

9/2/70

Dear Paul,

Because Bud asked me to remain near the phone in case he has to consult me from the Ray hearing today in Memphis, I had planned to keep this afternoon as clear as possible. This, having cleaned up most of the mail, I begin to respond to your request for comment on your paper dealing with head-motion and Zapruder. In order to get it to you as fast as possible, having read your first page, I will have to comment as I read, which, of course, is not as good as reading and then going over. However, as you know, I am also in the final stages of a book, so therein little choice. It may be that, in light of what I may come across in later pages, some of the earlier comment may be unwarranted. However, I hope you will believe it is not deliberate, coming from the disagreement you know I have with your thesis.

Page 1, par. 1. To say that "critics of the Warren Report have drawn inferences against the Commission's conclusion from the principal record of the assassination", the 4 film, is inaccurate and prejudicial. It is the same as saying "only", whether or not you mean to, and the principal physical evidence was the corpse. Evidence shows exact record, but the same is true and you should rephrase that part.

Whether or not you so intend, I say as so as I begin your second paragraph that you are using Thompson as a straw man. It is inevitable. You know most major critics have criticized him and you know that this aspect of his work was plagiarism. Especially is this true when with uncritical pretended straightforwardness you say, "Thompson analyzed in detail". He gave his opinion, but his work can hardly be called analysis because it was separate from the other relevant evidence. It is erroneous to say "Kennedy is obviously driven backward and to the left", the Garrison-Lane formulation. These are discontinuous motions and he was not, I think it is fair to say, "driven" to the left. He went that way, but not because he was "driven" if you are to be precise, you should say "wounds", multiple, not "producing a massive and fatal wound". It is inadequate to say that "several critics have claimed that the backward motion is in itself evidence of a shot from the right front (the direction of the grassy knoll.)" Mine is the first book to report this and it doesn't say right front and there are two grassy knolls. As I continue it is more apparent that, whether or not consciously, you are using Thompson as a straw man. I can not reread, but is it fair to say "comparable"? The "conclusions, as you know, is not Thompson's." He repeated it. Nor is this the only possibility of hits from both the front and the back, what I also regard as "implausible".

Page two: it is to repeat an earlier impression to say that it is Dr. Alvarez who "found evidence that Zapruder had jiggled his camera, probably in reaction to a shot", for this was earlier published by me and I have always pursued his interest in it was prompted by you and perhaps others. In fairness to Dr. A, I think the best that can be said is that he confirmed the earlier finding which he failed to credit, allowing this duplication to get the widest broadcasting in history as though it were his original finding.- and he knew it wasn't.

If I understand your bottom 2, top 2, you are saying that the force required to drive some soft material forward as you describe that direction, was sufficient to drive the entire head backward, and that violently. If this is not what you are saying, I would appreciate a formulation I might better understand. Whether or not this is the case, is it adequate, with what you seem to be building on it, to describe this motion as "primarily in the forward direction"? How about to the JFK left? Can you be absolutely certain that the "primary" direction was not to his left, on a motion of Z alone? You may do this, but in order not to forget, you should also study this head motion in Buchsore.

If this is all you say and consider about what happens to material once inside the hole, do you regard it as adequate? Can you ignore the positive evidence, subject to human frailty but abundantly and consistently reported, that most of the material went other than you say? And that tale is inconsistent with the existing descriptions of the wound(s)?

