

AN ANALYSIS OF THE MEDICAL DOCUMENTS RELATED TO THE FATAL SHOT by Jeff Hoyle

"An outside force acting on a body causes the body to accelerate in the direction of the line of action of force."

- Sir Isaac Newton's 2nd Law of Motion

What does Newton's 2nd Law of Motion have to do with the assassination of President John F. Kennedy? The fact that it has been quoted on numerous occasions by critics of the Warren Commission Report in an effort to demonstrate a shot fired from in front of the President, and thus, a conspiracy.

The reason for its use is the reaction of the President to the fatal head shot. Instead of falling towards the left front, as one would suspect would happen if someone is struck by a bullet fired from the right rear, the President's head snaps violently backward, and to his left. (This can be seen very graphically in the Zapruder film.)

Dr. A.J. Riddle, assistant professor of physics at UCLA is quoted in the 1967 Welsh-Lifton study "The Case for Three Assassins" as saying, "The motion of Kennedy's body in frames 313 through 323 is totally inconsistent with the impact of a bullet from above and behind. Thus the only reasonable conclusion with the laws of physics is that the bullet was fired from a position forward and to the right of the President."¹

The same Dr. Riddle is quoted once again on this matter by Josiah Thompson in "The Crossfire that Killed President Kennedy", and points out that when an object is hit by a projectile, it is given the motion that has the same direction of that projectile (Newton's Law). "At a shooting gallery, the ducks fall away from the marksman, not toward him."²

The words used in the 1967 articles cannot compare to the visual impact of what the writers were speaking of, and the American people got a look at it on national television in March 1975. Robert Groden, the photo-optical expert, appeared on Geraldo Rivera's "Goodnight America" (ABC) and brought with him his enhanced copy of the Zapruder film. The visual impact of the President's body moving so violently backward, at a speed calculated to be 100.3 feet per second per second³, convinced an immeasurable number of viewers that the movement of JFK's body after the fatal shot was a result of a shot fired from the right front.

The motorcyclists riding escort on the left side of the Presidential limousine are cited as further evidence of a frontal head shot. Both officers, B.J. Martin and Bobby Hargis, were riding 5 feet to the left and approximately 8 feet to the rear of the car at the time of the fatal impact, and were splattered with blood and brain tissue as a result of the hit. This led Officer Hargis to believe that the shot had indeed come from the front. Hargis actually got off his cycle and led the chase up the grassy knoll in search of any gunmen.

The rear portion of the car was covered with the same debris, and a piece of the President's skull was found on the south side of Elm Street. Also, a majority of the witnesses questioned believed the shots had come from the grassy knoll area. (51% of those questioned by the Commission felt the shots had come from the knoll, whereas 39% named the Texas School Book Depository as the source of the shots.)

With the obvious discrepancy in the witness recollection on the source of the shots, we must turn to the medical evidence to shed some light, and possibly clear up this matter.

THE GRASSY KNOLL GAZETTE, MARCH 1978

THE AUTOPSY

The autopsy of President Kennedy, which was later condemned by the American Academy of Forensic Pathologists as being so incomplete and sloppy as to be no autopsy at all⁴, was performed at Bethesda Naval Hospital in Maryland by Commander James J. Humes. He was assisted by Naval Commander J. Thornton Boswell and Lt. Col. Pierre Finck.

Their report described the President's head wound as follows:

"The fatal wound (sic) entered the skull above and to the right of the external occipital protuberance... The projectile was fired from a point behind and somewhat above the level of the deceased."⁵

Normally the conclusions of the autopsy would settle any dispute over the direction of the shots, but there is much controversy surrounding this autopsy. First, Commander Humes "destroyed by burning certain preliminary draft notes" related to the autopsy (see CE 397). Second, the FBI's autopsy report dated 11/26/63 is contradictory to the final autopsy report turned in by Humes *et al.* And third, there were many flaws in procedure and technique, such as the probing of a bullet wound with a finger, use of unorthodox reference points for measuring wounds, failing to cut the brain into coronal sections, and the fact that skin sections, photographs of these sections, and even the President's brain are missing from the Archives. (For further information on the flaws and missing autopsy materials see the works of Dr. Cyril Wecht cited in the footnotes.)

