The Zapruder Film Controversy

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The Chief Arguments Against Authenticity

Time constraints prohibit a review of much germane evidence against authenticity that has accumulated during the past several years. I have selected the arguments presented here based on my perception of their strength as well on as my familiarity with them. Other critics of the film would doubtless have a somewhat different list.

The Dealey Plaza witnesses. (Assassination Science 1998, pp. 273–275). In my prior essay I listed ten witnesses (of many eligible candidates) who reported a limousine stop. For this effort I was primarily criticized for using an indirect quote for Chaney (instead of a direct one). In reply, I would ask a more direct question: what did the ten closest witnesses report? First, did they describe the movement at all? Then secondly, what did they see? It is quite striking that each of these ten witnesses did describe what the limousine was doing; this would not have been expected if the limousine had traveled at a nearly uniform speed—as the Zapruder film suggests. This uniformity of the *closest witnesses* is also remarkable though because many Dealey Plaza witnesses are not known to have commented on the limousine. These latter, however, were uniformly farther from the limousine, some much farther away, and might therefore not have paid as close attention to the limousine as the closest witnesses.

But all ten of the closest witnesses did comment quite explicitly—and they all saw it either stop, or nearly stop. Their comments show no equivocation. These witnesses (in no particular order) and their statements follow. The Newmans are counted only once.

- Bobby Hargis: "At that time [just before a shot to the head] the Presidential car slowed down. I heard somebody say, 'Get going.' I felt blood hit me in the face and the Presidential car stopped immediately after that" (6H294). "... I felt blood hit me in the face, and the Presidential car stopped immediately after that and stayed stopped about half a second, then took off at a high rate of speed."(Trask-1994, p. 209, who quotes from an interview with The Dallas Times Herald.)
- B. J. Martin: He saw the limousine stop"... just for a moment." (Newcomb and Adams, Murder from Within 1974, unpublished, p. 71.)
- Douglas Jackson: "... the car just all but stopped... just a moment." (Newcomb and Adams 1974, p. 71.)
- James Chaney: "... from the time the first shot rang out, the car stopped completely, pulled to the left and stopped" (2H44-45, 3H266). Marrion Baker, his fellow officer, attributed this quotation to Chaney. Mark Lane confirmed that Chaney had indeed said this (2H45) and Lane then added "...[it] seemed to be so generally conceded by almost everyone that the automobile came to—almost came to a complete halt after the first shot—did not quite stop, but almost did."
- Bill Newman: "I believe Kennedy's car came to a full stop after the final shot." (Bill Sloan, *Breaking the Silence* 1993, p. 169.) "... I've maintained that they stopped. I still say they did. It was only a momentary stop, but..." (Newcomb and Adams 1974, p. 96, who cite an interview by Mary Woodward in the *Dallas Morning News*, 11/23/63; also see Jim Marrs, *Crossfire* 1989, p. 70.)

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the experiment were disr the motorcade stopped, inal headshot. Therefore, claimed, the Marshall exnd ear witnesses, too) can rshall study has taught us simple minded—we must Vhen the items are simple kably well.

- Mary Moorman: "She recalls that the President's automobile was moving at the time she took the second picture, and when she heard the shots, and has the impression that the car either stopped momentarily or hesitated and then drove off in a hurry." (22H838-839; Harold Weisberg, *Photographic Whitewash* 1967, p. 160.)
- Jean Hill: "... the motorcade came almost to a halt at the time the shots [rang out.... It [the limousine] was just almost stopped" (6H208-209).
- Charles Brehm: "... between the first and second shots the President's car only seemed to move some 10 or 12 feet. It seemed... that the automobile almost came to a halt after the first shot..." (22H837-838).
- Alan Smith: "The car was ten feet from me when a bullet hit the President in the forehead... the car went about five feet and stopped." (Newcomb and Adams 1974, p. 71, who cite *The Chicago Tribune*, 11/23/63, p. 9.)
- Mary Woodward: "Apparently the driver and occupants of the President's car had the same impression because instead of speeding up, the car came to a halt after the first shot." (2H43; *Dallas Morning News*, 11/23/63; also see Marrs 1989, p. 28.)