The opening of the first full paragraph on 3 confirms my opening: everything is Thompson. He speaks for all "critics". As for USA's immediate assumption, it fits quite unlike that of two engineers, who independently and spontaneously wrote me disputing that basic arithmetic. Because I'm taking this as I come to it, I raise a question about the characteristics of other than a hardened bullet, its design that it explodes. If you do not consider this, can any thesis or estimate be credited? Or, suppose it is designed to mushroom? And I see no reference to alleged points of impact, which I'd presume influence arithmetic, if not physics. As you well know, with up to a $1/3$ variable, Thompson could not estimate what he said to CIA, which makes using him as a sample of all not very fair. At what point in the time required for each exposure was it made? Suppose the first was made at the precise beginning of that interval and the second at the least, or the opposite? Then you assert his consensus as fact and base your calculations on it. Unless I am in error in my representation of Thompson, is it physics you here present? Before you can base any comment or calculation—even opinion—on Thompson, where is your independent confirmation of his so-called "calculations"? How can you use them unconfirmed? And if I can be devil's advocate, how do you know what is driven forward? Is it "driven", in the sense you have used this word, or rather propelled or exploded? And what evidence is there that it is included metal and bone? (which is also "viscous", so perhaps on this basis alone you need rewording at least). In fact, how, scientifically, since this is presented as pure science, can you continue the use of the word "fragment", and on what basis do you change the description to "forward-going"? And how about those so very we knew went other than forward-most?

On page 4 I see the word "infracted". But I see no representation of it. How is this depicted in the film or elsewhere? By no motion, only text? I haven't the background to follow you here, and I think, despite the intended place of publication, this should, if possible, be understood by those who might be in a position to dispute it on some basis other than a technical knowledge of physics, which thus far, frankly, I must say is separated from existing evidence that it seems to me is not possible except in pursuit of a preconception. You say "the part of the target that is not driven forward must recoil backward". But, in the sense that "forward" is away from the front: where is there any motion other than you describe as "backward", which would, in your thesis, have to be the initial motion? I haven't seen it. In the film or your words, you are describing a motion in relation to no motion, unless I am entirely lost.

It may not be disqualification, but on 4 you should specify what was used: rifle and ammo and characteristics. I think it likely the reaction to a Mosler and a Western military could be significantly different. Perhaps you do, later, but I feel this is important enough to note. I report also that all the army experts I consulted refused to believe, as yours did.

At the beginning of 5, I raise these questions: is it okay to use a 30.06 and, if it only, especially alone? Or a ~~different~~ "round-nosed reloaded bullet"? What is that? There is good point in taking pics at 24 fps and even more, but are you duplicating 13 fps and the different shutter speed? I think not. Perpendicular to the line of flight has to be wrong. More so is prone position, whichever direction you believe the shot originated, for it (either case the elevation was considerable and, if from the front, the angle could have been steeper than the elevation alone might indicate. You have, actually, a reverse of every position and relationship you claim to be checking. I cannot say they alter the results, but I can say they are not duplication and you are back at the beginning. Your reconstruction begins...

Please do not misunderstand me on testing the official version's probity. Dick Barnable and I went to considerable trouble and expense to check out what the FBI, ostentatiously, did not. We found we could exactly duplicate what they didn't even try to-and we had not, at the beginning of our own test, seen how this could be so. (Some of them.) However, you ask for critical comment, and that is what I'm trying to give, intending constructive advice and hoping to forestall what I regard as at best an inevitable, smother, eye-opening, out-of-context gas. One is too much, especially when it will be presented as science, which is also what once proved the world flat and the rotation of the sun around the earth.

How does a shot from the prone position into a target an ungiven number of feet above the ground get described as driving the target downward?

I next come to the description of what happened to the bullet, and am reminded of the earlier LIA use. CBS used maceonite except where it was required. What did you add to the maceon to replace the benefit the head? How did you compensate for the different reactions of the different kinds of bullets, of different velocities (your's not given), angles of incidence (in real situation there were two). And did you use any kind of explosive bullet? Did you use extremely high, small calibre? Or are you assuming that the FBI had to be it? This means nothing and invalidates everything, "science" or fiction, if it is the basis of your "test". But, without simulation of here, have you any? Do you suppose all of this didn't suggest itself to the FBI?

It may not be disqualification, but I regard as dubious spray-length comparisons at 24 vs 16 speed.

If your motion could "fall down under the influence of gravity", how have you conducted a real "test"? How do you duplicate the attachment of (index) to the body?

