

Dear Paul,

6/6/77

Your June 1 was delayed by a side trip to Newark N.J. Came today and I thank you for the information in it and the enclosures. It is helpful and it raises more questions.

I'm glad you approve what I have been quoted as saying. I recall no misquotations and there must be stories I have not seen. Today's in the Times I'll see tomorrow when I'm in D.C., whether or not there is a Hall hearing.

In case the lady-like language of the Los Angeles Member reaches you, "that son-of-a-bitch has been out to get me from the first," it is false. While I had doubts I hope you share about Downing and Gonzalez, I went to some trouble, including when I was ill and weak, to be of help and gave them a very large stack of significant material. The only reason their counsel did not leave with more last October is because he did not want to take more. This was on a wing. They were coming on JFK and never did. Not my fault. My break was over ethical and legal questions and the cheapest kind of Philadelphia-lawyer lying. While I have little concern for what is said, more than enough of this is in writing.

After I wrote you I had a response from ERDA. I'd filed and FOIA request. They referred to their S.F. office, as by now you may have heard.

It is pretty far out if a respect "obel Luareate lies and says he was supported by federal money if in fact he was not. Especially when it is included on the inside-back cover as a required "legal notice." (Even is including a disclaimer of the assurance of accuracy.)

There remains what I regard as a basic question: if not true why did Alvarez say it?

You have no doubt of NAA mishandling. It is not too late to provide Jim with suggestions. We are still in court on that one.

When I referred to Alvarez having been turned on by students I recalled, I think clearly, that he said years ago the animated discussions by and with his students turned him on. As I also recall it at that time there were only two books, WW and Inquest. I recall nothing of this nature in Inquest, at least not in the required detail. Therefore I did assume that however he learned, Alvarez learned from WW, despite a studied contrary pretense in this newer drak.

You say you recall having little to do with this. I am not asking to criticize you and if you discussed it with him what is there to criticize? Nothing. My sole interest is knowing what happened as it relates here to the possible WW original source.

What I find provocative- and not I'm not beating around the bush with words like interesting or fascinating - is "His interest in the head snap started after he asked me what the single most convincing piece of evidence for a conspiracy was."

For a man of science I believe any one is inadequate because any one can be equivocal or even wrong while many others could be right. From this I am wondering if for his own reasons he was looking for what he did - making a basic assault on a major criticism of the Report and the official account.

Later you say "Maybe we can agree that the Zapruder film is not simple to interpret" as others like Downing think. You have forgotten. Or perhaps I never told you. Anyway, when I wrote about the headsnap part in 1966 (it is toward the end of WWII) I believed it would not be credited and rewrote it down to almost nothing but a mention. If I do not go as far as you do in what is possible interpretatively if you switch to acceptability there is no disagreement. Where there is disagreement is where most disagree with me. I do not regard it is scientific or reasonable to isolate individual items of evidence.

(I've been over three hours getting this far. The phone, over the Hall hearing in\* Washington tomorrow and the NYTimes story today, has been busy. \* marks the spot when I got a California call a half half ago-last half hour. SO I'm sorry if I am disjointed.)

There are, I remind you, two separate items, one the jiggle, as you call it and then the Tink-ing, as I do. Tink's book was not out for about another year. But was the Alvarez suggested explanation the business of the head moving into the force that hit it? My memory has misled me. I thought the idea originated with Olson.

When they appeared I read some of the books on the Speer case. Alvarez' name then meant nothing to me. You say they contain unflattering portraits. Are you saying he is one of those who went after O and in doing it presented himself in this unflattering way to those who wrote later? My own view is that what happened to O was McCarthyism in its more principled aspects. You need not agree but with this my opinion if Alvarez had joined in the political hue and cry that is a self-portrait to me.

Not inconsistent with his Operation Jargon career. I've forgotten the details of it. The Eisenhower phrase is Military-Industrial complex. My recollection is that this was big brains justifying everything (that I would not justify).

There is an undercurrent of defensiveness in your graf where you say of course a melon is not a head. I'm not a scientist and I'm not going to go through all that business again but I am saying that an eminence grise of the scientific world knows better than the experiment of which you were part. I'm glad to know that Soder and Sagan, of whom I have no recollection, agree with my chicken-farmer's notion that with the bone in it the skull is relatively rigid. There is much more that can be said than this. More than the absence of replacement of bone, nerves, attachment, etc. But this from a Nobel laureate and it is called science? You and Olson were kids, perhaps overwhelmed by his reputation.

You do not respond to my question about where in the melon the shots were aimed and about even with an unattached melon would you expect the same reaction if the force were applied in the middle as you would get with it applied at the top. We have learned much since what I remember as the time of those shootings.

I like Don Newhall and I've never found him irresponsible. If I've forgotten that conversation what you say is an understatement of what I thought. Gardner is understating considerably and emphatically. I do not ask why. It is scant comfort to find that just about everyone who has had any contact with the committee has come around to my early opinion-and predictions. (I have not seen the Rawls story but I'm confident it is also understated.) These interruptions just seem like they'll not end. One told me that the committee has issued a vague press release attacking Rawls for not waiting another 8 months to see that by then they do not have what they now want believed at long last they have. Another is that those who can get other jobs are looking. It is not just on Hall and the news stories. But on the stories I presume the reporters begin with the assumption that they must be timid to get past the desks and then the desks eviscerate them more. My impression of Rawls is that he is a good person and an first-rate reporter.

