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Telex 28722

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Dear Dr. Hartmann:

Many thanks for your very prompt and detailed reply to my letter of 2 July. I had not intended this to develop into a lengthy correspondence, but your letter requires a detailed reply in view of your inability to obtain the acoustics reports. The University Library probably has a set of the HSCA volumes available. It is clear that, from what you say, the final draft of the photographic report section dealing with the blur analysis was written using time intervals not derived directly from the reference cited, but from some other source. The same is true of other sections of the report. As nearly as I can determine, this source is probably the letter from Prof. Blakey dated 22 February 1979 and reproduced in Vol. V, p. 722ff. of the Committee's hearings and exhibits. Prof. Blakey is a lawyer, not a scientist, and it does not appear that he consulted any scientists about the wisdom of inserting a time measurement from one source in a sequence of times derived from another source.

It is also clear from your letter that you were never given the opportunity to see Dr. Barger's final written report before writing your own. One thing that comes out clearly in his report is the fact that he was able to measure the relative times of the onset of each train of impulses with accuracies of 0.01s or slightly better. Inspection of the graphs included in the report confirm this.

Despite what you say in your letter about small errors in the acoustical data time scales being irrelevant, they are actually extremely relevant. The origin for the acoustics timings was not arbitrary, as you stated in your letter. Both teams used the same impulse on the recording as a zero clock time. This zero consisted of a "keying in" impulse generated by the motorcycle microphone being switched on; this event occurred about 145 seconds prior to the first "shot". The second acoustics team was given the sole task of verifying the validity (or not) of the grassy knoll shot. It should be stressed that they measured its time relative to the keying in impulse, but not relative to other sounds on the recording. This is why I said that the arbitrary insertion of their timing of the grassy knoll shot into the sequence of the Barger report is an incorrect procedure. They also con-

of the origin of the sound to ± 5 ft on the knoll along the east-west line of the wooden fence.

The reason that this error is materially important rather than academic nit-picking is that, if one postulates that the grassy-knoll shot struck at frame 313, the relevant frame one needs to examine for a possible second wound is frame 323, not frame 327 as used in the photographic panel's report. The President's head begins a sharp forward motion at frame 323-4 which ends at about frame 328 or 329. This has usually been interpreted as "bouncing off the seat with considerable violence". I have no argument with those who conclude that President Kennedy was hit in the head from behind; the physical evidence is overwhelming that this is so. Also, this bullet was fired from Oswald's rifle. What I do question is whether this event occurred at frame 313 or one-half second later. By frame 327, 0.7 sec later, which I believe was the wrong frame to analyze, the President is out of position to match the wound with the Depository window. I do not think this is the case in frame 323.

You mentioned that you had doubts about the grassy knoll shot because it was deafening when you heard it during the tests--it made your right ear ring, and you thought Zapruder should therefore have been more positive about it. I agree. In fact, when interviewed immediately after the assassination by the Secret Service, he apparently was sure: "According to Mr. Zapruder, the position of the assassin was behind Mr. Zapruder." He later testified that one shot reverberated all around him, louder than all the others. This could be consistent with his initial statement and a double shot from two locations. Mr. Zapruder's condition on the day he testified was hardly conducive to clear recall--the transcript shows that he was extremely upset by the questioning and broke down several times and cried while viewing the photographs he took. I suggest that the difference between what you heard and what Zapruder said he heard could be due to a difference in the positions of the rifles. As I noted from your testimony and the acoustic reports, the test rifle was fired from a location very close to your position. However the acoustic placement of the grassy knoll rifle is in a position about 20 ft further to the southwest of the test position. In any case, several other witnesses in the vicinity stated that shots or a shot came from the knoll, although very few of these were called to testify before the Warren Commission.

Among those who were very close to the grassy knoll who had vivid recollections of a shot from the knoll but were not questioned were Gordon Arnold, Mary Woodward, Maggie Brown, Aurelia Lorenzo, Ann Donaldson, and John and Mary Chism. Sam Holland and Jean Hill saw a puff of smoke, and several people including policemen smelled gunpowder in the area immediately after. So, despite your doubts about Zapruder's recollections, there is abundant witness corroboration for the acoustic finding that a shot was fired from that spot.

is minimal. What I would most like to see tested is the probable reaction to a series of shots to see whether the usual pattern is a distinct reaction to each shot, or only to the first shot (or two). This might be relevant to further interpretations of your analysis.

I have to agree with and am grateful for the analysis and conclusions about the genuineness of the photos of Oswald with the rifle. However, we should remember ~~in~~ that all these photos prove is that in April 1963 he owned a rifle, probably the same one which fired shots on November 22. They do not prove that he shot President Kennedy.

I do not get many chances to visit the USA these days or to attend AAS meetings very often, but I hope that if I do we might have a chance to meet some time and discuss these questions further. Meanwhile, in reference to "soft" evidence about Oswald, you might take a look at a new book by Anthony Summers called Conspiracy. The evidence, unless everyone is lying, is not as soft as you seem to think. As for myself, my personal view, after considering the evidence available, is far from comfortable with the notion of Oswald's guilt.

Sincerely,



M. M. Dworetsky