. Some film does not have a manufacturer's ID strip. Dr. Mantik is wearing blinders to avoid seeing ALL the currently available information. His attitude is, "Don't bother me with the facts; I have a theory to promote."

12. Robert Groden has argued passionately that copying 8 mm films to include the i.s. image was impossible in that era. Yet we now know that this could be done. We know this from the copies of the home movie portion of the Z-film at the National Archives. These copies, of which there are several, all contain i.s. images. But what is odd about these copies is that they contain at least two sets of IDs along the edge, thus confirming that they are several generations removed from the original. But these obvious copies DO contain i.s. images--thus refuting Groden's contention! Since the original of the home movie section is missing (according to the Archives), then the existence of these home movie copies (with TWO set of IDs) implies that they could not have been made by Jamieson. Someone else also had that capability.

Is Mantik letting the cat out of the bag? Here he admits that the home movie portion of the Z-film is only a copy, not the original as he had previously suggested. I have not asked Robert Groden what his latest position about copying the sprocket hole area is, but I am not convinced that he argued that copying the original film and preserving the sprocket hole area was impossible. Maybe he just argued that it was an impossible task for the CIA to do it within a few hours and have the original film back in Dallas to be shown at 8 AM the next morning. I would rather see a quote than a hearsay. If the copies of the original show two sets of IDs along the edge we should not be relying on them to make definite statements about what the sprocket hole areas show. Are we really sure that the original home movie section is missing? Maybe the Zapruder family still has it and refuses to release it. I don't see what we can do about that. The home movie portion can probably not be obtained under the JFK Records Act. I dearly wish it could, but we have to respect people's rights somewhere.

13. The edifice for film alteration is built upon many foundation stones of evidence, as discussed in some detail in AS. Even if this particular stone (of

ghost images) were finally shown to be wrong (perhaps Marsh shall eventually be proved right!), then how does that make all of the other stones crumble, and why would the entire edifice fall merely because one stone was gone? In particular, during his initial talks on this subject Mantik listed no fewer than 20 anomalies that pointed toward film alteration. To vary the metaphor, these are like 20 cords in a rope. Why would the fracture of one cord necessarily destroy the entire rope? Marsh's argument has an inherently weak structure.

Yeah, yeah. Weak structure, eh? I made it clear in my article that I was not going to discuss every supposed anomaly which various authors have brought up. I will discuss them as I get to them. I just recently discussed Jack White's Observation 5, which Dr. Mantik seems to endorse, where Jack claimed that Connally said that he turned left, then right and as we don't see that in the Zapruder film, this proves that the Zapruder film is a fake. Well, I just proved that Jack based that partly on someone else's article without checking the facts for himself (sound familiar, Dr. Mantik?). And it turns out that none of his sources (no footnotes) got it right. And in fact Jack simply made up the right turn from his imagination, then said that Connally said it. Most of the 20 or more "anomalies" are like this. Misquoting, misinterpreting, and misleading.

14. It is well known among logicians and scientists that proving a general statement is either extremely difficult or impossible, depending upon the circumstances, whereas disproving a general assertion can be achieved by means of just one counterexample. For example (see AS, p. 346), Eddington's expedition to Africa to observe starlight passing near the sun during a solar eclipse falsified Newton's classic theory of gravitation. Just one counter example did this! In that one moment, all of the centuries of evidence for Newton's theory came unglued. Similarly, why does Marsh claim that one example supporting authenticity is sufficient to prove it? From a logical point of view, in order to prove authenticity, it would be necessary to show the authenticity of every feature in every frame and that the sequence itself was identical to the original. Marsh vastly underestimates the enormity of this task.

Proving a simple fact of physical reality is usually quite simple. My discovery is not an example supporting authenticity. It is a discovery of the physical properties of Zapruder's camera. That discovery allows the Zapruder film itself to prove its authentic. Would that Dr. Mantik really believed in that scientific principle that only one counter example is all that is necessary to disprove a theory. I have provided just that one counter example. Mantik et al have argued in Assassination Science that the ghost images could only be produced by some conspiratorial process and that they do not occur in everyday, ordinary 8 mm home movies. My examples show that everyday, ordinary 8 mm home movies have ghost images. If Dr. Mantik is correct, then Assassination Science will fall like a house of cards.

15. Doug Mizzer adds the following comment. (It was Doug who first questioned the magnification changes of the Stemmons Freeway sign.) BEGIN QUOTE.

