

RESEARCH ARTICLE

THE ROBERTSON HYPOTHESIS: A JOYLESS REVIEW

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If you have only a map of Kansas, you will never get to Oz.
--the Tin Man

If you don't know where you are going, you may not get there.
--Yogi Berra

You got to go down a lot of wrong roads to find the right one.
--Bob Parsons

Abstract

Robertson tries to prove a JFK two-head-shot scenario via an initial fracture line that (supposedly) interrupted a subsequent fracture line. This claim has been widely circulated and has often been uncritically accepted among Warren Commission critics. It is therefore worthy of serious scrutiny. Rather than logically examining the evidence, however, these compliant critics have guilelessly curtsied to the authority of a board certified diagnostic radiologist.

What is truly astonishing though is how many medical witnesses and official experts have disagreed with Robertson. It is likely that he has set a new record for this. For example, he disagrees with the Parkland medical personnel (including several neurosurgeons), the forensic anthropologist, the forensic radiologist, the ballistic expert, the autopsy radiologist, three Dallas pathologists, and even with the autopsy report itself.

He never adequately explains the mysterious, nearly circular, 6.5 mm bullet-like object on JFK's anterior-posterior skull X-ray, and he even disagrees with the ballistic expert about its interpretation. The ballistics expert, a consummate marksman, and a famous forensic pathologist have never seen such an object in their entire careers, but Robertson unequivocally claims to know what it is. Nor does he address the metallic smear on the Harper fragment, and he misplaces this bone fragment in his reconstruction of the head wound.

In summary, this review exposes remarkably many reasons for disbelief, reasons simply overlooked by laypersons. Among other miscues, Robertson has even misidentified left for right

A Summary of the Randolph Robertson (RR) Hypothesis¹

1. RR believes that the JFK autopsy X-rays are authentic and that these contain proof of a second shot to the head. The first of two head shots (separated by “a fraction of a second”) struck the right posterior skull (Figure 1) above the external occipital protuberance (EOP).² The exit site for this posterior shot lay just anterior to the coronal suture (see Appendix A), about 5.5 cm right of midline (RR offers no images). This trauma was caused “...by the entry of a jacketed bullet similar to a 6.5 mm Mannlicher-Carcano round.” He also asserted that the high entry site near the cowlick area proposed by the House Select Committee on Assassinations (HSCA) was wrong.

¹ Here is the original (undated) article by Randolph H. Robertson, M.D., which tries to prove that JFK was hit by two head shots:

<http://jfk.hood.edu/Collection/Weisberg%20Subject%20Index%20Files/R%20Disk/Robertson%20Randolph%20H%20Dr/Item%2001.pdf>.

Here is RR’s 1993 appearance before the ARRB—
Electronic Assassinations Newsletter: <http://www.assassinationweb.com/issue1.htm>.

Here is a third person (undated) account of RR’s presentation to the Assassination Records Review Board (ARRB), as well as a critique of RR’s hypotheses: mcadams.posc.mu.edu/robertsn.txt. This includes a peer review of RR, done for the professional journal *Radiology* (Manuscript #0448-93). This (negative) review is about 5% as long as my review here.

Here is Walt Brown’s enthusiastic endorsement (in about 1995) of RR’s two-head-shot article: <http://manuscriptservice.com/DPQ/robert~1.htm>.

Here is a 2014 joint presentation by Mantik and Robertson, about the Harper fragment: <https://www.youtube.com/watch?v=vk1GWih6G2s>.

See “The Robertson Study: Synchronization of the Zapruder Film with the Dictabelt” (2013): <https://www.youtube.com/watch?v=8orxa1DKKbQ&list=UUH2GWsaaN-QvVWnJtcPdaQ>. That the acoustic evidence is overtly spurious is examined in many, many pages of my 2019 updated review of Don Thomas’s work. See my website: <http://themantikview.com/>.

² In a YouTube presentation, RR concludes that the impact of the first head shot is seen at Z-313, and that it was fired from the Dal-Tex Building. Then he claims that the impact of the second head shot is seen at Z-328, and that it was fired from the Texas School Book Depository (TSBD). Unfortunately, this information is missing from his original article. RR’s 15 frame-interval between these two shots represents a period of $15 \div 18.3 = 0.8$ seconds. Whether this is a “fraction of a second” lies in the eye of the beholder: <https://www.youtube.com/watch?v=GGf0zrKkDI4&list=UUH2GWsaaN-QvVWnJtcPdaQ&index=4>.