That all of these closest witnesses comment at all on the limousine movement—independent of the type of movement—is, by itself, extraordinary. In view of Marshall, these witnesses clearly considered the limousine movement to be a salient feature of the entire event. This is totally contrary to what devotees of film authenticity would have us believe about the motion of the limousine. Furthermore, the witnesses' actual words leave no room for a slight deceleration. Instead, they uniformly described a dramatic deceleration, and for many of them it was a literal stop. Furthermore, all four of the closest motorcyclists agreed that the limousine stopped; since they were riding immediately beside the limousine and trying to mimic its speed, they, of all people, should be reliable witnesses.

If witnesses can indeed recall simple and important events, this surely must be one of them. Why would all ten closest witnesses recall the same event—in the same way—unless that was really what had happened? And why would all four of the closest motorcyclists invent such a stop if none existed? Readers who have watched the extant Zapruder film might ask themselves: would they have commented at all on the limousine speed? If so, what would they have said? Would they have reported either a stop (most unlikely) or even a near stop (unlikely)?

There are many more witnesses to the stop than those listed above ("59 Witnesses: Delay on Elm Street," *The Dealey Plaza Echo 3/2*, July 1999, Vince Palamara, pp. 1-7). [*Editor's note*: This study appears elsewhere in this volume.] In fact, virtually every witness who commented on the limousine movement recalled a stop or a near stop. Moreover, this stop was widely taken for granted at the time; it was reported contemporaneously in the media (*Newsweek*, 2 December 1963, p. 2 and *Time*, 29 November 1963, p. 23), by later biographers (*UPI's Four Days* 1964; William Manchester, *The Death of a President* 1967; Jim Bishop, *The Day Kennedy Was Shot* 1968)—and, much later, even by the media's current hero of lone assassin aficionados, Gerald Posner, who describes the limousine stop as follows: "Incredibly, Greer sensing that something was wrong in the back of the car, slowed the vehicle to almost a standstill" (*Case Closed* 1993, p. 234). How

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The head snap was spontaneously described neither by the Dealey Plaza witnesses nor by early viewers of the film. In the recent past, moreover, the jet effect as an explanation for the head snap has been fully discredited in independent experiments performed by Arthur Snyder, Ph.D. and Doug DeSalles, M.D. It can no longer be offered as a viable explanation for the head snap. In addition, a long list of arguments against that particular explanation has been previously recounted (*Assassination Science* 1998, pp. 279–284). The other explanation offered by Warren Commission supporters—the neuromuscular reaction—has never received any credible support from appropriate experts in the neurosciences. The many arguments against it are also recounted in *Assassination Science* (1998, pp. 279-284). Nothing new has emerged to resuscitate this idea. Jackie's simultancous head snap (originally noted by Itek; see *Assassination Science* 1998, p. 283) remains a mystery as well—unless film alteration is accepted. In summary, none of the traditional explanations can account for the head snap. By itself, this argument alone requires that film alteration be taken seriously.

The traditional Warren Commission critic, for years, has taken the head snap as an obvious proof of a frontal shot. Itek originally pointed out, however, that this simply could not work, mainly because it is not a simple matter of transferring energy from the bullet to the motion of the head. The problem is that JFK's head (and upper torso, too) must be lifted substantially against gravity. This requires a great deal of energy—energy that is no longer available for the kinetic energy of the head. These calculations demonstrate that the energy left over cannot reproduce the head snap of the Zapruder film.

I found this to be true even after I revised some of Itek's anatomic values. [*Editor's note:* This is one of many manifestations of the importance of the author's expertise in both medicine and physics.] Unfortunately, no one else, to my knowledge, has corroborated these calculations, even after all of these years. In summary, then, these arguments about the head snap leave believers of film authenticity in a very difficult position. They are left with no explanation for the most remarkable feature of the film—the head snap. 33 c - 7?