Let's examine Z-348. At Z-348, SS Agent Hill is trying to climb onto the trunk of the limo. In the upper sprocket hole area is a shadow on the road from the limo's right rear hand held. The edge of the left hand held can also

from the limo's right rear hand hold. The edge of the left hand hold can also be seen, along with the area in between the hand holds. In this area, the shadow of Jackie can be seen. Since Z-343, Hill has been holding onto BOTH handholds and at Z-348 is in the process of switching over to just the left hand hold. For Marsh to be correct, the shadow of Hill's arms, if not more of his body should be present in the image in the upper sprocket hole area. Guess what? There is no trace of Hill or his shadow in the upper sprocket hole area. This is impossible if the film is authentic! This can only mean that the image in the upper sprocket hole area is a double exposure from a frame when Hill had not yet reached the limo. And what does that mean? It means that the film has been edited. END QUOTE.

Doug Mizzer? Typical uninformed and sloppy buff stuff. Clint Hill was holding onto the tire holder with his right hand, not the right handhold. Read the following quote of Professor David Wrone on page 45 of the Globe weekly (July 28, 1998) interview:

"Apart from perilously clinging onto the tire holder on the limousine, we see the motorcade catching up with the car and the agent almost being clipped by a passing vehicle."

And that is exactly what the Zapruder frame to the right of the quote shows, Clint Hill holding onto the tire holder, not the right handhold. Yes, I think Dr. Wrone's rhetoric may have been a little overblown (especially the point about being clipped by a passing vehicle), but try arguing with Professor Wrone about the fact that any careful researcher can see that Clint Hill was holding onto the tire holder with his right hand. Go ahead. I triple dare you!

I do not blame Dr. Mantik for including such uninformed contributions in his letter. He certainly did not screen, approve or agree with other people's points. And anyone else certainly had a right to pile on. But you would think that even Dr. Mantik would give Doug the answer which I gave him and save him the embarrassment.



16. David Lifton offers the following argument. BEGIN QUOTE

THE "MONA LISA AND THE MUSTACHE" PROBLEM

Tony Marsh points out numerous irregularities which (he says) are inherent in the claw mechanism of the Zapruder camera, and which (he notes) are on the Zapruder film in the intersprocket area. And so, he says, the very presence of these "markers" is proof of authenticity. In short, Marsh says, the Zapruder film contains its own "internal evidence" of its authenticity. All very well, but Marsh has made a serious logical error--and it is not just one of optics, but one of logic.

Let us concede for the moment that the claw mechanism and the shutter may indeed have certain features peculiar to this camera. And let us even go one step further and concede for the moment that this or that supposedly unique marker appears in the sprocket hole area. Contrary to Marsh's implication, this doesn't prove anything. And why not? Because the *last step*--if alteration really occurred--is to reshoot the altered film in the Zapruder camera! And so, of course, these very same markers (on which Marsh relies so heavily) will appear in the final product. They will appear there if the film is a genuine original because the Zapruder camera was shooting "reality", on November 22, 1963; but they would also be there if the film had been altered, bumped up to 35 mm, modified, and then rephotographed by the Zapruder camera, say, on December 5.

Hmm. Not exactly. It is not just the claw which is the decisive factor. It is where the claw grabs the sprocket hole to push the film down. As I pointed out in my illustration, some cameras are designed so that there is a notch at the top of the aperture plate above the sprocket hole area where the claw finished its push to bring in the next frame. On such cameras there is not a double exposure in the sprocket hole area. On some cameras, the claw is designed to grab the sprocket hole in the sprocket hole area of the frame just exposed. On such cameras there is a double exposure in the sprocket hole area. There must be, due simply to the design of the aperture plate to allow the claw to grab the film in the frame just exposed.

One can not simply reshoot a mock-up Zapruder film through the original camera to produce a new copy. The pattern of ghost images depends on the real life conditions which existed only during the assassination in Dealey Plaza. Whether a ghost image showed up at all in one location depended on whether that spectator decided to wear a dark jacket or only his white shirt, as I have pointed out before. The double exposures are caused only by real-time filming. They can not be duplicated by refilming. The tabs of single exposure at the beginning of the film and at the end of the film can not be duplicated if the aperture plate is not as I diagrammed. David could solve this himself, but refuses to do so. I have asked him several times to go to U. T. Photo in Burbank, CA which bought out all the old Bell & Howell business, but David refuses to help. Maybe some other researcher who has more free time (David is working on a book and I respect his time constraints). All we need is a picture of the Bell & Howell aperture plate like Zapruder's. We do not even need to film a test film through Zapruder's camera. The design of the aperture plate is what caused the double exposures on the Zapruder film. just as it did in the exemplars I have.