What is most curious, though, is this: His second headshot (with a visible impact at Z-328, and supposedly fired from the TSBD) occurs far too late to produce a head snap—even though his original article claimed that the second head shot triggered the head snap. (For example, he states, “A few frames later [i.e., after Z-313] it violently reversed direction and slammed him against the back seat.”) In this video, *he does not invoke a frontal headshot at Z-315 or at Z-316*, where the head snap begins. In short, RR has presented two mutually inconsistent scenarios, i.e., one with a second head shot seen shortly after Z-313, and another with a second head shot seen at Z-328. Like his original article, this YouTube video is undated, so it is impossible to determine which of these two scenarios should have priority.

2. This EOP bullet produced a large transverse fracture of the right posterior, inferior skull. On the lateral X-ray (Figure 1), RR claims that this corresponds to the second dark line from the bottom, i.e., not the lowest dark line. RR further claims that this fracture line has been overlooked by prior radiologists. On the Anterior-Posterior (AP) X-ray, this (purportedly) same fracture line lies just below the right infraorbital rim (Figure 2).³

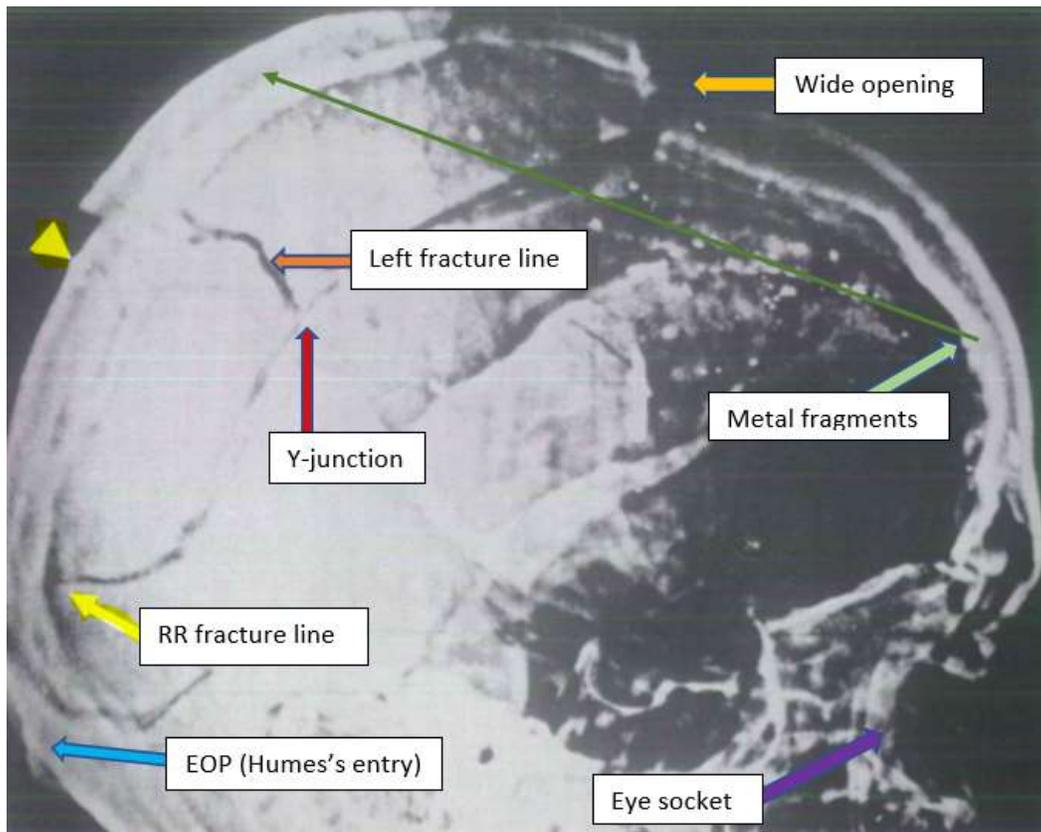


Figure 1. This is the HSCA-enhanced, “right” lateral skull X-ray, with the eye socket on the right. “Humes’s entry” represents the posterior impact site, per the Warren Commission testimony of Humes and his colleagues. The lower yellow arrow is RR’s self-identification of his proposed “transverse fracture of the right occipital bone just slightly above the EOP....” His upper yellow arrow identifies an authentic metal fragment, which he correlates with the 6.5 mm object on the AP X-ray. This upper yellow arrow is near the cowlick area, which the HSCA chose for its posterior entry site. My blue arrow identifies the approximate site of the EOP. The long, thin green line identifies the metallic trail of debris. Dr. Michael Chesser and I have both observed multiple, tiny metal fragments very near the forehead (light green arrow). See the text for discussion of the “Y-junction” and the “Left fracture line.”