With so much room for dispute and disagreement in the original autopsy report, let us move on to other medical opinions.

THE CLARK PANEL REVIEW 1968

In February 1968, then Attorney General Ramsey Clark asked three pathologists and one radiologist to come to Washington and examine the autopsy materials. The Clark Panel met and examined this material February 26-27 of that year. Their report was not released until January 1969. This report described the President's head wound as follows:

"One bullet struck the back of the decedent's head well above the external occipital protuberance. (p. 14)

"The foregoing observations indicate that the decedent's head was struck from behind by a single projectile. It entered the occipital region 25mm to the right of the midline and 100mm above the external occipital protuberance. (p. 12)

"Based upon the observations that he was leaning forward with his head turned obliquely to his left when this bullet struck, the photographs and the x-rays indicate that it (the bullet) came from a site above and slightly to his right." (p. 14)⁶

The conclusions of the Clark Panel, like those of the original doctors, indicate the fatal wound was fired from the rear, somewhat above the President.

But it is also important to note that although the doctors agree on the source of the shot, the wound's location on the President's head is different.

The Panel locates it "well above" and "100mm above" the occipital protuberance, not just "above and to the right" as described by the autopsy report. The wound is actually described as being 4 inches higher than the report stated, placing it high on top of the head.

But controversy surrounded this report, also, for not only were all the participants (Drs. William H. Carnes, Russell S. Fisher, Russell H. Morgan, and Alan R. Moritz) announced defenders of the Commission's Report⁷, but also the fact that the findings of this Panel were not released until almost a year after the examination took place.

With two government studies released and almost in complete agreement on the location and source of the shots, people still had doubts, and the cry of "cover-up" continued.

THE ROCKEFELLER COMMISSION

The latest government report dealing with the medical evidence related to the head shot was released in June, 1975. This was the report of the Commission on CIA Activities Within the United States, headed by then Vice-President, Nelson Rockefeller.

A review of various materials including the films, bullets, bullet fragments, photos and x-rays was conducted by the Panel members who submitted separate reports of their findings.

According to the report, they were unanimous in their finding that:

"The President was struck by only two bullets, both of which were fired from the rear. There is no medical evidence that the President was struck by any bullet coming from any other direction."⁸

This third government report, which was in unison with the original report, and the Clark review, joined its predecessors in coming under fire for varying reasons, such as: (1) David Belin, an Assistant Counsel to the Warren Commission, and one of the chief defenders of its findings, was named Executive Director of the Rockefeller Commission, a move many felt demonstrated the government's lack of interest in clearing up the controversy. (2) the Commission used the testimony of Dr. Alfred Olivier, a veterinarian who had also testified before the Warren Commission, on the backward movement of the President's head. The Rockefeller Report stated that Dr. Olivier and his associates had conducted "extensive tests" on the effects of high velocity bullets fired into live animals.⁹ But this was later refuted by Mark Lane in the introduction to his reissued *Rush to Judgement*. According to Lane, Dr. Olivier stated in an interview that he never conducted such tests.¹⁰ (3) Dr. Cyril Wecht claimed the report seriously "misrepresented" and "distorted" his testimony in connection with the medical and scientific evidence. (4) Dr. Werner Spitz, an expert who examined the material at the request of the Rockefeller Commission, co-authored a textbook with Dr. Russell Fisher, a member of the 1968 review panel.¹¹

On three separate occasions the government has given "official" medical versions of the assassination. On three occasions those government reports have been carefully scrutinized by the watchful eyes of independent researchers, who have discovered some very valid, well-documented reasons for doubt and criticism.

THE INDEPENDENT EXAMINATIONS

In 1972 Burke Marshall, the acting representative of the Kennedy family estate, allowed the first persons outside of government auspices to examine the x-rays and photos related to the Kennedy assassination.