To use an analogy from the world of art: if one paints a mustache on a copy of the Mona Lisa, and then rephotographs the phony Mona Lisa with the Zapruder camera, that would still not mean that the *original Mona Lisa* has a mustache. So I reject Marsh's argument not on the ground that he may not be correct that he has identified this or that indicator that might be present from the camera, but because his methodology fails to take into account the final step of the forgery--that that very same camera would, of course, have to be used in making the final product, the so-called "camera original 8". I refer to this as the "Mona Lisa and the mustache" problem, and I expect it's going to come up again and again, as we debate this issue. Indeed, it's not very different from the issue that FBI expert Shaneyfelt dealt with when he testified that one reason he concluded the pictures of Oswald with the rifle were authentic was that there were irregularities at the edge of the picture that matched the lens mold of the Oswald camera. But then he made a very important statement. He testified, in the very next breath, what that would mean (if he were wrong): that the picture in evidence, if altered, had then been rephotographed--I stress *rephotographed*--in the Oswald camera. (See the Shaneyfelt testimony, where this is spelled out in detail). The very same principle applies here. The final step in any forgery (it seems to me) was to "reduce back down" to 8mm, which meant that the Zapruder camera had to be mounted in an optical printer, to produce the phony "original". And that's why things that Tony Marsh refers to as "markers" from the Zapruder camera would certainly be on the final product, yet that would not be a valid or conclusive indicator that the product is in fact a genuine original. It comes back down to the issue that rephotographing the Mona Lisa, after someone has drawn on a mustache. Such rephotography does not make such a copy an original, or mean that Mona Lisa, when she posed for Leonardo Da Vinci, had a mustache. END QUOTE. (It should be recalled that Zapruder's camera remained in government hands at least until late January 1964.)

We applaud Marsh's efforts to obtain a manual for Zapruder's camera. The best solution, though, would be to shoot new film through that camera. The ARRB has refused to do this. The recent films taken through a camera just like Zapruder's look very different from the Z-film, as does the Zapruder home movie sequence. These mysteries need to be addressed. We encourage others to replicate this recent experiment.

For further discussion, note just two (of many) anomalies from the i.s. area. First is the presence of two (to date) geometric plus signs, one found by Roy Schaeffer on Elm St. in Z-028, and a second found by Mantik in the i.s. area of Z-308. Why are these present at all? Second, the magnification that occurs in the i.s. area is not consistent. Although Marsh has proposed that the magnification change across the i.s. area is due to a specific feature of the camera, the exact mechanism (if true) remains unknown. Much worse than this though is the fact that the magnification is not uniform (see AS, pp. 319-320). This is very troubling. Why should it change--and change by a lot--in different parts of the film? No one, including Marsh, has even begun

to explain this curiosity.

Was Roy Schaeffer examining the original Zapruder film? No. He was examining a very poor quality B&W. That is why he thinks there is a broken shadow line at Z-316 (next article). I can not comment on what someone observes in a very poor quality copy. It could be anything. Like Morningstar's vapor trails (endorsed by Jack White) which only appear in a very poor quality videotape and are never seen in the original film released by MPI.

I don't think I ever addressed the magnification issue specifically in my previous article. It's just that the process which created the double exposure makes the possibility of creating the ghost images in the sprocket hole only because of an artifact of the magnification process as proposed impossible. It is not a curiosity. It is sloppy research.

The new MPI production will, no doubt, prove very useful. However, the borders of some frames may have been altered. If so, then estimates of camera tracking will not be accurate, which would be a serious loss of information. This needs to be clarified. Jiggles have been removed at places and contrast has apparently been altered. How this affects detailed analysis remains to be seen. It would seem wiser meanwhile (when possible) to base research on the WC prints or the Archives' slides until these issues are clarified. Those are the sources used in Mantik's chapter in AS.

And we have to remember that the MPI digitization rotoscoped the frames in the computer so things do not move as we would expect them to move normally. Some objects may even appear to move backwards. And we still have missing, damaged, spliced, and reversed frames, so the MPI release is not a perfect reproduction of what Zapruder filmed. We have to live with that until someone clever figures out a way to put it onto a CD ROM.