³ Of course, a CT scan would have clarified the anatomical correlations between the AP and lateral X-rays, but CT scans were not even widely available when I left my tenure-track physics position and began medical school in 1972. Even today Digital Breast Tomosynthesis (DBT), using somewhat similar algorithms, is only just beginning to replace plain mammograms.

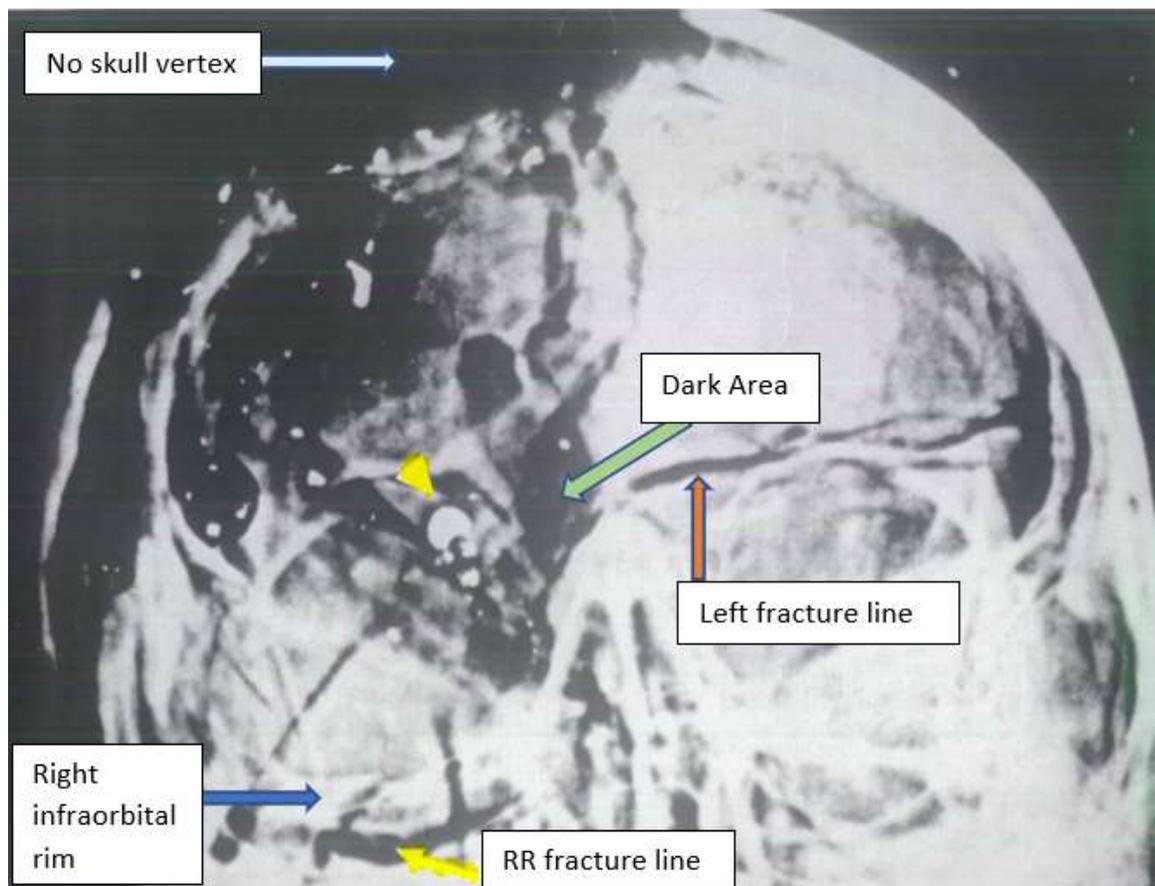


Figure 2. This is the HSCA-enhanced, AP skull X-ray. RR himself placed the lower yellow arrow to identify the correlate of his transverse fracture (shown in Figure 1). The upper yellow arrow (placed by RR) identifies the 6.5 mm object, which RR claims was deposited on the rear of the skull as a frontal bullet *exited*. See the text for discussion of the Dark Area. I interpret the “Left fracture line” as identical to the one (orange arrow) in Figure 1.

