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OCTOBER 11, 1980

8/15/80

FBI:LL:JIF:jad

129-11a

Dr. Michael M. Dworetzky  
Department of Physics and Astronomy  
University College London  
Gower Street  
London, WC1E 6 BT

Dear Dr. Dworetzky:

Your recent letter to the Attorney General's Office was forwarded to the Criminal Division for reply. You provided a detailed analysis of the physical evidence in the John F. Kennedy assassination. You also requested that your letter be referred to the scientific experts involved in the review of acoustical and photographic evidence in that matter.

The National Science Foundation has recently contracted with the National Academy of Sciences for a study of the acoustics research techniques used by the experts who performed the analysis of acoustical evidence for the House Select Committee on Assassinations (HSCA). The Federal Bureau of Investigation Laboratory is also performing a study of the acoustics research in this matter.

We have taken the liberty of making your letter available to the National Academy of Sciences and the Federal Bureau of Investigation. You will be contacted directly by either of those agencies if additional information is sought for the evaluation of your theories.

The Department of Justice envisions completion of the investigative and scientific tasks sought by the HSCA in about four months. At that time, a report will be sent to the U.S. Congress. The Congress is expected to issue a public report in response to that information. That public report should be available to you through the channels which you used to obtain the HSCA report.

Records ✓  
Gen. Litigation  
Fogel (2)  
Kench

2578

Your detailed analysis and offer of assistance in the future are appreciated.

Sincerely,

PHILIP B. HEYMANN  
Assistant Attorney General  
Criminal Division

By:

LAWRENCE LIPPE, Chief  
General Litigation and  
Legal Advice Section

OFFICE OF THE  
DEPUTY ATTORNEY GENERAL



8-22-90

~~Mr. Cabbage~~

Mr. Fogel

Please acknowledge.

Perhaps we should  
send to NAS??

RUC.





Dear Michael Dworetzky,

9/6/81

In your letter of August 15, 1980 to Mr. Keuch of the Justice Department you refer, correctly, to "a serious logical flaw." You had no way of knowing it, but your perceptive letter also suffers a serious logical flaw: you assumed that the official investigators were serious and intended diligent investigation. No official ~~ME~~ investigation of which I know intended anything other than further covering up. The real purpose of the House assassins committee was to put down all critics and criticism. To the best of my knowledge I am the only one with whom it refused to tangle. It was only when the anticipated results of the acoustical testing could not be used for any such purpose that those whitewashers decided to use it to escape total bankruptcy. But by then the overall and corrupted record did not permit proper use by HSCA anyway. It is because of the baseless HSCA theorizing that all shots came from that one rifle and that one sixth-floor window that the work it assigned to Barger et al required this as a preconception and built-in limitation.

If there had ever been any official interest in interviewing all the witnesses, the impressive statistics you compiled would have been even more impressive. You are restricted to those the FBI and Commission believed they could get away with ignoring. For one example, the FBI never interviewed a single one of the 18 Dallas motorcycle policemen about the JFK assassination until 1975, when it interviewed two and managed then not to report to Washington what was of most pertinence and interest in what they said. (The Commission was content.) I go into this in a current affidavit in a current, albeit the very oldest, of Freedom of Information (FOIA) lawsuits, for the results of the FBI's scientific testing in the JFK investigation, spectrographic and neutron activation analyses.

The person to whom your letter was originally routed sent it to the man who drafted the response for the Criminal Division chief. He then asked, "Perhaps we should send to NAS?" Mr. Fogel decided to include the FBI also, from the response to you. I'd be interested in knowing if there was any serious expression of interest to you, from either the FBI or the NAS panel. Which includes a notorious if eminent partisan, Luis Alvarez, who should have disqualified himself and, in fact, should never have been considered because of his partisanship. He cannot find any evidence of any other shooting without condemning himself and his past. His own diatribes are based on the three-shot-only, Oswald only official mythology.

There is much evidence bearing on more than one shooting and shooting from another or other points. Some is involved in this ongoing litigation to which I refer above, C.A. 75-226, in federal district court in Washington. This is the case over which the Congress amended the investigatory files exemption in 1974. The FBI was forced to conduct testing pertaining to other shooting but to the degree possible it avoided all of this. One of the dodges that I regard as a more serious offense than "a logical flaw" is the rejection of anything not of 6.5 caliber.

It was known from the first, for example, that the slits in the front of the JFK shirt collar were not caused by a bullet but were made during emergency procedures, by a scalpel, but this was uncongenial to the official predetermination so all the tests and testimony were and remain ignored. HSCA knew of this and avoided it because of its own preconceptions.