Many witnesses describe an erect posture at the instant of the final headshot, after which JFK is commonly described as slumping forward. Such witnesses, mostly Secret Service agents in the follow-up car, are Swartz, Ault, Hargis, Hickey, Kinney, Landis (*Assassination Science* 1998, pp. 289–290). These descriptions of erect posture are totally inconsistent with the Zapruder film, in which the (single) headshot occurs when JFK is slumped forward and to the left. But when the question is raised (as it rarely is) about what posture the witnesses saw at the moment of the headshot, none of them describe JFK as slumped over. This issue—so striking when it is considered—has received almost no discussion whatsoever.

Those witnesses who do describe JFK's position at the moment of the headshot describe him as sitting erect. And most of these then go on to describe how JFK next slumped forward (probably for a second time). How is it possible for such a simple—and memorable—event to be remembered so incorrectly (if authenticity devotees are correct) by so many relevant witnesses, especially in view of Marshall's research? This simple recollection should not tax the abilities of hu-



man memory, nor is it so inconsequential that it would be forgotten. In fact, it is just the kind of incident—one with simple actions and salient events according to Marshall—that witnesses would recall. In fact witnesses do recall these events with remarkable consistency. If there were no Zapruder film, how would the assassination be described in history books? It is likely that the Zapruder version would be unknown.

The early reenactments. I will say rather little here about the first two reenactments, for which I previously cited (Assassination Science 1998, pp. 305-308) the meticulous articles by Daryll Weatherly (*The Investigator*, Winter 1994-95, p. 6) and Chuck Marler (Assassination Science 1998, pp. 249-261). Their work has, unfortunately, received little attention—but also little criticism. The point is simple—these reenactments as well as associated documents and eyewitness statements—place the final head shot (the second, in my view) about 30 to 40 feet further down Elm Street than Z-313. Warren Commission data tables actually place the final shot at 294 ft from the "sniper's" window, not the 265 ft that corresponds to Z-313. This greater distance of about 294 ft was actually identified in a photograph (Figure 1) printed in *Newsweek* (pp. 74-75) as recently as 22 November 1993. In summary, the data tables, documents, and figures from these early reenactments remain powerful corroboration for the alteration of the film. The evidence is so powerful, in fact, that proponents of authenticity usually ignore it. There is little else for them to do.

Inconsistencies with other photographic evidence. This substantial area can be addressed only briefly here. Jack White has discovered new—and astonishingly robust—evidence, based on a simple reenactment he performed in Dealey Plaza. In the famous Moorman Polaroid, taken immediately after a headshot, Jack noticed the geometric pattern in the background arcade over JFK's head. He also noticed Zapruder's pedestal in the foreground and he recognized that, by lining up both of these features, it was possible to locate Moorman (actually Moorman's eye) very precisely at the moment she took her picture. Although her distance from the arcade remained uncertain, her lateral and vertical position could be determined quite exactly. [*Editor's note:* White's newer discoveries, some quite astonishing, appear elsewhere in this volume.]

When I attempted to reproduce this I was astonished. As I lined up one corner of the pedestal with a chosen point on the background arcade, I could immediately see that this technique was exquisitely sensitive to even slight head movements. The smallest movement of my head put it out of alignment. So I lined it up precisely and then placed a knife in the ground to mark the exact lateral position. Then I moved a short distance away, and without looking at the ground, attempted to reproduce what I had just done. To my amazement, I could do this repeatedly to within an inch, just as Jack had implied. Next I looked at the vertical location. It was immediately obvious that I had to crouch far down in the grass in order to reproduce the image seen in the Moorman photo. I stepped onto the street immediately adjacent to the curb—and discovered that I still had to crouch quite a lot.

On a subsequent visit, I was able to use as a model a young woman who was only slightly taller than Moorman. When standing on the grass south of Elm St. (Figure 2), she had to crouch a good deal in order for her eye to reproduce the background alignment of the Moorman photo. Next she stepped onto the street;



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Figure 1. This astonishi shows the final headsl Z-313 (the supposed suggested by early re all of w

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identified the out-of-camera film as perforated by the number 0183 (which was placed at the time of development). Unfortunately, the exact site of this perforation on the film was not identified in the affidavit. The extant film (i.e., the purported original film currently in the National Archives) does not contain any perforated number. But since this number 0183 was photographically copied (or printed) onto Secret Service (SS) copies #1 and 2 *after* the home movie segment, this seemed to imply that 0183 originally was punched only after the home movie segment. If true, then the absence of 0183 from the extant film (which shows only the motorcade) would be expected. According to Zavada, standard Kodak practice was to punch this processing number after the last image on the second side. If this practice had been followed with the Zapruder film, then a 0183 should have appeared after the motorcade side. None of the remaining numbers (the image of 0183, the punched 0186) coincide with this practice. A review of the intact *original* home movie side might prove enlightening; unfortunately, it remains unlocated.

