

8/31/67

Dear Harold,

Enclosed find my "Memorandum , Re: Head Snap Phenomenon and Zapruder Film Frame Sequence". It is 12 pages long and is dated March 20, 1967.

This memo, in somewhat didactic fashion, analyzes the various types of motion that can result, after collision, when a body that is free to rotate about an axis (such as the FJK head, about the neck) is hit by a sudden force.

These results are then applied to actual situation that prevails at Zapruder frame 313 and vicinity. Unlike any other analysis that I have seen done by any other critic, this one takes into account the rotational effects that result when a pivoting body is hit by something, and thus is much more thorough, somewhat more involved, and far more accurate than an analysis which limits itself to attempting to build a theory by asking: "How did the head move from this film frame to the next one: "forward" or "backwards"?"

This latter type of (what I believe to be greatly over-)simplified analysis has led many critics down the path towards thinking that there is a double-head-hit around frame 313. My analysis shows that the resulting motion is easily explained by (and in fact is the necessary, direct result of) a bullet which strikes the head from forward, to the right, and above the target: a forward, steep angle shot.

The double-head-hit, of course, will always remain a possible explanation for the phenomenon, but it is certainly not the only explanation. Should the high angle forward shot be the explanation that prevails, the next problem would be to figure out from where such a gunman could fire. For the angle to the top of the fence on the knoll is only 11 degrees, but to achieve this effect, one must be firing at an angle of 25-35 degrees. But this would mean he is up in the tree line somewhere.

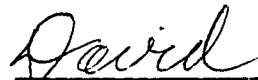
After the initial explanations of the physics, I spend sometime rendering my opinions on other matters, not just the physics, as they relate to the head-snap sequence. Then, I spend about a page and a half criticizing the arguments which were published in the March , Ramparts, for the double head hit. (Ray Marcus' letter)

Finally, I point out the logical connections between the camouflage theory and the proposition that a single high angle shot explains the happenings on the Zapruder film after 312.

This is the type of thing that I want you to have for your files, to read when you have time, and to certainly consult if you find yourself in the thick of an argument regarding the head snap with anybody.

If you have questions or comments concerning any of it, I will be glad to entertain them. It is something of a first draft, but I think it is in good enough shape as it is to get some limited circulation.

Sincerely yours,


David S. Lifton