Even though before digging it up the FBI knew that the Dallas curbstone that was scarred by the shot that inflicted the minor injury on Jim Tague had been patched it pretended otherwise. Does to this day. One of the bits of new information I will be presenting to the court soon is an FBI page saying this, withheld from the Commission. Not saying there had been a patch, saying that the nick which did exist exists no more.

What also exists no more, if the unsworn representations of the FBI in this litigation can be believed, is the samples submitted to NAA. These, if they do not lie,



/destroyed as radioactive trash. They were neither.

A similar fate is said to have befallen the curbstone spectrographic plate, the given reason being to save space! (Only lead and antimony are said to have been detected.)

There is no innocence. Even Dr. Baden admitted to me that he suspected that the knot of the tie had been undone before it was shown to him after being retired. It is the knot alone that had evidentiary value and the FBI undid it years ago. Spectrographic analysis, by the way, showed no metallic traces on it~~s~~ of the front of the shirt. It also was nicked by the scalpel, when the tie was cut off at the hospital.

The FBI was so upset over my earlier and accurate writing that for a while it considered filing a spurious libel suit against me, in Shaneyfelt's name, to "stop" me, the word of its own internal records. They finally chickens out.

Reference to spectrographic analysis is, I can now state definitively, to only qualitative analysis. The quantitative analysis was never done. It was done, at least stated, with the Tippit killing evidence, so it was possible for the FBI then. I did not learn this, as proof rather than suspicion, until this year, when I deposed another FBI Lab agent. His testimony is explicit.

As you are aware, based on the timetable given to you a year ago the reporting of the results is now eight months overdue. Actually, all that work should have been done before you wrote Justice.

There was to have been enhancement of the motion picture taken by Charles Bronson. All knowledge of this had been suppressed, meaning of the existence of that film. I got the Dallas internal memos in another FOIA suit. As of my last information, the FBI was still stonewalling.

One of their problems is partly solved by having a "private sector" panel do the work. FOIA applies to official records only. They'll be able to claim that the records of the panel are "private sector" and immune under the Act.

The Bronson film, by the way, shows more than one object in that window. It also shows motion by those object. One purpose of the enhancement would be to identify those objects.

The date stamped on the letter to you appears to be October 31, 1980. The carbon states that it was typed 10/10/80. The date written on is 8/15/80. They did not get many letters like yours and it appears to have been disconcerting.

It is a careful and cautious letter. You did a good thing.

Sincerely,

Mikhail M. Dworetzky was of the  
Department of Physics and Astronomy of the  
University College of London, Gower Street,  
London, WC1E 6 BT

Harold Weinberg

*Letter page*

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15 August 1980

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Mr. Robert L. Keuch  
Special Counsel  
The Attorney General's Office  
Justice Department  
Washington, DC  
USA

*129-110*

Justice Department Investigation of  
the Assassination of President  
John F. Kennedy--Acoustics Analysis

Dear Mr. Keuch,

It is my understanding that the Justice Department is engaged in a new study of the acoustics evidence originally examined by the House Select Committee on Assassinations (HSCA). This letter contains a recommendation which I hope will be forwarded to the acoustics experts whom you have asked to make this study.

Speaking as a scientist myself, with a background of nearly 20 years of study, research, and teaching in the fields of physics and astronomy, I must comment that the original analysis, although obviously preliminary, was a highly convincing piece of scientific detective work. However, I believe that there was a serious logical flaw in the original acoustics report by Barger et al. (HSCA VIII, p. 33) which ought to be corrected in the detailed analysis performed under Justice Department auspices in order not to bias the results unfairly.

It is my firm opinion that the sound impulse at channel time 140.32 seconds (Table II, VIII, p. 101) was unjustifiably rejected from further consideration as a possible gunshot. The impulse was rejected as a "false alarm" because ". . . [the] rifle cannot be fired that rapidly" (VIII, p. 105). This is incorrect reasoning, as there is no objective data to indicate how many rifles were actually in the Texas School Book Depository (TSBD) on November 22, 1963. One was found; there may have been another.

Out of personal and scientific interest I have made a careful study of eye-witness testimony, the Zapruder film (from various published versions), and the acoustics reports. I believe there is very strong evidence which suggests that the impulse in question actually represents a gunshot; this evidence is summarized below.

1) The first two shots were fired only 1.66 seconds apart. This is the minimum possible time in which the Mannlicher-Carcano rifle could be reloaded and fired



without aiming, according to tests made by the HSCA. There is general agreement that the first shot probably missed; it seems totally illogical to expect the assassin to have then rushed the next shot. Obviously this means that there is already a strong inference inherent in the acoustics data that two guns were fired from the TSB. (I understand that the possibility of another firing point in a nearby building was not entirely eliminated by the preliminary analysis, but the more careful analysis should resolve this question.)