Dr. John Lattimer, chairman of the Department of Urology at Columbia University Medical School, was allowed to inspect the materials, and he concluded that the Warren Commission was correct: Kennedy had been struck by only two bullets, both fired from the rear. His conclusions were much expected by students of the assassination, as Lattimer had published works prior to his examination in which he had defended the Commission's conclusions. Researcher Harold Weisberg, author of the WHITEWASH series, immediately attacked Lattimer's conclusions, noting that Lattimer was not a forensic pathologist, but rather a urologist, a science, Weisberg notes, that "progresses no higher in the body than the navel."¹²

Dr. Lattimer also testified before the Rockefeller Commission in 1975 that there was no medical evidence to support a theory that the President had been hit by a bullet from any direction other than the rear and above.¹³

Also in 1972, Dr. Cyril H. Wecht, former president of the American Academy of Forensic Sciences, and the coroner of Allegheny County, Pennsylvania, became the first independent forensic pathologist to examine the autopsy material.

In his report, which concentrated more on the "single bullet theory" than on the head shot, Dr. Wecht concluded that the Kennedy case was "unsolved", and the single bullet theory "implausible" and "scientifically untenable."¹⁴

He speculates on the possibility of a second assassin, most likely firing from the rear, but leaves the door open for a possible shot from the grassy knoll. His reason for this "equivocation" is based on the first impressions of the doctors at Parkland Memorial Hospital in Dallas, who first described the throat wound as one of entrance.

In a second report on his examination of the autopsy materials, written with Robert P. Smith, then director of research for the Committee to Investigate Assassinations, Dr. Wecht spoke strongly against any head shot(s) from the front or right front:

"The available evidence, assuming it to be valid, gives no support to theories which postulate gunmen to the front or right front of the Presidential car. The wound in the President's head, as evidenced in the autopsy photographs and x-rays, can only have been fired from somewhere to the rear of the President. If any other bullet struck the President's head, whether before, after, or simultaneously with the known shot, there is no evidence for it in the available autopsy material."¹⁵

And in conclusion, Wecht and Smith state, "So far as the available medical evidence shows, all shots were fired from the rear."¹⁶

OTHER EXAMINATIONS

Dr. James Weston, Chief Medical Examiner of the State of New Mexico, examined the autopsy material at the request of CBS for its 1975 series "The American Assassins". Dr. Weston, then President-elect of the American Academy of Forensic Sciences, said he was willing to "stake his reputation" on the belief that Kennedy was hit by two bullets only... both fired from the rear.¹⁷

Another former president of the American Academy of Forensic Sciences, Dr. Robert J. Joling, wrote in the Saturday Evening Post in December, 1975, that there is no medical evidence "to support the claim that anyone was shooting at the presidential limousine from the front or from the grassy knoll area. Repetitive reviewing of the Zapruder film does not lend credence to any claim that the President received a frontal or side head shot."¹⁸

ANSWERS TO SOME QUESTIONS

What seems clear is that medical opinions, of both government-sponsored examinations and examinations by independent researchers, have all agreed on one thing: that the head shot came from the rear.

There has been much to criticize in the autopsy, in the year delay in the release of the Clark Panel review, and in the misrepresentations of testimony by the Rockefeller Commission. But even Dr. Wecht, one of the most respected critics of the Warren Report, and his colleagues from the Academy of Forensic Sciences, Drs. Joling and Weston, agree that there is no evidence of a frontal head shot.

But what of some of the circumstantial evidence of such a shot? What of the cyclists who were riding to the left rear of the President? What of the trunk of the limousine? And what of the slamming movement of the President's body after the hit?

Let us examine once again these claims, and see if in fact they, too, are proof of a shot fired from the right rear.

