

single shot fired from forward, but from a fairly high angle. (How high is "high" is discussed in the memo).

Using ordinary laymen's language that one usually applies to describes how something translates (up-down, left-right, forward-backward), JFK goes back, down, and to the left. (Such a shot, therefore, comes from forward, high, and to the right.)

A physicist would say the resulting motion is some combination of rotational and translational motion imparted ~~to~~ to the body by the ~~XX~~ bullet strike. There are three combinations of rotation and translation that could result from a bullet striking the head, and they are discussed in the memo. (See pages 1-5, and the Fig I and Fig II on page 2).

(PART II)

To explain this correctly in the Ramparts article would have meant making it into a physics lecture, which we could not do. Besides, the post-313 motion is still a valid indicator that the shot came from somewheres up front. So we parried this issue by relegating the implications of 312-313 motion to footnote 10; "The initial motion of the head (frames 312-313) is consistent with a bullet fired from an elevation of about 25 degrees or more from the direction we have postulated, since this would cause a turning motion about the neck in the direction observed."

Now, however, life is getting more complicated. People are writing books, and looking into this issue in great detail. A lot confusion is going to result. First of all, some of the critics claim ~~two~~ ^{of} TWO bullets hit the head during 312-314---one from the back and one from the front. This is a possibility. It is not, however, the only explanation. The other is that the shot came from forward, high, and to the right. Second of all, ~~XXXX~~ counter-critics (like WJL) try to ~~XXXX~~ use the 312-313 portion of the motion ~~XXXXXX~~ alone (and ignore the rest) in order to state that the shot came from the rear. (They invoke neuromuscular reactions to explain the rearward motion after 313). ~~XXXXXXXXXX~~ WJL made the acquaintance of a pro-Warren-Report Assistant Professor of Physics, Brian Jones, at UCLA last year, and had him do an exhaustive study on the Zapruder slides. (Life sent them out here for a few weeks).

His result was essentially the same as mine. ~~X~~ Ignoring the double hit possibility, WJL always says: "Either the shot came from the rear, or my physicist says it came from the front, but from very high. Well, theres nothing up there but trees, and if you want to believe that...." etc etc ad nauseum. I don't think there is anything that shook him as much last year as having his own physicist tell him that if it wasn't fired from behind at 313, it had to literally come out of a tree up front.

For all these reasons, I think you will find the attached memo a useful piece of intellectual ammunition should you become involved with anyone in a discussion of the head-snap. It is 12 pages long because I tried to explain things as clearly as possible, which means going through things step-by-step. If any of it is confusing, or if meanings are not clear, I would be glad to entertain any questions you may have, or incorporate any suggestions you make. This is something of a first draft.

The main conclusion of the memo is that there are three "possible" explanations for the "312-and-onward" motion: a) one hit from the rear and a powerful neuromuscular reaction