The chain-of-custody affidavits (for reasons unknown) do not mention serial number 0184, which remains a mystery—because it has never Leen located and because the Kodak lab has no record of any roll of film that would correspond to it (critics have suggested that this was the Hunt copy). They do state that the numbers 0185, 0186, and 0187 were punched (one per copy) through the three copies made at the Jamieson laboratory on 22 November 1963. While SS copy #1 has no perforated number in it, SS copy #2 does have the number 0186 perforated through its black leader. This is the only perforated number currently present in any of the two SS copies, or the extant film.

In SS copy #2, this perforated number (0186) precedes the first portion of the motorcade segment. Curiously though, the number 0186, while physically continuous with the beginning of the motorcade segment, is separated from the actual motorcade images by a photographically copied (i.e., printed) splice. This image of a splice occurs only 12-1/4 inches after a physical splice (according to Livingstone's film map-Zavada's report does not contain this information). This photographic splice suggests that a physical splice was present (for reasons unknown) in the source material-supposedly the original film. This enigma is only exacerbated by the knowledge that the original was processed intact without removing the four-foot leader, as the Zavada report reminds us. This expected four-foot leader is seen neither in the extant film nor in SS #2. Instead the extant film contains three (sic) separate leaders each followed by a splice, after which the motorcade begins. This motorcade sequence includes 6' 3" of images and 2'7" of black film, with no splice between them. These distances obviously cannot explain the 12-1/4" interval seen on SS #2. Since SS #2 has earmarks of authenticity (e.g., 0186 punched through it, loading fog, and the pre-motorcade images), we would expect to see an image of the four-foot leader. None is seen, however, which suggests either that (1) the Zavada report is wrong about the leader, or (2) SS #2 is not a first day copy-despite its apparently authenticating features.

Thus, while the presence of the perforated number 0186 on SS #2 is consistent with the chain-of-custody affidavits, the presence of the photographically printed splice raises questions about the source film: was the source film really the out-of-camera original? If so, why did this source film contain a physical

The Z

splice? If so, how and why did camera original?

Because film is unavoidabl all developed film should conta cade sequence in the extant fil reveals an explanation for this segment (a green chair and thi SS copies is absent from the extant film because the prebeen cut off.

On SS #2, the second port first portion and actually prectwo segments lie four physics for this odd arrangement is u information in these paragrap copy (the *Life* copy), supposed table, based on a recent repo

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terminal fog	ye:
image of 0183	ye
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- (a) The perforated number graphic splice, thus suunknown) in the source ber 0186 lies at the begin with the image of 0183
- (b) Initial fog is separated earmarks of authentici #1, SS #2, and LMH), r cut off in each of the th
- (c) Initial fog is followed three bystanders) and the this sequence seems n absence of an image of leader was not remove the first day. If a fourwas copied, where is i additional conundrum
- (d) Nothing before Z-214
- (e) Both the initial and term
- (f) Terminal fog follows t

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ousine, and other objects adshould—but Foster remains nost exactly the same lateral within 1/18 second, and then displacement within the next for an explanation, but none ty.

is totally *inconsistent* with a ad is tilted far forward, a shot h overpass (the latter is more om front to back with respect er, such a shot should descend adical disagreement with the head is tilted back (e.g., at Zil. Obstinate adherents of the the head snap prefer to ignore the Itek arguments against a

all this & more w/o saying what the kilm does show The Zapruder Film Controversy 353