2) I have analyzed the detailed statements of 72 witnesses, of whom 71 testified or gave detailed sworn affidavits to the Warren Commission. This work differs in scope from that of Green (HSCA VIII, p. 128). These statements could be classified into three groups:

A: Those who described three closely spaced shots (36 witnesses);

B: Those whose testimony corroborates the acoustical analysis by 1) describing the last shot as "double" or a distinct pair, 2) describing four shots with a pause after the first three, 3) providing testimony which totally agrees with the acoustics work (10 witnesses);

C: Those whose testimony is too vague to analyze further (26 witnesses).

Selection of witnesses was severely biased by the way in which the Warren Commission went about its business. One should not read very much into the fact that the numbers in group A are larger than in group B.

The 36 group A witnesses were dominated by those 28 witnesses who recalled a distinctly longer gap between the first two shots. The mean value of the duration of the three shots estimated by those who offered quantitative opinions was 5.8 seconds, with a standard deviation of 1.1 seconds.\* The mean value of the ratio R of the pause between shots 1 and 2 to the pause between shots 2 and 3 is  $R = 1.55 \pm 0.14$  (standard error). The statistical probability that 28 of the 36 class A witnesses would describe such a specific series of events in this way if there had actually been equal pauses or a longer pause between shots 2 and 3 is much less than 0.1%. The small number of those who described the shots as "equally spaced" is consistent with this low probability.

Forensic psychologists are (or should be) aware of the weaknesses of witnesses.\*\* One such fault is their inability to report intervals of time accurately. Fraisse (1964) quotes three experiments, Langer et al. (1961) published one, and Buckhout et al. (1975) published yet another. All of these

\*The Warren Commission Report (p. 117) noted that the time spans given by witnesses in testimony tended to average 5 - 6 seconds, but attributed this to the witnesses' knowledge of published descriptions of the assassination. The alert lawyer will note that the Commission thereby impugned the credibility of its own witnesses. I do not agree with their conclusions on this matter.

\*\*See list of references appended.



experiments imply that eyewitness will tend to report times to be about twice as long as those actually elapsed, over a range of true elapsed times from 3.5 seconds to 6 minutes, 15 seconds (see graph).

Therefore one has every reason to suspect that the class A witnesses actually heard the three shots over a span of 3 seconds or slightly less, and that the spacing did in fact have a value of about  $R = 1.5$ . There is strong support for this in the testimony of Police Chief Curry, who estimated the time span as 5 - 6 seconds, but whose estimates of his speed and position where he heard each shot indicated a total duration of 2.1 - 2.7 seconds (Warren Comm. IV, p. 172). This remarkable testimony has gone un-noticed until now.

3) In the Zapruder film, three events which probably represent the first three shots are seen at frames 191, 224, and 233-4. The first event is a large blur which could be Zapruder's reaction to a shot fired at approximately frame 184. The second event is the President's reaction to a wound incurred after frame 205 and before frame 224, and the third event is Governor Connally's first visible reaction to his injury. The elapsed time for these three events is approximately 2.6 seconds.

If the impulse at 140.32 seconds of channel time is a shot, the ratio  $R$  from the acoustical data is exactly 1.50, and the total interval is 2.76 seconds. This agrees extremely well with what the witnesses reported--provided the expected correction of a factor of 2 is applied to allow for their incorrect estimates of the elapsed time. The three rapid shots could also satisfactorily be construed to agree with the Zapruder film, and at the same time eliminate the contentious and troublesome "single-bullet" theory.

I would prefer not to go into detail in this letter about possible reasons why the class A witnesses did not recall the last shot(s), except to note that there are strong indications in testimony of a rapid onset of mass panic, screaming, and a very loud motorcycle "revving up" in Houston Street immediately after the first three shots. One witness, Mrs. Mary Muchmore, had been filming the motorcade and panicked--stopping the camera--when she heard the shots. Although she could not recall doing so, she actually filmed a sequence seconds later which included the head shot (Warren Comm. V, p. 140. Alas, Mrs. Muchmore did not actually testify herself, and her statement does not appear in the 26 volumes of exhibits. Her testimony might have been very useful.)

If view of all the indications that the impulse at 140.32 seconds (channel time) is a gunshot, it is obviously imperative that the acoustics experts should devote some attention to it. This is the basic recommendation which I would like you to convey to these experts.