3. A subsequent bullet struck promptly from the right front, fired from the Grassy Knoll (GK). It entered rather far posteriorly, ejecting the triangular (aka “delta”)⁴ fragment from the parietal area (adjacent to the sagittal suture), and depositing metallic debris on one corner of this fragment (Figure 8). This second bullet exited at the rear of the right skull, depositing the 6.5 mm object (Figure 2) and *also* creating the trail of metallic debris near the skull vertex. It produced radiating fractures, extending “...from this impact focus inferiorly and laterally into the

⁴ There is no photograph of the triangular fragment. We have only the X-ray. This means that we cannot certainly identify which surface is exterior and which surface is interior. So, during a reconstruction, both options need to be tried. Angel’s reconstruction forces a choice between these two options. I suspect that he was correct.

surrounding bone.” (See Figure 3.) At no time did this bullet, or any visible fragments, traverse the left brain. This second shot produced the infamous head snap in the Zapruder film.

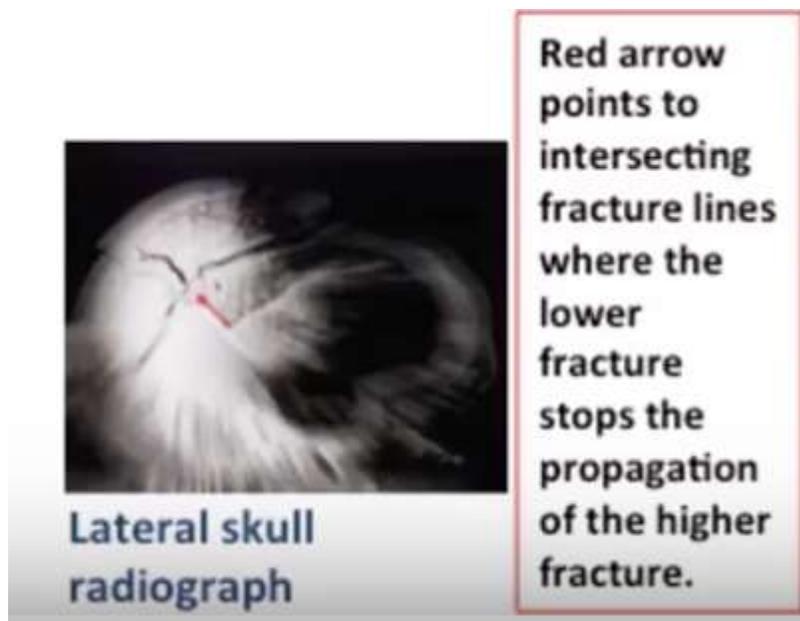


Figure 3. This image is excerpted directly from RR’s “Synchronization Study” (footnote 1). It is located at 24:55 minutes. Unfortunately, this image was missing from the original article (at the Weisberg website). RR’s “higher fracture” here is presumably identical to my “Left fracture line.”

4. *Now here is the main pillar of the RR hypothesis:* As this subsequent fracture (I take this to be the “Left fracture line” in Figure 1) descended, presumably from the 6.5 mm object (per RR), it stopped abruptly (Figure 3) where it encountered the (supposedly) pre-existing transverse fracture (lower yellow arrow in Figures 1 and 2).⁵

5. The photographs, X-rays, and Zapruder film are all authentic.
6. The Dictabelt contains authentic gun shots.
7. The triangular (aka “delta”) fragment derived from the posterior skull, near the vertex.

⁵ I label this supposed fracture line encounter (Figure 1) as “Y-junction.”

It was collected from the limousine trunk by Jackie Kennedy.

8. The Harper fragment derived from the right parietal area.

9. Although this is not relevant to the head shots, RR also believes a variant of the Single Bullet Theory (as does Don Thomas⁶), i.e., a bullet entered JFK's back and exited through his throat.

In summary, RR proposes two head shots in quick succession, one from the rear, and a second from the right front, fired by a GK gunman. This latter is a conventional critic's scenario. But this is new: RR claims, without much comment, that the 6.5 mm object was deposited on the posterior skull by the frontal bullet—as it exited. On the AP X-ray, he also claims to identify a fracture line (below the right infraorbital rim), and he insists that this pre-existing fracture caused a subsequent fracture to stop in its tracks. Finally, he concludes that his argument proves two head shots.

RR's scenario has several attractive features. It purports to prove two head shots—without requiring any photographic or X-ray film alteration. It also permits the recollections of all the physicians at Parkland and Bethesda, all the paraprofessional autopsy personnel (including Sibert and O'Neill), and the mortician, too, to be *merely mistaken*.