- (1) The two motorcyclists riding to the left rear of the limousine were splattered on their LEFT sides, that is, the left sides of their windshields and helmets, etc. This would seem to indicate that they were hit by the impact of the falling debris. If they were hit with debris as a result of a shot fired from the right front, it should appear on the RIGHT side of their uniforms.
- (2) The rear portion of the car was also covered with matter, but Governor and Mrs. Connally and Secret Serviceman Roy Kellerman also testified about falling debris. It seems clear that particles were thrown in both directions. This does not indicate a double hit; a bullet passing from the rear to the front can throw particles in both directions. (Itek Corp. film analysis for the 1975 CBS show "The American Assassins" stated that computer analysis of the particles "showed all trajectories in a forward direction and no particles going backward." Itek's findings also seem to indicate debris to the rear of the President was the result of falling matter.)¹⁹
- (3) The piece of skull found on the south side of Elm Street, often mentioned as evidence of a frontal shot, was actually found, according to R.B. Cutler, 37 yards ahead and to the left of the point of impact.²⁰ Other factors which discredit a frontal head shot are (a) the lack of damage to the left side of the skull, where there should have been an exit wound if the shot came from the right front and (b) the lack of damage to Mrs. Kennedy, who was in the direct line of fire from the right front.
- (4) Many reasons have been advanced to explain the backward snap of the President's head: "Neuromuscular reaction", "jet

effect", the President's back brace, and even Mrs. Kennedy, who had both hands on the President at the time of the fatal shot, and may have contributed in some way by her "shoving away" at the moment of impact.²¹

But another plausible explanation of the backward movement deals with the location of the wound itself.

The President was leaning forward, head turned toward his left, when he was struck 25mm to the right of the midline and high (100mm above the occipital protuberance) on top of his head. Clearly a glancing blow, the high point of impact on the leaning skull, produces a spinning effect. A hit on the high, right side produces a spinning to the left, just as can be seen on the film.²²

It seems evident that the tangential blow, coupled with the medical reasons already put forth, can well explain the movement of the President's head, without the destruction of Newton's Second Law of Motion.

Examination of the medical evidence by qualified doctors, defenders, and critics of the report alike, and examination of the physical facts as we know them, all indicate a conclusion that many critics of the Warren Commission may find difficult to accept: that the President was killed by a shot fired from the rear, and somewhat above the limousine.

FOOTNOTES

1. David Lifton and David Welsh, "The Case for Three Assassins", Ramparts, January, 1967, p. 89.
2. Josiah Thompson, "The Cross Fire That Killed President Kennedy", The Saturday Evening Post, December, 1967, p. 50.
3. Josiah Thompson, Six Seconds in Dallas, New York, Berkeley Medallion Books, 1967, 1976, p. 115.
4. Robert Sam Anson, "The Greatest Cover-up of All", New Times, April 18, 1975, p. 19.
5. Report of the Warren Commission on the Assassination of President Kennedy, New York, Bantam Books, 1964, p. 504. See also: Cyril H. Wecht, "A Critique of President Kennedy's Autopsy", Six Seconds in Dallas, Appendix D, p. 361-372.
6. Clark Panel review, printed in Post Mortem by Harold Weisberg, Route 12, Frederick, Md. 21701, p. 580-595, with a critique by the author.
7. Robert Sam Anson, They've Killed the President, New York, Bantam Books, 1975, p. 98.
8. The Nelson Rockefeller Report to the President, Commission on CIA Activities, New York, Manor Books, June 1975, p. 262.
9. *Ibid.*, p. 262.
10. Mark Lane, Rush to Judgement, New York, Dell Books, 1966, 1975, p. xxix.
11. *Ibid.*, p. xxx.
12. New York Times, January 9, 1972. Works by Lattimer have also appeared in International Surgery (Dec. 1968), Resident and Staff Physician (May 1971), Forensic Gazette (Sept. 1973). For a critique of Lattimer's works, see Weisberg, *op. cit.*, p. 386-402.
13. Rockefeller, *op. cit.*, p. 263.
14. Cyril Wecht, "Analysis of the Autopsy of President John F. Kennedy and the Impossibility of the Warren Commission's 'Lone Assassin' Conclusion", Computers and Automation, February 1973, p. 26-28.