Blur analysis by Weatherly. Daryll Weatherly notes that many frames show a seemingly impossible paradox between the camera tracking as predicted by (1) the image content at the right side of two successive frames and (2) the image clarity actually seen on the second of these frames. ("A New Look at the 'Film of the Century'," Harrison Livingstone, *Killing Kennedy* 1995, Appendix.) These paradoxes exist for both moving and stationary objects. Not only are the predictions of image clarity often wrong, but also sometimes they are exactly opposite to what is seen. Such paradoxes recur in many, many Zapruder frames but were not seen in the Giuliano and Edwards simulations in Dealey Plaza during my brief review. Aside from the proposal of film alteration, these blur analysis paradoxes remain unexplained. Zavada did not address this issue; for him, this required an analysis of film content, a subject that lay outside his technically limited mandate. My own analysis of many additional frames (unpublished) also frequently yields startling discrepancies. This is true for blurring seen both horizontally and vertically. One of Weatherly's examples is discussed next.

The right edge of the image is the same in Z-302 and Z-303; also, the highlights on the roll bar in both images are well defined, although they are somewhat sharper in the latter frame. These observations are consistent—they both indicate that the camera was tracking well. Therefore all moving objects (the limousine and motorcycle) should be well defined, which is the case. All is well so far. It should also be noted, however, that the background figures in the grass are also well defined in Z-303. Between Z-303 and Z-304 the camera falls slightly behind the limousine: in Z-304, more of the front of the limousine has been cut off. Therefore the tracking is not accurate—the camera has slowed down slightly. Since the camera is moving more slowly now, the background (stationary) observers should be seen more clearly (the camera is moving slower with respect to them than in the prior frame). But what is seen is not consistent with this—in fact, the background observers are obviously much less clear in Z-304 than in Z-303. No logical explanation has been offered for such singular features.

What Other Proofs of Inauthenticity Might Be Possible?

One possible proof would be the discovery of a film that shows (or even suggests) the leftover work of the forgers. There may actually be a candidate for this role—the odd 8 mm film given to me by David Lifton (Assassination Science 1998, pp. 321). Although this film, of uncertain ancestry, employs only frames from the extant film, many show a superposition of images or other odd features. For example, when Clint Hill tries to climb onto the back of the limousine, the curb can be seen through his leg. It is particularly striking that the manufacturing date of this film, based on the symbols in the edge prints, is 1941, 1961, or 1981.

The possibility that this film is left over from the actual forgery is conceivable for two reasons: (1) it is an 8 mm film and (2) the film could well have been manufactured in 1961, the same date as the extant film (both contain two triangles that identify the date of manufacture). Proponents of authenticity have argued that it was difficult—perhaps even impossible—for alterations to be made to an 8 mm film. But here is just such a film—it is in 8 mm format and it does

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contain irrefutable anomalies that may be proof of alteration. Furthermore, the film was almost certainly manufactured in 1961, so this copy could have been prepared as early as 1963. That this copy was made soon after the assassination is also supported by the manufacturer's date code (the year was 1963) on SS #1; SS #2 and the LMH copy. Why would the date code of 1961 on this odd film *precede* the date on the Secret Service copies (especially if they really were first day copies)? On the other hand, if Lifton's copy were produced in 1981 (the next consistent date code) or later, what purpose would be served by making such an odd copy at such a late date?

Discovery of a film that shows more frames than the extant film (Assassination) Science 1998, pp. 298-300). A surprising number of individuals claim to have seen just such a film. The Zavada report itself, indirectly, raises this very question. Early on 23 November 1963, two FBI agents came to Kodak to view the film for about one hour. They counted frames, cursed the sign, and exclaimed when bullets (plural) impacted between JFK's flinches. Such precision, even to the point of counting frames, is certainly not simple based on the extant film. To complete all of this in one hour, using the extant film, would actually be a remarkable achievement. If they truly succeeded in this on the original film, then the subsequent jiggle analyses would have been unnecessary-one could instead simply have counted JFK's flinches. Such an achievement raises the possibility that they were viewing a different film. One of the Kodak staff members, interviewed for the Zavada report, also recalled that he (and Zapruder, too) could see three distinct jumps by JFK, from which they concluded that at least three shots had been fired. That conclusion would be very difficult to draw from the extant film. Furthermore, three successful shots-and one missed shot (that hit James Tague)-would immediately require a second gunman. If three shots were indeed seen in the original, then that, by itself, may have been sufficient reason for the forgers to alter the film.