It also tries to explain the mysterious 6.5 mm object. The hypothesis is simple, easy to understand (even for a layman) and, furthermore, was authored by a board-certified diagnostic radiologist, nominally the best specialist for the job. Nonetheless, this scenario obscures numerous problems, several of which are fatal.

Two Dozen Protests

1. *RR's entry site for the posterior bullet is too high.* The pathologists described the entry site as 2.5 cm to the right of midline and "slightly" above the EOP (Figure 1). "Slightly" would seem to mean less than 2.5 cm. When asked by the HSCA to document this site on a skull, each of the three pathologists did so (Figures 4A and 4B).⁷ The chief autopsy pathologist, James Humes, specifically confirmed his site (Figure 5) while before the Assassination Records Review Board (ARRB).⁸ *RR admits that his own proposed entry is 3 cm above the EOP!* (Compare the yellow and blue arrows in Figure 1.) None of the pathologists chose a site anywhere as high as RR's site. On one occasion, both Humes and Boswell even described the entry site as *below* the EOP.⁹ For such a fundamental forensic fact, three centimeters is a rather excessive discrepancy. It appears therefore that RR has chosen this relatively high entry site, not because the

⁶ *Hear No Evil* (2010), Don Thomas, p. 414.

⁷ 7 HSCA 114-115, Figures 22-23.

⁸ <https://www.maryferrell.org/showDoc.html?docId=337>

⁹ 7 HSCA 246. Also see the ARRB Testimony of Dr. James Joseph Humes, 13 Feb. 1996, pp. 241-242: <https://www.maryferrell.org/showDoc.html?docId=788#relPageId=227&tab=page>.

pathologists reported it (which they did not), but rather because it fits his hypothesis. In any case, RR offers no corroboration for his new entry site.

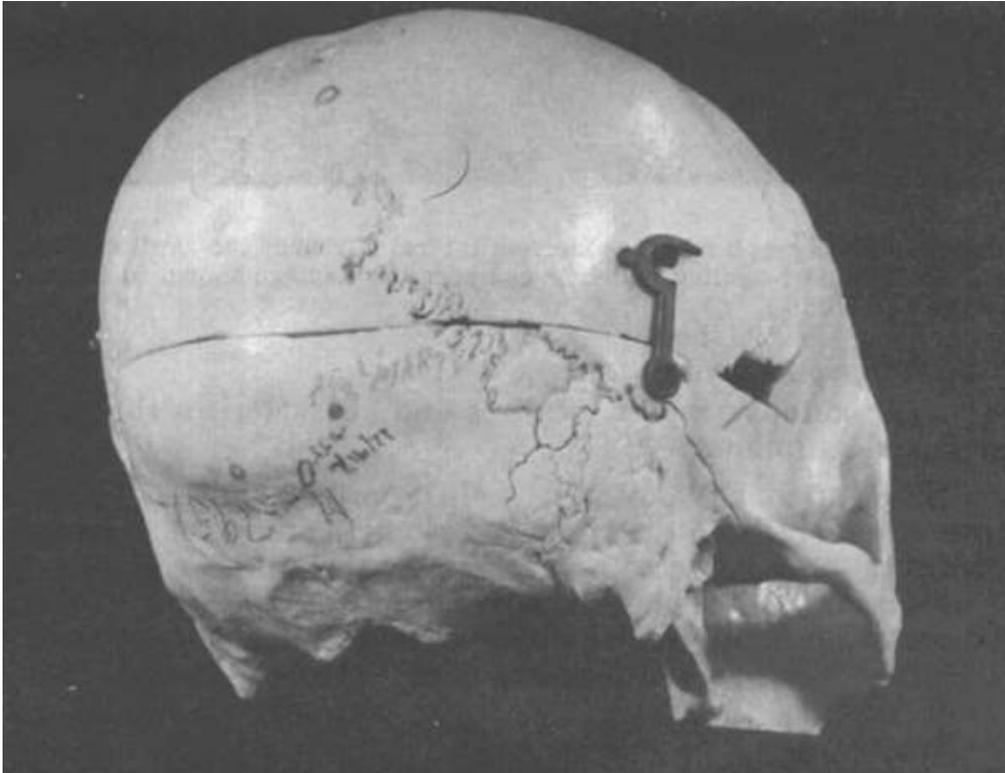


Figure 4A. The following is a quotation from the HSCA, Volume 7, Figure 22.

