

March 28, 1997 (Revised)

Topic Outline: Reasons Why Some Researchers Doubt the Authenticity of What Is Purported to be the Original Zapruder Film

- I. Unexplained Apparent Anomalies Within the Existing Film
 - A. Head turns by limousine driver William Greer, in two different locations on the film (between 302-303, and 316-317), appear to some observers to be made faster than humanly possible, and to these researchers represent *de facto* evidence of removal of frames.
 - B. In some frames prior to the head shot (e.g., 303, 305-307, 309-310), both bystanders in Dealey Plaza, and the moving limousine, appear to be in focus at the same time when individual frames are examined: this seems an impossibility to some researchers (given an unaltered film with a continuously moving vehicle): they interpret these frames as proof that the limousine stopped at some point.
 - C. In some individual frames, double images of some objects appear, while other objects in those same frames are not depicted by double images (e.g., 294, 308, 311, 313, 314); in the absence of a credible explanation for this phenomenon, some researchers suspect this to be *de facto* evidence of some kind of film manipulation.
 - D. "Inertial Effect" (blue tint) appears at the beginning of the lead motorcycle escort sequence, but not at the beginning of the "jump cut" to the limousine coming down Elm Street, leading some researchers to believe that frames showing the limousine turning the corner at Elm and Houston have been removed. [In the absence of scientific control tests conducted with Zapruder's camera, and an accompanying written report, no conclusive rulings can be made regarding whether the "inertial effect" is an intermittent phenomenon, or uniformly consistent each time the shutter begins operating.]
 - E. The washed-out, or "silvery," quality of the images between the sprocket holes causes some researchers to be suspicious that the cause for this difference in image quality may be an artifact of the creation of a "new" original in an optical printer with different apertures (i.e., an image aperture, and an edge print aperture) following the

implementation of sophisticated special effects (e.g., removal of frames, alteration of wounds in images, etc.). [In the absence of scientific control tests conducted with Zapruder's camera, and an accompanying written report, Kodak's informally expressed opinion that the differing quality of the images between the perforations is likely caused by "vignetting," "claw flare," and "development turbidity" will remain nothing but an unsubstantiated expert opinion.]

- F. The perforated I.D. number "0183," punched in the processed film and carrier strip by Kodak in Dallas, is missing from the purported original in the National Archives.
 - G. The "home movie" portion of Zapruder's film (approximately 32 feet of domestic movies showing a child, an infant, and a woman using the telephone) is not present in the Archives with the original film. Its absence means that the quality of the images between the sprocket holes on the home movie cannot be compared with the images between the sprocket holes on the purported original; this may cause suspicion among some researchers.
 - H. The President's head moves forward quite rapidly for one frame between frame 312 and 313 (at about 69 feet per second), and then rapidly backwards between frames 313-319 (at about 94 feet per second). This rapid change in direction and velocity has caused some researchers to wonder whether filmed evidence of two separate head shots, separated by an interval of time, may have been removed from the film to make it appear as if there was only one shot to the head; they posit that the brief evidence of forward motion between frames 312 and 313 is evidence of a mistake (i.e., the inadvertent retention of one frame of forward movement) by those who may have altered the film.
- II. Circumstantial Evidence of Possible Frame Removal in Warren Commission Documents
- A. Reportedly, CE 585 (survey plat map of Dealey Plaza) lists distance from 6th floor window of TSBD to the rear of the limousine at the head shot as 294 feet.
 - B. Reportedly, CD 298 (FBI Memorandum to the Warren Commission dated January 20, 1964) lists the distance from the 6th floor window of the TSBD to the impact point on the President as 307 feet; this appears reasonably consistent with subpara A above.

- C. The Warren Report, on page 110, lists the distance from the sniper's nest (6th floor, TSBD) to the President of the third shot as 265 feet (vice the answers given in A or B above of 294' to the bumper/307' to the President), a clear discrepancy. Some researchers feel that the reason for this discrepancy is that the measurements in A and B above were obtained by study of an unaltered film prior to removal of frames, and that the changed distance to the sniper's nest in the published Warren Report reflects study of an altered version of the Zapruder film--a version with many frames removed.

III. Apparent Inconsistency Between Zapruder Film and Nix Film

- A. Rearward motion of the President's head is seen in the Nix film, but it appears to many observers to be much less rapid, and less violent, than the head-snap in the Zapruder film. If this perceived difference is not a photogrammetric problem (i.e., a problem of viewing angles and perspective), it may be circumstantial evidence that frames have been removed from the Zapruder film head shot sequence, creating a more violent head-snap.
- B. Although no head-snap of any kind can be seen on the Muchmore film, that appears to be because immediately after the head shot, the President is blocked out of view by bystanders standing in the field of view in between the photographer (Marie Muchmore) and the limousine.