I'll be out there briefly in a little over a week. I have no schedule. I'm going to Dallas for some FOIA work and then to LA for other work. I expect to go to SF just long enough to see the Whites. Hal has been silent, unresponsive, for years. Thanks and best,

June 1, 1977

Dear Harold,

Thanks for your letter of the 27th.

I only have a single copy of the Alvarez preprint, so I have Xeroxed the front and back ~~xxxx~~ covers for you (along with the first page). When ~~xx~~ the published version came out, I checked it against the preprint, and my recollection is that there were no non-trivial changes.

I've also enclosed the cover page from my ~~xxxxx~~ thesis, which shows the same contract number. I'm pretty sure that is a general contract covering all the work of the Lab.

Yes, I would be surprised if ERDA authorized Alvarez to use any money for this project. In fact, ~~if~~ I wouldn't be surprised if they had no knowledge of this work until it was done and written up! (Of course I have no evidence on this point.)

I have no doubt that there could be a major story in how the NAA was (mis)handled. That is probably an unrelated story, I would guess.

My recollection is that I had very little to do with Alvarez' first interest in the Z film (which led to the much-maligned, thanks to CBS) "jiggle" theory. My ~~xxx~~ office-mate at the time, who spent quite a bit of time talking about the JFK case with me, was one of the ~~xxx~~ students who frequently talked with Alvarez over lunch or coffee; I wasn't. I recall that there was so little contact at that time ~~xxxx~~ that when Alvarez wanted to check the film in the 26 volumes, he went to the law library and didn't even contact me.

His interest in the head snap started after he asked me what the single most convincing piece of evidence for a conspiracy was. I told him about the head snap and (I think) loaned him Tink's book. He came up with a suggested explanation, and then Olson and Buckingham joined us in testing it experimentally.

I don't know anything about ~~Rxxxxxx~~ Project Jason, so I can't help you on that.

For what it's worth, ~~xxxxxxxxxxxxxx~~ the WC critics are not the first people to find Alvarez difficult, arrogant, or whatever. If you check some of the books on the Oppenheimer case and other events of that period, you will find some quite unflattering portraits. Actually, he's mellowed quite a bit in the last 10 years or so. But I do think that's all irrelevant to our major concerns.

Of course a head is not the same as a melon, and we weren't trying to simulate a head in detail. Let me try ~~xxxxxxx~~ stating my understanding of what the Alvarez experiment has established: if the WC critics are to argue that the head shot could not have come from the rear, we cannot do so simply from a general principle ("A target always goes away from the gun") but must base the argument ~~of~~ on the specific properties of the skull, the bullet, ~~the~~ ~~xxxx~~ and the motion which distinguish them from the situation in the Alvarez experiment. The most persuasive criticism I recall hearing (and I think it came from Soder or Sagan at Cornell) is that the relatively rigid skull (bone) would require more forward momentum to be imparted. But that is also a hypothesis, which would have to be tested experimentally. Maybe we can agree that the Zapruder film is not simple to ~~xx~~ interpret (as people like Rep. Downing think), and that the proper scientific study to get all possible information from it has not been done.

Jon Newhall of Zodiac News (who told me he had talked with you) gave me some ~~xxxx~~ details about the House Committee's interaction with Loran Hall which make the Committee look far worse than what was printed in Lardner's piece - which ~~xx~~ was bad enough. A couple of people from their investigative staff talked with me for an hour when ~~xxxx~~ they were out here a couple of weeks ago, and did nothing to change my opinion that the Committee doesn't have its act together and is showing no signs of doing so in the ~~xxx~~ near future. I saw you comments to Lardner when the last HSC report came out, and I thought they were well taken points.

Sincerely,

*Paul*  
PLH

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A MEASUREMENT OF THE  $K^0$  (890) MASS DIFFERENCE  
IN THE REACTIONS  $\pi^+d \rightarrow (p)\Delta K^{*+}$  AND  $\pi^-p \rightarrow \Delta K^{*0}$

Paul L. Hoch  
(Ph. D. Thesis - Part 3)

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KENNEDY ASSASSINATION FILM

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## A PHYSICIST EXAMINES THE KENNEDY ASSASSINATION FILM

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### Introduction:

In the eleven years since the Warren Commission published its 26 volume report<sup>1</sup> on the assassination of President Kennedy, a controversy has continued over the validity of the Commission's findings. Dozens of books and countless articles have been written to show, for example, that Lee Harvey Oswald had nothing to do with the event, or that he was part of a conspiracy with the CIA or other parties in planning the assassination. Some of the books, such as Mark Lane's "Rush to Judgement,"<sup>2</sup> were best sellers. In December 1966 Esquire published an article<sup>3</sup> listing thirty-five different theories that had been advanced by as many authors, each suggesting a variation on the Warren Commission's official scenario of the assassination. And since then, many more theories have appeared.

In the light of such a long history of unsettled controversy, the reader might well wonder why yet another author would feel moved to write on the subject. The reasons are quite simple; in the first place, I continue to read, and to hear on radio and television that "The laws of physics require that the President must have been shot from the front, whereas the Warren Commission places his assassin, Lee Harvey Oswald, behind him."

Such statements involve the backward snap of the President's head, immediately after the shot that killed him. I will show, both theoretically and experimentally, that such statements are simply incorrect; the laws of physics are more in accord with the conclusions of the Warren Commission than they are with the theories of the critics.

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