“Photograph of the posterior view [sic] of the human skull on which the autopsy pathologists, Drs. Humes, Boswell, and Finck, identified the approximate location of the entry wound. The two initialed circles on the lower portion of the skull and to the right of the midline represent the general area where the autopsy doctors believe the entrance wound to be. (There are two circles because Dr. Finck marked the skull independent of Dr. Humes and Boswell, and without knowing where Drs. Humes and Boswell had placed their circle.) The circle on the top portion of the skull and to the right of midline represents the general area where the forensic pathology panel believes the entrance to be. (The fourth circle on the lower portion of the skull and approximately on the midline represents the location of the external occipital protuberance).”

The HSCA finally concluded that the autopsy doctors were too ignorant to know where the wound was—because the “authenticated” X-rays and photographs proved to their Forensic Panel that the shot had entered at the circle on the upper skull.

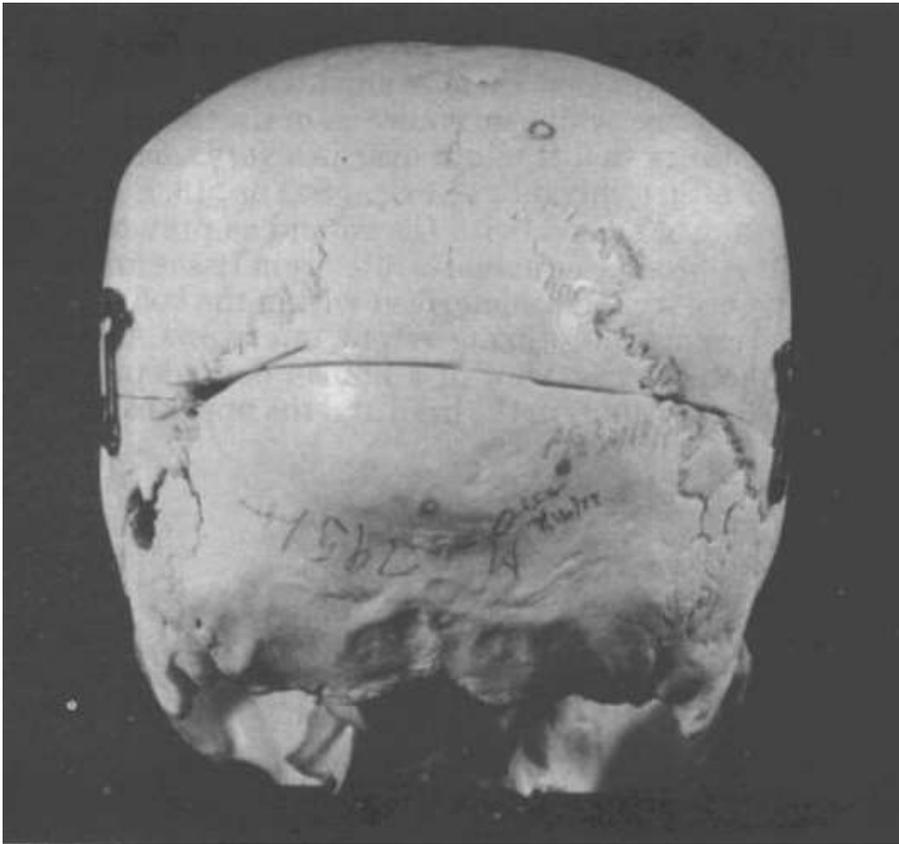
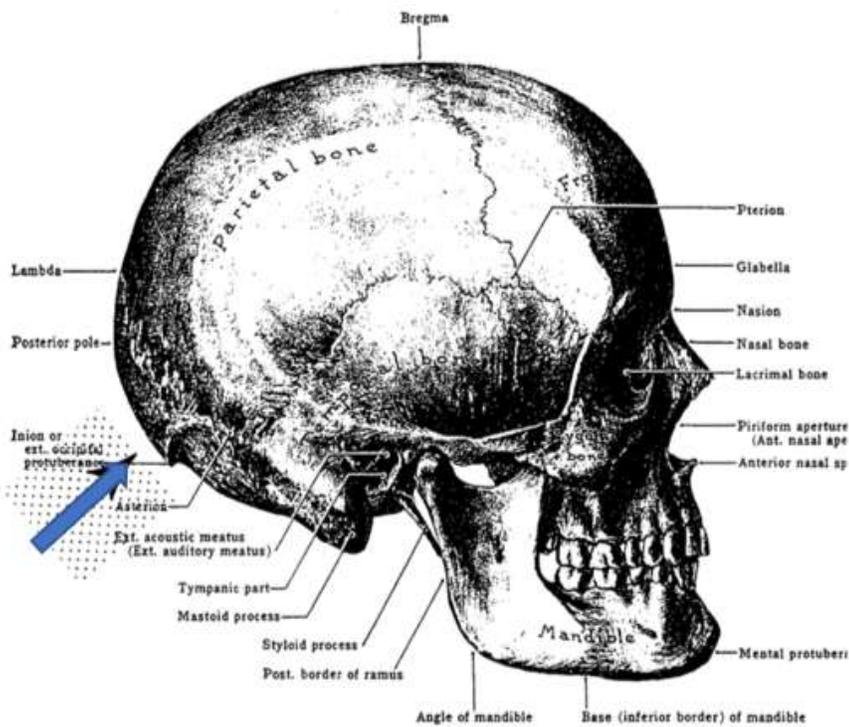