More recently, several additional witnesses (including Joe O'Donnell—see my essay, "The Medical Evidence Decoded") have recalled a different film. Three times over 25 years, Rich Della Rosa has seen a different film; he describes this film as being of high quality. He saw Greer make a wide turn onto Elm Street, an event not seen on the extant film. He also saw the limousine stop briefly on Elm Street, an event not seen today. It is remarkable that William Reymond also saw these same events in the film that he recently saw in France.

Finally, Scott Myers has also seen a film that is distinctly different from the extant film and which may have been the same version that Della Rosa (and possibly Reymond) saw. This has led to a peculiar situation in which a small number of individuals know from personal experience that the extant film has been altered, but devotees of authenticity obviously do not regard these individuals as credible—but no one has explained why they are not credible.

Epilogue

Like most concerned citizens, I, too, find it difficult at times to believe, at a deep emotional level, that anyone would deliberately and illegally falsify a movie film of such significance. Unfortunately, this issue cannot be decided by emotion alone—precedence must be given to the evidence. Just as most of our media now find it easier to ignore the enormous weight of evidence for conspiracy in the

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cult at times to believe, at a y and illegally falsify a movie nnot be decided by emotion st as most of our media now dence for conspiracy in the JFK assassination, some of our fellow critics now find it easier to believe in a more limited conspiracy—one that is too conservative to alter a movie film. But if the extant film is authentic, why then has so much suspicious evidence accumulated to the contrary? If the extant film were genuine, almost none of the evidence discussed here should exist.

As a specific example, in the Zapruder film why doesn't Moorman appear in the street where she must have stood—based both on the evidence of her own Polaroid and on her own recollections? Why does Foster stop so abruptly at Z-321 and then resume her regular displacement so quickly again? Why is there an image of the limousine in the intersprocket area of Z-318? Why do the first two reenactments disagree so radically with the extant film? Why do various observers, over many years, report seeing a different film, starting as early as 22 November 1963—with Deke DeLoach of all people? Why do the Dealey Plaza witnesses (including the ten closest) disagree so fundamentally with the film? Why does Weatherly's blur analysis yield so much contradictory information? Why is the traditional critic's frontal head shot at about Z-313 in such arresting disagreement with the trail of metal debris on the lateral X-ray film?

For all of these questions, and many more besides, there are no easy answers—except that of film alteration. Although the easy road is to circumnavigate this mountain of evidence, the honest approach is to sift and weigh the evidence as a whole. And if we still cannot agree after all of this, then perhaps a re-reading of Ronald White's essay, "Apologists and Critics of the Lone Gunman Theory: Assassination Science and Experts in Post-Modern America," (Assassination Science 1998, pp. 377-410) will assist us at least in understanding the chasm that divides the "realists," like myself, who consider the authenticity of the film to be a theory that has been falsified, from the "relativists," like Josiah Thompson, who consider the theory to be a paradigm laden with anomalies, burdened but unbroken.

Acknowledgments

I am indebted to our editor, Jim Fetzer, for constantly encouraging my research and specifically for arranging a conference at the University of Minnesota where I presented an earlier version of this study. Special thanks must also go to Doug Horne, David Lifton, Jack White, Noel Twyman, Doug Mizzer, Harry Livingstone, Phil Giuliano, Roy Schaeffer, Milicent Cranor, and Brian Edwards for their inestimable contributions to this cause. I apologize in advance to those I should have mentioned but have failed to recognize—it was not deliberate. A surprising number of unnamed—but very interested—private investigators have contributed both stimulating ideas and clues.

I am often plied with tantalizing hints that time constraints prohibit me from pursuing as thoroughly as I would wish. I hope that these investigators will understand that my sometimes-slow responses do not reflect a lack of interest. If anything, the opposite is typically true—I wish that I had more time for them. So I strongly encourage them to pursue their original ideas vigorously. Eventually, I believe, the growing trove of evidence will persuade most serious students that the Zapruder film has indeed been altered.