I am quite willing to prepare a more detailed report on the analysis of eyewitness testimony, if you feel that it would be of value to your investigation. It

M. M. Dworetsky  
15-aug-1980

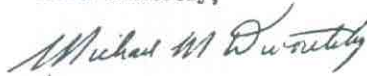
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could serve to supplement the acoustics analysis.

Could you please advise me when you have passed this recommendation on to the scientific experts concerned? Also, I would be grateful if the final report on the Justice Department's investigation could be sent to me when it is ready. If any information is available now, I would of course appreciate receiving it. I sincerely hope that my suggestion does not come too late to be acted upon.

You will, of course, understand that I am rather out of touch with American news here in London, and that this is the reason I am writing to you now rather than earlier. I wish the Justice Department every bit of success possible in finding out what really happened that day.

Yours sincerely,



Michael M. Dworetsky

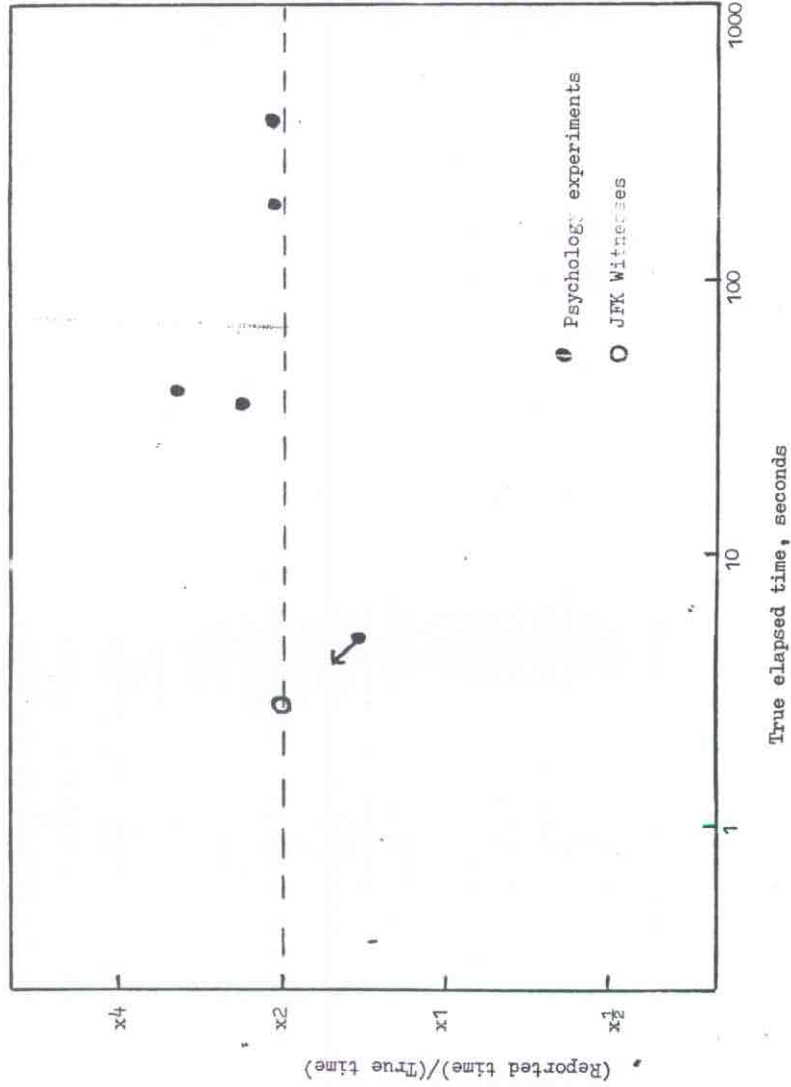
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- P. Fraisse, The Psychology of Time (tr. by J. Leith), (Eyre & Spottiswoode, London, 1964), pp. 227 - 228.
- G. Cooke, ed., The Role of the Forensic Psychologist (Charles C Thomas Publishers, Springfield, Ill., 1980), pp. 175 - 198 (by Buckhout).
- J. Langer, S. Wapner, and H. Werner, Am. J. Psychology 74, 94, 1961.
- R. Buckhout, R. Figueroa, and L. Hoff, J. Psychonomic Soc. 6, 71, 1975.

see also Buckhout's articles in Cooke, op cit., and in Scientific American, December 1974.

M. M. Dworetzky  
 15-aug-1980



Caption: Results of experiments comparing observers' reported time elapsed with actual time elapsed in five experiments. The point with an arrow represents a "stress" experiment in which increasing subject stress produced responses nearer to the tip of the arrow. The JFK witnesses are also shown if it is assumed that the third impulse at 140.32 seconds (channel time) is the sound of a gunshot.