

31. Fonzi, p. 292.  
 32. Fonzi, p. 293.  
 33. Fonzi, p. 124.  
 34. Fonzi, p. 144.  
 35. Fonzi, p. 144.  
 36. See pages 149 through 151 of Fonzi's book for a few of these details.  
 37. Summers, p. 511.  
 38. Summers, p. 339.  
 39. Summers, pp. 325-326.  
 40. Summers, p. 326.  
 41. Summers, p. 328.  
 42. Summers, p. 328.  
 43. Warren Commission Report (New York: St. Martin's Press), pp. 728-729.  
 44. Summers, pp. 358-363.  
 45. Summers, pp. 335-336.

*copy to H. WEISBERG*

## QUESTIONING THE LIMOUSINE'S SPEED ON ELM STREET

by  
 Chuck Marler

On June 4, 1964, FBI Agent Lyndal Shaneyfelt testified to the Warren Commission that the limousine in which President Kennedy was assassinated was traveling on Elm Street at an overall average speed of 11.2 miles per hour. [1] This determination was based upon a May 24, 1964 reenactment conducted by the FBI that measured how far the limousine traveled between frames of the Zapruder film (see Commission Exhibits 888 through 902). [2] It was calculated the vehicle traveled a distance of 136.1 feet between frames 161 and 313 (the fatal head shot.) [3] As the Zapruder camera operated at 18.3 frames per second, [4] one can calculate the number of seconds between frames, the feet per second the vehicle traveled, and the miles per hour of the limousine. [5]

Two and one-half months prior to the reenactment made on Elm Street, Secret Service Agents Roy Kellerman, William

Greer, and Clint Hill gave their estimations of the limousine's speed to the Warren Commission. Agent Kellerman, who was riding in the right front of the vehicle, testified as they turned onto Elm Street they were through the section of Dallas and "the driver picked it up because we were all through. Purely a guess, we could have been going at the most 25 (mph)." Agent Kellerman further stated the minimum speed would have been fifteen miles per hour. [6] It would have been expected for the limousine after making a slow turn onto Elm Street to have picked up speed well beyond the average of 11.2 miles per hour. The motorcade was essentially over, the crowds had thinned out, the freeway access was straight ahead, and the heavy vehicle would be going down a three degree decline on Elm Street. [7] The estimations of the speed by both Agents Greer, who was the driver, and Hill, who rode in the follow-up car behind the limousine, however, were lower than Kellerman's at "between 12 and fifteen miles per hour." [8]

Although Agent Shaneyfelt provided the Warren Commission with the average speed between frames 161 through 313, he did not provide any further information about speeds between other frames. Using the data in Commission Exhibits 888 through 902 and computing the distance traveled by the limousine from Station C, the speed of the limousine can be determined between selected Zapruder frames. The frames selected provide approximate equal intervals in time. A further breakout between frame 225 and 313 could not be calculated since they were not provided as a Commission exhibit.

<u>Frames:</u>	<u>Seconds</u>	<u>Distance</u>	<u>MPH</u>
161 185	1.31	20.1	10.4
185 207	1.20	21.8	12.4
207 225	.98	17.2	11.9
225 240	.82	14.0	11.6
240 255	.82	14.1	11.7
<u>255 313</u>	<u>3.17</u>	<u>48.9</u>	<u>10.5</u>
161 313	8.31	136.1	11.2

The above table indicates that between frame 161 and the fatal head shot at frame 313, the driver of the limousine maintained a constant pace of approximately eleven miles an hour for 8.3 seconds and 136 feet down Elm Street. As Frame 161 has been measured to be 94 feet from Station C (the

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beginning of Elm Street as separated by Houston Street), the limousine never increased speed beyond 12.4 miles an hour after traveling down Elm Street for 16 seconds and 230 feet! [9] The calculated speed between individual frames is further inconsistent with both the speed of the limousine while viewing the Zapruder film and the testimony of its driver, William Greer.

Based upon the government's measurements, the limousine only reduced its speed 1.2 miles per hour between frames 225 through 255 and frames 255 through 313. When one views the Zapruder film without the close-up enhancements, the limousine reduces its speed significantly between frames 255 and 313—substantially more than the 1.2 miles per hour. This obvious reduction of speed prior to frame 313 also occurs as the limousine is becoming more perpendicular to the location of Abraham Zapruder which should visually appear to be going faster even if there wasn't a reduction in speed. [10] Witnesses to the assassination, including Dallas police officers, said the limousine came to a stop before the fatal shot. Officer Earle Brown, standing on the triple overpass, testified "after it made the turn and when the shots were fired, it stopped." [11] Police officer Marion Baker testified fellow motorcycle officer James Chaney (who did not testify before the Warren Commission) told him, "after the first shot rang out, the car stopped completely, pulled to the left and stopped...Mr. Truly was standing out there, he said it stopped. Several officers said it stopped completely." [12] Senator Ralph Yarborough, who was riding in the motorcade, said "when the noise of the shot was heard, the motorcade slowed to what seemed to me a complete stop...after the third shot was fired, but only after the third shot, the cavalcade speeded up." [13] Ms. Earle Cabell, who also rode in the motorcade, said "I was aware the motorcade stopped dead still. There was no question about that." [14] Roy Truly testified "I saw the President's car swerve to the left and stop somewhere down this area." [15] James Simmons, standing on the triple overpass, said the car "stopped, or almost stopped" prior to the fatal shot. [16] Gerald Posner in his book Case Closed acknowledged the driver "slowed the vehicle almost to a standstill." [17] Calculating the limousine's speed using the Zapruder film in combination with the measured distance between frames indicates, however, the limousine not only did not stop—it barely reduced its speed!