Dealey Plaza

00) Douglas P. Horne noted that Zavada uble images during his shooting experi-

, four autopsy personnel (Humes, Boswell, cument entitled, "Report of inspection by , 1996, at the National Archives of X-rays ident John F. Kennedy." Nonetheless, subses signatories made it clear that the closere false: contrary to their statements, not ere included in the collection. Therefore, se a demonstration of how little reliance ions prepared by attorneys for the signa-

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d a series of five articles ("The Zapruder *Fourth Decade*, May 1999 through January assion have greatly advanced the discusy. His work also initially ignited my own

he factual content of the preceding paraand has confirmed their accuracy. ations of this issue in my initial reading of debted to Douglas Horne for bringing it to

phone, and sent a certified letter, to the De-16,000,000 for the film (which price did not y recommended one simple test: just shoot . DoJ never responded to my letter and this . In a subsequent letter, I suggested that the prefund the purchase price if the film were respond to this letter, either.]

DoJ, which appears on the following page, s between the editor, David W. Mantik, and sistant Deputy Attorney General, who was ns over compensation for the government 1 as an "assassination document." The queshe film's value as an historical artifact but ight, since presumably the copyright privil "out of camera" version shot by Abraham 1 not to any subsequently altered version. The Zapruder Film Controversy

August 14, 1998

Ms. Leslie Batchelor Civil Division Department of Justice, Room 3736 950 Pennsylvania Avenue, NW Washington, DC 20530

Re: Authenticity of the Zapruder film

Dear Ms. Batchelor:

Thank you for your courteous response to me today on the telephone.

I think no one in the JFK assassination research community could ask for much more than a film (or films) shot through the *original* Zapruder camera. Such an experiment has already been done within the past year with a virtually identical camerawith nearly the same serial number. I have seen these films. This experiment has succeeded only in raising even more questions. It is critical that this experiment be repeated with the *original* camera, which, I am told, has been on display at the Sixth Floor Museum in Dallas, Texas.

There has been serious speculation that the images on the extant Zapruder film have been magnified in the process of alteration and therefore cannot be the original. I have personally calculated the expected angle of view from the known optical parameters of this camera. Using known sized objects in the actual field of view (e.g., the limousine, the background buildings) it is also possible to calculate the angle of view that is actually seen in the film. The disagreement between these two numbers is larger than I would expect at the full zoom (telephoto) setting that Zapruder said he used. And if the camera had actually been set at less than full zoom, the mismatch is even worse. The direction of this disagreement does suggest that the extant images are too large, as has been implied previously. Furthermore, I did not find this problem for the Nix film. It is absolutely critical that the actual angle of view be determined for the original centers when set at full zoom. This will be trivial for any ervert to do. Langest.

It is absolutely critical that the actual angle of view be determined for the original camera when set at full zoom. This will be trivial for any expert to do. I suggest, however, that one simple additional step be taken. To satisfy the critics, some well known object should be filmed from a well known position (e.g. the Lincoln Memorial as seen from the Washington Monument). This will allow anyone afterwards to do their own measurements of size and distance and to calculate the angle of view, which can then be compared to the actual film. If these simple steps are taken, they will go a long way toward satisfying the questions of many chronic students of this case.

My understanding is that the Assassination Records and Review Board has been reluctant to engage in investigations of this type, apparently interpreting such steps as beyond their charter. However, I note that the FBI will soon be examining material found on one of the bullets discovered in JFK's limousine. That is obviously an investigation, so, if that can be justified, then surely shooting film through the *original* Zapruder camera can also be justified.

Thank you again for your attention to this matter. I am very pleased that you are positioned to assist in a matter that is so central to our national history.

Sincerely yours, DW Manthe. David W. Mantik, M.D., Ph.D. (Physics)

Letter of 14 August 1998 from David W. Mantik, M.D., Ph.D., to Leslie Batchelor, Assistant Deputy Attorney General, proposing that the authenticity of the film be tested by taking new images with the original camera, which might serve to settle many important questions. The Department of Justice, however, declined to accept this recommendation and, as a consequence, ihese questions remain unsettled.