— Haven't the scientific background, in any discipline, to argue, as I merely express what seems to me to be a common-sense apprehension of astounding exaggeration by needlessly exposing at 24 fps and then projecting at 16 fps, which is the speed at which the film should have been exposed. And what is the "apparent ambiguity"?

Why is it of interest to note the discrepancy with Snyder when you have not stimulated identical conditions?

— Please — misread this page, you are saying that your work shows that if the shot had been from the front, the spray also could have been toward the front.

It is quite wrong to say that because the film is owned by LIFE you cannot reproduce it. The first book did contain frames from it, I've used them on TV, all over the country, and LIFE has not made a murmur. If you want to do something constructive with the backing of LIFE, challenge LIFE on this rather than assuming what is proven wrong to begin with. You can and should reproduce the frames, for persons in the scientific community may be able to project an understanding in your discipline, that is contrary to yours, especially on the direction of the spray as well as the interpretation of the motion. You continue to use "Snyder" as a straw man, and it is not accurate to say we allege only that "considerable matter... was ejected backward and to the left". Most went other than to the front. And, I hope you are not forgetting the alleged distribution of the alleged fragments of bullet, with all that physics tells you about that. I hope you also realize that you are assuming the pristine condition of the film. I, for one, wouldn't—and have what I regard as reason not to, much more than you are aware of, as I've tried to indicate to you, being unable to tell you what I know.

How can LIFE say there is a "similarity" between 24fps and 16 fps film?

"All of the frames around the head shot around..."

around 313 (a better formulation than the preconception entirely unestablished, "the head shot") may be. But # 284 is not. 333 is not. The government had an as a both. As you can see, I am also deeply concerned about the intrusion of "science" into a discipline not its own, forensic science, with impressive formalities only being presented as scientific ones. Even if they are right this one to be wrong. Thus far, I repeat, no verisimilitude at all, and I'd hate that to be called "science". Especially in the context of current legal proceedings:

Ray, tennessee
US federal government, on JFK stuff.

Your work will be in this context, as an answer, whether or not you so intend, and I do insist that you consider it. This stuff will be in court for some time. This is an intrusion into that and will be misused by the government whatever your intentions and whatever your protest over misuse.

By six, after repetition so much, is it not time to specify the method of mounting the melon? Whether any of the shooting or any of the photography at any time exactly duplicated what you present it as duplicating? I repeat emphasis on bone, which is vital, whether or not you consider it. It may work your way, but it cannot be ignored, and you have done it. And at what point is that size melon(s) were impacted? Your appendix may show this, but your text should include it and any relevant discussion, if only to protect yourself and your reputation.

How is an entry hole "up to a few inches in size" an duplication? And why is no minimum given? How can the reactions be compared when the difference is between perhaps a half inch and an unknown number of inches? And when "one-half to two thirds" of the interior of the unknown melon size was evacuated, compared with part of the right hemisphere only and with no damage to the floor of the fossa or the left hemisphere? It is entirely inadequate to say "We should have weighed the part of the melon that exploded, but neglected to do so". First, do you mean recoil. Second, do you mean part. Again, lack of size or other indication of valid comparison is invalidating. Remember, I told you of the melon to illustrate what your own testing does, that the spray can go any way.

If you have duplicated "t-nail strength" with Scotch tape, ^{have you} duplicated strength? I think not. I think the reaction or interactions of bullet and bone (plus skin and other tissue) are not comparable to that with tape.

Does not your work with gelatin, a closer approximation of the reality, disqualify this paper? And is not rubber a better approximation of skin than melon-rind or beef?

I think a simple explanation of what you admit (last par, 6) that none of the melons showed any forward motion before recoil simply means they offer no resistance. Again I emphasize my suggestion of fruit was for purposes of illustration spray only.