Figure 4B. “Photograph of the posterior-lateral view [sic] of the skull on which the autopsy pathologists identified the approximate location of the entrance wound.” [This is a quote from the HSCA, Volume 7, Figure 23.] See Figure 4A for further comments.



7-6 SKULL, FROM THE SIDE (NORMA LATERALIS)

Figure 5. Diagram from *Grant's Anatomy* of Lateral view of Human Skull (with occipital entry wound marked in blue ink by Dr. Humes). This diagram was identified (and published) by the ARRB as MD73.

2. *It is most unlikely that any prior radiologist (of many) would have overlooked such an obvious fracture line*—and it is this supposed fracture that is the centerpiece of the entire RR edifice. After all, this dark transverse fracture is obvious to anyone, even to laymen. If it were relevant, surely not every one of these radiologists would have missed this.

3. *The 6.5 mm object remains a mystery.* On the lateral X-ray it appears to lie on the *outer* table of the skull. If so, how could a *frontal* bullet leave part of itself on the *back* of the skull? And how ironic is it that RR's 6.5 mm bullet was fired *from the front*, and was exactly the same caliber as Oswald's (purported) weapon? *RR does not address this bizarre fluke.* Furthermore, based on the AP (anterior-posterior) X-ray, this object is not clearly attached to any bone fragment. What is the probability that such a large metal fragment would stop abruptly, outside the skull bone that it had allegedly just perforated (per RR), and fix itself in *the soft tissue* of the scalp?

And RR does not explain (at all) how a parietal entry would deposit multiple tiny fragments very near the forehead (Figure 1—see “Metal fragments”).¹⁰ Even worse, the 6.5 mm object does not lie on the bullet trail; on the contrary, it lies well below it. *RR does not discuss any of these issues.*

4. On the lateral X-ray (Figure 1), RR’s transverse fracture line curves upward (toward the Y-junction) quite promptly as it extends forward. But that is not what we see on the AP view. Instead, RR’s transverse line (Figure 2) is nearly horizontal—from right to left. Furthermore, *it never ascends!* In addition, *we never see an interrupted fracture on the AP view*—just examine the entire width of the “RR fracture line” in Figure 2. What is even worse is this: RR does not even claim to see one.¹¹ Next look at the “Left fracture line,” which is visible in both Figures 1 and 2. In my view these are the *same* fractures on the two views.¹² After all, on both the AP and lateral views, each of these lines begins at the midline, just superior to the fragment denoted by the yellow arrow. On the lateral view it extends forward and superiorly to the “Wide opening.” But this opening must lie on the *left* side—because there is no skull vertex on the *right* side (see Figure 2: “No skull vertex”).¹³ Finally, on the lateral X-ray, the posterior terminus of the “Left transverse fracture” lies at the rear of the skull (just superior to the yellow arrow). But this must be very near the midline—after all, on the lateral X-ray the most posterior part of the skull must depict the midline area. On Figure 1, we can also see that the Y-junction lies more anteriorly (than the back of the skull), so it must be well off the midline. Therefore, on the AP X-ray (Figure 2), this same Y-junction must lie well off the midline, on the “Left fracture line.” So, we should see this Y-junction somewhere on this line. But none is visible. In conclusion, on the AP X-ray, there is no interruption of RR’s transverse fracture. And there is no interrupted fracture on the “Left transverse fracture” either. So, where is RR’s interrupted fracture on the AP X-ray?