It is precisely relying on the old Archive slides and WC prints which leads to so many false conclusions. That is why the MPI release is so important. I could not have made my discovery if not for the release of the original, clear film with the sprocket hole information intact. If you think that the Zapruder film was altered, then why should the information in the very poor copies be any more genuine than the MPI release, which came directly from the original camera print stored in the vault at the National Archives?

We recognize that these issues are usually far from simple and often not easy to resolve. We predict that not even the expert's imminent report for the ARRB will put all of these questions to bed. We are all well acquainted with the long (and similar) controversy that has raged around the autopsy X-rays and photos. (This is now, with the new ARRB releases, closer than ever to resolution.) It is likely that a similarly long controversy will surround the Z-film, unless surprising new information emerges soon. Finally, we suggest that terms like "balderdash" and exclamations of "absolute proof" have no place in discussions that purport to be scientific and objective, as previously explained in AS, pp. 345-351.

8/8/98

All of these issues would be quite easy to resolve if some researchers would actually do some serious research and cooperate with other researchers. It would also help if some researchers would be willing to answer questions, share information, respond to requests, and be willing to admit their errors.

8/13/98

Addendum - 9/27/98

What you are about to see, fortunate viewer, is an example which it seems that no one else in this debate has seen before. A few frames from an ordinary, everyday 8 mm home movie which has ghost images in the sprocket hole area very similar to the Zapruder film. This example alone proves that the ghost images in the 8 mm film are a natural process of some 8 mm movie cameras, not a byproduct of CIA tampering only in the case of the Zapruder film.

In this example you can clearly see the very strong ghost image in the upper sprocket hole area. It is green grass with a white chalk line running across it horizontally. The reason why the ghost image is not strong in this example is because the background in the sprocket hole area of the current frame being exposed is extremely dark, almost pure black. So, that area is almost totally unexposed by the current exposure of the frame. In fact you can clearly see the very sharp line of demarcation at the bottom of the upper sprocket hole area. This is the sharp outline of the groove where the claw pushes the film.

What is the source of the ghost image of grass in the upper sprocket hole area? Was there suddenly a big patch of grass in the upper stands of the football stadium, brightly lit? If so, how big would that white chalk line have to be in the stands? Anyone with a modicum of common sense can tell that the grass in the upper sprocket hole area came from the football field, which is in the lower half of the frame. Does the image of the grass in the upper sprocket hole area match up with any other area of grass in the normally projected frame? No. There is no other area showing a white chalk line so wide and the grass in the upper sprocket hole area does not have any shadows, such as the shadows of the goal post in the lower sprocket hole area. There is a white chalk end zone line at the bottom of the frame, but it is narrower than the white chalk line in the upper sprocket hole area. So the wider line, having been placed on the football field with the same width as all the other lines, must be closer to the camera. The grass in the upper sprocket hole area is the foreground below the normal frame, a double exposure as explained in my original article. Notice that in the lower sprocket hole area there is very little ghost image visible. This is because the tab of exposure had a very dark background just like the top of the normal frame. We can clearly see the yellow goal post upright which extends very high above the normal frame. And we can see the faint bluish glow of the sky at the top level of the stadium. We can even see the outline of one pillar in the ghost image in the lower sprocket hole area like the ones we can see in the upper portion of the normal frame area next to the upper sprocket hole. Other than those two very bright exposures in the lower sprocket hole area, the rest of the background was extremely dark, so only these two images were double exposed. The much brighter grass and even dark shadows of the goal post dominate the lower sprocket hole area. The area in the middle of the sprocket hole area shows no ghost images, as would be expected by the process of double exposures which I explained in my article. Where this example differs from the Zapruder film is in the positioning of

the ghost images in the sprocket hole areas. Whereas in the Zapruder film the ghost images extend all the way to the right edge of the sprocket holes and not all the way to the left edge of the sprocket holes, in this example film the reverse is true. The ghost images extend to the left edge of the sprocket hole, but do not extend to the right edge of the sprocket hole. This is a sure indication that the camera model was not the same as Zapruder's, but had a similarly designed aperture plate. However, in this case the claw would grab the sprocket hole farther to the left of the frame than the Zapruder camera. Another minor difference appears to be that the opposite corner of the inner open area of the aperture plate at the junction of the normally projected frame area and the sprocket hole was rounded. Like the Zapruder film, this movie was shot on Kodachrome II safety film, only it was type 81 rather than type 37 and was manufactured in 1972. I have no idea when it was actually filmed.