And if all depends on "the details of the structure of the target" what kind of science is it to ignore what more closely duplicates the reality and base conclusions on what in no single respect duplicates? Next, you suggest what would happen to "the target". What does this mean? Lumen head? Melon of undetermined size, type character, consistency, ripeness, etc.? What does "rigid body" mean. A head that is not rigid, being flexibly attached? A melon that is hanging in an undetermined way? If I say I share your apprehension and misgivings about what amounts to the basis of "Lumpson's thesis, need I say I began by predicting you were working with a straw man? I've already mentioned, in addition, the ignored variables. How could it be "corrected for" when neither beginning nor end could be known, or that time period, for example. Also see no acceleration between 313 and 318.

So there will be no misunderstanding, this is not what I reported ("II about 223), but it is what Thompson stole (literally) from Ray, for Ray came to a name from having been at LIFT and reported what he told them to twin the early fall of 1966). You will find I describe "discontinuous" motions I still stand by, not inconsistent with the disappearance of 2204 from the slides and persistent refusal to replace it, nor the refusal to correct what is not 317, obviously in the 224 range. I've been trying to get this done for years. Why are you content with mere doubt of the error estimates? Why not check the work out? But, if you do, you will be faced with the certainty that you are addressing work of known inaccuracy, which would hardly be what you are describing. You'd then be in a position to begin a real study (most that could be said for it being that Thompson is wrong, and what that all makes a study about that for? You have another stray man here (top7), that any forward motion could not be used "as evidence of a shot from the front". Not even Thompson does that, quite the opposite. Only the work in this paper can be said to claim or indicate that, am I not right?

To say merely, and especially after the initial disqualification, that all you want to prove is "that a recollection of the gun is physically possible" is to beg the question incredibly, for the sole question really is "with a human head". Another matter, candy, public affairs, non-existent fingerprints-even molans believe this any is or is material as anything can be. And if a closer but still-not-faithful duplication "would not permit" us to make a conclusive statement about the assassination, why make any, knowing, as sure as hell you must, that regardless of any disclaimer this is how it will be taken? And how many will accuse you of wanting to advance yourself (I do not mean I believe this, I do not) with Alvarez, of the government-funded institution? If you cannot make a valid conclusion, it is also to a friend to make any. What good is it to compare the end two, added, when the question is three from seven, subtracted? I charge you, and I mean truly, with under-appearing, as from the past you must, that anything like this will be taken as the most definitive confirmation of the official horseshit, and I am troubled that you seem to be unaware of it. You have, to this point, proved nothing relevant, done nothing that duplicates what you are allegedly addressing, so what have you done except what will be taken as other than you say you intend but meant, if you but thing, not realize, will be interpreted exactly as you say it means not be?

How in the world can you "fool" that a taped ~~copy~~ is not an unreproducible simulation of a person's head? Has it skin? Hair? Cohesiveness? Soul, soul, what are you into when it can run an exact expression from you? And then to follow it with another children disclaimer, knowing that you live of the world in which you live and what was done with this kind of whit-washed-science last time?

Now, in the light of your next comment, will you please show me where you do an "adequate analysis of the physics of the motion of the President's head"? You are back in the public-affairs science department in this kind of thing. You postulate what to understand what did or did not happen, physics is necessary, and you do all of this without regard for the damage done or allegedly done-as close to entirely out of context as possible. That is physics or analysis? It is either physics or analysis to stage a deliberately different "test" test is not faithful in any single respect?

In the light of the foregoing and what else you say, I think you owe many people an apology, that their "beliefs" have been "based" on no more than "intuition and an inadequate analysis of the physics of the situation". And as you have already said that the gelatin thing did disagree with you and that you are not and are not going to (and I to I you did not) duplicate the reality, by what kind of logic or science can you then say "the set up of the President's head as recorded in the Zapruder film is completely consistent with a single shot from the roof". The one claim I can say for Alvarez is that he wouldn't have been happy with Galileo if he feels "this conclusion should be stated more strongly". Glad you got that "fifth floor"