The calculated speeds between frames is also inconsistent with the testimony of the driver, William Greer. Agent Greer stated he heard three shots. "I knew that after I heard the second one, that is when I looked over my shoulder, and I was

conscious that there was something wrong, because that is when I saw Governor Connally. And when I turned around again, to be the best of my recollection there was another one, right immediately after." [18] Later in his testimony Agent Greer said, "Just as soon as I turned my head back from the second shot, right away I accelerated right then. It was a matter of my reflexes to the accelerator." [19] Which was correct? After the second shot did the driver accelerate or turn around again?

According to the House Select Committee on Assassinations, the second shot Agent Greer is referring to occurred at Zapruder frame 188–191. [20] Author Gerald Posner places the second shot at frame 224. [21] The calculated speeds between frames from the table indicate the driver did not accelerate prior to the fatal head shot at frame 313. In fact the limousine did not accelerate, according to Agent Clint Hill, until after he was on the car's left rear step board. [22] FBI photo expert Shaneyfelt testified that Hill placed one foot on the bumper of the car at frame 368 (three seconds after frame 313). [23] Depending on which frame is used for the second shot, the driver's reflexes in hitting the accelerator had in fact an extraordinary delayed reaction for seven to nine seconds that proved fatal to the man he was protecting. Viewing the Zapruder film projected at normal speed also indicates not only did the driver not accelerate after the second shot, he applied the brakes to an already slow moving limousine of eleven miles an hour. A study of the film also confirms that the driver did turn and look over his shoulder a second time. It is absolutely incredible that a trained Secret Service agent, whose critical responsibility is to protect the President, and after hearing two gunshots, the panic of his passenger's exclaiming "My God, I am hit," [24] and "Oh, no, no, they're going to kill us all," [25] and after turning his head to verify "something was wrong" would not have immediately accelerated out of trouble. Instead, in that remaining critical five to six seconds before the fatal bullet to the President's head, the driver turns to look again, the limousine slows down, and the driver does not turn back around again until after the President's head has exploded.

It may not be difficult to reconcile many of these discrepancies. David Lifton at the 1993 Dallas ASK conference pointed out in the Zapruder frames following frame 313 that the driver is looking directly over his shoulder and in the very next frame the driver's head is looking straight ahead. It was Mr. Lifton's position that one could not turn their head 180 degrees in 1/18 of a second and suggested various Zapruder frames could have been deleted. If selected frames between 255 and 313

were omitted from subsequent copies of the Zapruder film, these falsified copies would show an increase in the rate of speed of the vehicle both visually and in mathematical computations of speed. If frames were deleted, the head shot would have occurred much later in the original footage. If the limousine had actually slowed down to five miles per hour between frames 255 and 313 instead of the calculated 10.5 mph, the head shot would have occurred at approximately frame 377.

Another possible explanation for these discrepancies could be the FBI's exaggeration of the distance the limousine traveled between the Zapruder frames. Where in the volumes of exhibits and testimony of the Warren Commission is there any information on the distance between fixed landmarks in Dealey Plaza? For example, what was the distance between the Stemmons freeway traffic sign and the street light just west of it? Where exactly in terms of measured distance from fixed landmarks in Dealey Plaza was President Kennedy at the point of the fatal head shot? How do the Zapruder frames correspond to a survey map of Dealey Plaza? The answers to these questions cannot be determined by the evidentiary record. The only diagrams of the crime scene are Commission Exhibits 385 and 883 [26] which are identical survey maps of Dealey Plaza completed for the Secret Service on December 3, 1963. CE 385 does not have any landmarks such as the picket fence, concrete steps, or pergola structures and the scale is so obscure making any reference to it extremely difficult. CE 883 has drawings of the picket fence and pergola structure but no information on the scale to which it was drawn. No measurements of any fixed landmarks have been given on either exhibit. Therefore, our only source of information in terms of measured distance in Dealey Plaza is based upon a moving limousine from a fixed starting point on Elm Street and the utilization of the Zapruder film frames in determining both time and area traveled. How can we compare the accuracy of the Zapruder film if we don't have the necessary information to conduct the comparison?

One issue of concern in the FBI's May 24, 1964 reenactment was their failure to conduct any measurements between frames 255 and 313. After measuring in small increments by Zapruder frames down Elm Street, why did they jump 58 frames from 255 to 313? This is the sequence where the limousine reduced its speed significantly when viewing the Zapruder film. Measurements between frame 255 and 313 would have also included landmarks such as the street light in which comparisons could be made for speed calculations. Another question to be asked concerns the location of the

Stemmons traffic sign. In 1965 the Stemmons sign was removed from Dealey Plaza. [27] However, in 1964 the groundskeeper for Dealey Plaza, Emmett Hudson, testified to the Warren Commission that "they have moved some of those signs" after the assassination. [28] If the Stemmons sign was in fact moved, was it accurately repositioned before the May 24, 1964, reenactment by the FBI when they used this landmark to determine the distance the limousine traveled?

It is hard to believe that there are not precise measurements of the crime scene at Dealey Plaza or exact measurements of where exactly President Kennedy was shot on Elm Street. Without precise measurements from fixed landmarks in Dealey Plaza it is difficult to conduct independent analysis of the limousine's speed. The suspicious behavior of the driver, the statements of witnesses who said the limousine stopped, the inconsistency of the mathematical calculations of the limousine's speed when compared to viewing the Zapruder film, and the 180 degree turn of the driver's head within 1/18 of a second, all warrant further investigation including the determination of whether possible tampering with the Zapruder film occurred.

#### Notes

1. Hearings Before the President's Commission on the Assassination of President John F. Kennedy, Vol. 5, p. 161. (References to this source cited hereafter in format 5H161).
2. 18H86-95.
3. 5H161. The distance of 136.1 feet can be calculated by subtracting the distance from Station C in Frame 161 (CE 888) from the distance from Station C in Frame 313 (CE 902). Station C is a horizontal line made from the west curb line of Houston Street. It marks the beginning point from Elm Street (5H145).
4. 5H160.
5. Number of seconds between frames calculated by dividing the difference between frames by the speed of the camera—18.3. Feet per second determined by dividing the distance travelled between frames using measurements from Station C by the number of seconds between frames. Miles per hour calculated by multiplying the feet per second by 3600 (number of seconds in an hour) and dividing by 5,280 (number of feet in a mile).
6. 2H73.
7. 5H160.
8. Greer (2H119), Hill (2H139).

9. Based upon assumption of average speed from turn to frame 161 at eight miles per hour. Frame 161 measurements (CE 888).

10. When tracking a moving object with a movie camera, the closer the object approaches the photographer, the faster the camera has to be moved to keep the object within the frame.

11. 6H233.

12. 3H266.

13. 7H440.

14. 7H487.

15. 3H221. The limousine swerving to the left would improve the line of sight of anyone firing from the grassy knoll.

16. Robert J. Groden and Harrison Livingstone, High Treason (New York: Berkley Books, 1990) p. 22.

17. Gerald Posner, Case Closed: Lee Harvey Oswald and the Assassination of JFK (New York: Random House) p. 234.

18. 2H118 (emphasis added).

19. 2H119.

20. Report of the House Select Committee on Assassinations (HSCA Report) p. 80.

21. Posner, Case Closed, p. 300.

22. 2H141.

23. 15H699.

24. 2H73.

25. House Select Committee on Assassinations (HSCA) vol. 1, p. 43.

26. 17H262, 17H901.

27. Sylvia Meagher, Accessories After the Fact, (New York: Vintage Books, 1967) p. 33.

28. 7H562.

## RETHINKING CHOMSKY

by

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Rethinking Camelot (Boston: South End Press, 1993) is Noam Chomsky's worst book. I don't think it merits a detailed review, but we should be clear about the stand that "America's leading intellectual dissident," as he is often called, has taken on the assassination. It is not significantly different from that of the Warren Commission or the majority of Establishment journalists and government apologists, and diametrically opposed to the view "widely held in the grassroots movements and among left intellectuals" (p. 37) and in fact to the view of the majority of the population.

For Chomsky, the only theories of the assassination "of any general interest are those that assume a massive cover-up, and a high-level conspiracy that required that operation." These he rejects out of hand because "There is not a phrase in the voluminous internal record hinting at any thought of such a notion," and because the cover-up "would have to involve not only much of the government and the media, but a good part of the historical, scientific, and medical professions. An achievement so immense would be utterly without precedent or even remote analogue."

These arguments can be as glibly dismissed as Chomsky presents them. It is simply foolish to expect the conspirators to have left a paper trail, much less in the "internal record," or that part of it that has become public. It is equally foolish to confuse the notion of conspiracy and cover-up with the much more broadly applicable phenomenon of "manufacturing consent," to use Chomsky's own expression. You don't have to be a liar to believe or accept or perpetuate lies. This is exactly what Chomsky himself and Edward Herman say about the media, and it applies to the "historical, scientific, and medical professions" as well:

*Most biased choices in the media arise from the preselection of right-thinking people, internalized preconceptions, and the adaptation of personnel to the constraints of ownership, organization, market, and political power. Censorship is largely self-censorship, by reporters and commentators who adjust to the realities of source and media organizational requirements and by people at higher levels within media organizations who are chosen to implement, and have usually internalized, the constraints imposed*

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