in. Nothing could be more appropriate. But because you feel L.A. believes this so strongly, and especially because he has, in the past, pilfered off my copyrighted work as originating with him (you may tell him I am so sure of it if you'd like), I'd expect him to make to me with permission to use in any way I might then see fit a statement in which he describes this as scientifically precise and dependable work, duplicating the real condition with which it makes comparison as closely as it is possible for him to, and he stakes his reputation and honor on its validity, in physics and all other sciences of which he has knowledge. Unless there is an accurate and faithful comparison there is no comparison, in my view, and I want his committed before publication to a firm statement that he thinks this work justifies either your conclusion or his stronger one. We'll then see if his reputation survives it. His appropriations, no doubt, will. I would also like him to specify just as means by "the direction of the material ejected from the President's head". What went backward? What went sideways? This seems to be most of it? Or is it what you or he have yet to identify upon in the 2 frames.

I presume the dismay that overwhelms me as I get more and more into this becomes more and more apparent. Paul, I can't think of anything more completely unlike you that this rubbish. I have too much respect, really admiration for you, to say anything of personal like, to advise you with a early-voiced version. I simply cannot believe that what I am reading is yours. Dismay is hardly all I feel. However, in fairness, because this is only page seven, I should acknowledge the depths of my antagonism to virtually 100% of everything to this point, for it is only fair to consider that when considering what I'm saying. I acknowledge extreme antipathy to everything, beginning with concept through formulation of what you call "conclusions"?

I can make no sense at all of Figure 1 and think nothing as unclear as this should be included in such an ambitious result used intelligence.

2-counterexample: You have presented none, unless you are saying cabbages are kings.

"Type internally verified" when the closer simulation of the human brain, the one used by the government, does prove exactly the opposite? Neither my nerves nor mind can tolerate such more, so I'm abbreviating.

"Isn't a conclusion not correct?" What proof is there is this? That horses drop bullshit? Again, the gelatin is closer to proof.

"test it experimentally" is the one thing you did not do.

Why did not the Warren Commission come up with this? Because they lacked L.A.'s contempt for human intelligence/they dared not visit what he will.

External considerations? Is this what you mean by ignoring all the relevant medical evidence, every valid comparison?

What were the "bureaucratic, political and organizational? You mean, they fired into closer approximations? They couldn't have fired into sideways?

"Quickly-reached conclusions" - Neither mine nor those of the Commission were. The Commission agonized this long, it sustained. Defections ever it, and I spent some time poring over 2 alone, I warrant, that all of you concerted with this third-world science together before I published my own conclusion, the existing and basic one, the first one, so studiously ignored here. You prefer the other one.

Not to defend Thompson, which is impossible, how can you compare an invalid non-comparison by so-called physics, which ignores all relevant considerations and conditions, with that of an eminent forensic pathologist, which is the relevant thing?

There is a fine, judicious statement on page 9, I agree: "Alvarez' explanation is hardly obvious". How true!

I disagree to the abstract, which contains this false statement: "...comments on the motion as observed in the Zapruder film by critics..." You discuss Thompson only and he is not "critics". You discuss nothing not out of context, and I note the discrepancy between the representations of the FBI relationship ~~with~~ with CBS on pages 4 and 8.

This reminds me of Roberts, who said such things as "Lans and Weistarg say" and never quoted me, for I did not say what he said I did, sits with Epstein and me. If Thompson's was "scientific" then arrange whistle blower. (9)

Alvarez dares call this "incontrovertible physical evidence"? Or any of yours?

But it is good that your defense of the Commission and its "defenders" is explicit (In my belief, they'll not survive their "defenders").

Some error about "all of the frames".

I do not recall this citation from Starn earlier than in Accessories. It is false on early and precisely accurate account of what I claimed earlier and you do not address, that the two motions were discontinuous. You say otherwise. The alleged acceleration of the car is no tribute to Starn, for the most casual examination of the film discloses this didn't come until much later. Sylvia's book, by the way, dates to late 1967, not late 1966. (bottom, 9). Vince presented this trading (10) to me as his own idea. It is a good one. This formulation confuses between front and right of the car with front and right of the President and duplicates the error about a single, continuous motion.

On page, as you must, you bag the question of bones. It is no response to talk about the stomach.

I must protest the misquotation from P. 24, where I have just checked, not believing I made so gross a misrepresentation of my own belief. I did make this type. That it is this kind of error No. I misread you. I said the first was from the rear, that the 313 was from the front. My earlier citation of WHEE is correct, 223. I assume you had some reason for not citing this, since both were published before Thompson and both before Sylvia.

When I consider what is ~~by~~ of the serious critics, I can assume no more than prejudice in this irrelevancy quoted from Garrison (11). I ignore this lengthy stuff because it is irrelevant and can be designed only as prejudice.

You quote from the Beck's cross-examination. I believe that was in the afternoon session. If so, I do not have it and would appreciate a copy. I have the 2.2.

Nor is CBS worthy of more than disdain in a work of "physics", so I do not even read that, either. I've noted, in skipping that "a lightning is obviously a very poor simulation of the President's head". How does a ~~lightning~~ ^{lightning} become a good one?

17: Please justify "careful measurements" as applied to Thompson, the basis of this "an lyric"? And if CBS is wrong in using "an unrestrained buld", how is it right not to describe the parallel with the ~~buld~~ ^{buld}?

18: Are you underwriting that there was a ~~lightning~~ ^{lightning} and that if there had been it would have had this effect? In any event, there was a wind either then caused by the car, which you ignore.

If I read the first part of the bottom quotation to which you seem to subscribe (18) correctly, you are really saying that the weak spot is where the hole was and the ejection of matter from the front is proof the bullet came from the front. However, you are not dealing with either a "high velocity" or a "haunting" bullet.

19. You can expand on the lack of knowledge that the headshop was never considered by the Commission or for the Commission, and here, I think, you must ask yourself questions. Esp, when the FBI fails to note this in Z and Luckman and then says the snap is to the left, which you know it isn't.

21. Perhaps there was a Commission the FBI was in charge of the investigation. That they failed to see or check this can not safely be alleged. It has to be assumed that they know their business, whether or not that skill is displayed in the available evidence. It cannot, therefore, be assumed that they know less of the facts of ballistics than WFA and associates and failed to make a necessary test or were without certainty of what it would have shown even if melons were not in season in DC in 11/63.

22. If you are not claiming there was only a shot from the rear, be honest and junk this rot or face the reality that you are pretending to be dispassionate and honest when the opposite must be the effect, if not the intent, of such a prostitution of (excuse the expression) "science".

How can you have "conclusions" about the motions without consideration of the wounds? And does physics today not include Lucina?

All your pretended disclaimers vaporize at the top of 23, where you have that each of you must recognize is the *quod pro* of quotes: "Our work has demonstrated that the fatal shot probably was fired from the direction of the Texas School Book Depository Building, a *sine qua non* for any single assassin theory."

I'm delighted that your physics has healed Tague so rapidly (25) and that you "conclude" what was earlier concluded about the first shot on nothing herein attributed to science and early copyright. It is not an original conclusion with you and you neither say this nor credit any source. In such a work, however, there is the obvious next requirement, "Our work disproves the Warren Report?"

The Alvarez plagiarism is repeated here. Alfred Henry have duplicated what was copyrighted in 1955, and that not on his own initiative. Some science. Some honor.

24; the entry to heaven: "...our observations tend to support the conclusion of the Warren report, that Lee Harvey Oswald was the lone assassin...." Especially on 25 and with Tague. Like firing not fewer than four shots in time not possible for the best expert with three (all the timing is fake, it beginning with the sound of the first).

I've not time for close examination of what is obviously invisible, but Target five is noted.

Can I borrow 25 through a library can't buy, but will return. (App 3). Also nine-Apple?

I think it only fair to ask that I be told how to communicate with all protective users of this "science" so I can request identical and coinciding opportunity to discuss this new science, esp. the media, for there you should anticipate equivocation of the fairness doctrine, to court if necessary, and through a second law hearing as a preliminary if rejected by the stations or the FCC. Harold Weitzberg