5. *There is a better explanation for the dark transverse area below the right infraorbital rim.*¹⁴ It is really quite simple: That area is dark merely because right occipital bone is missing. Optical density (OD) measurements¹⁵ on the AP skull (at the Archives), at symmetric sites below

¹⁰ Based on his observations at the Archives, Michael Chesser, MD, has strongly emphasized the tiny metal fragments very near the forehead: <http://assassinationofjfk.net/a-review-of-the-jfk-cranial-x-rays-and-photographs/>. My own extensive survey of all metal fragments on the skull X-rays corroborates Chesser’s conclusion: http://themantikview.com/pdf/Omissions_and_Miscalculations_of_Nicholas_Nalli.pdf, Figure 2.

¹¹ On the AP X-ray, it is conceivable that this intersection of fracture lines occurs at the far left end of the “Left transverse fracture.” Such a (nearly vertical) fracture may be barely visible at the Archives. However, this is not RR’s scenario. In particular, he claims that the interrupted fracture is on the *right* side.

¹² Michael Chesser, MD, concurs with this interpretation.

¹³ If there is no right skull vertex, then there can be no “wide opening” in the right skull vertex.

¹⁴ For the layperson, I refer here to the site immediately inferior to the right eye socket.

¹⁵ All my OD data were taken directly from the actual X-ray films—not from the HSCA-enhanced versions.

the infraorbital rims, are entirely consistent with this.¹⁶ Furthermore, the lateral X-ray cannot prove the presence of bone at this site. The lateral X-ray can only show that bone exists *on at least one side of midline*. This is easy to prove, as follows. On the AP skull X-ray, locate the Dark Area (Figure 2), located just medial to the 6.5 mm object. The visible darkness at this site (corroborated by OD measurements) strongly implies that bone is absent here—just right of the midline at the back of the skull. However, at this site on the lateral X-ray there is no discernible missing bone. The human eye sees only intact bone, both at the midline and to the left of midline. The human eye simply cannot discriminate well enough to determine that bone is missing just to the right of midline. (But OD data can do that.) Based on that OD data we now know this: On the AP X-ray, occipital bone is missing when viewed through the right orbit (and even slightly below the infraorbital rim).¹⁷ *If bone is missing, then it surely can show no fractures.*

6. *RR disagrees radically with the Parkland physicians.* Many Parkland physicians saw cerebellum lying on the table, or visible through the occipital defect. RR denies that they saw this; instead he believes that the cerebellum was intact. He claims that *all these physicians, including two neurosurgeons, were mistaken*. On the other hand, Kemp Clark, MD, the chief neurosurgeon, was specifically asked by Arlen Specter how JFK's performance would have been affected by the head wound, and Clark said:

...the loss of cerebellar tissue would probably have been of minimal consequence.... The loss of the right occipital, and probably part of the right parietal lobes, would have been of specific importance.¹⁸

One could not ask for a more precise description of the site of brain damage. Moreover, Clark's most important task in the emergency room was to assess JFK's viability; after all, an error here could have been malpractice fodder. In view of this, it is truly astonishing that RR insists that JFK's posterior skull was intact. These physicians—and many other Parkland observers, too—saw a right occipital defect. Gary Aguilar, MD, has compiled an impressive list of these concurring (and self-consistent) witnesses, who agreed that JFK had a large hole in his occiput.¹⁹

¹⁶ “Paradoxes of the JFK Assassination: The Brain Enigma,” by David W. Mantik and Cyril H. Wecht from *The Assassinations: Probe Magazine on JFK, MLK, RFK, and Malcolm X* (2003), edited by James DiEugenio and Lisa Pease: <http://feralhouse.com/the-assassinations/>.

Despite many visits to the Archives, and the presence of an optical densitometer at the Archives, RR has never made even one optical density measurement.

¹⁷ <http://themantikview.com/>: “JFK Assassination Conference 2018,” slide 42. On the lateral X-ray, along the critical area, OD measurements show that bone is absent just where the Harper fragment originated.

¹⁸ 6 H 26

¹⁹ “The Converging Case for Conspiracy,” Gary Aguilar, in *Murder in Dealey Plaza* (2000), edited by James Fetzer, p. 199. Also view the eyewitness images (showing the occipital wound) in *JFK: Absolute Proof, The Killing of a President, Vol. III* (2013), Robert Groden, pp. 149-156.

RR maintains that all these observers, including many physicians, were wrong. *Virtually none of these eyewitnesses agrees with RR.*²⁰

7. *RR also disagrees—and disagrees radically—with the pathologists about the large skull defect.* In a letter to Aguilar²¹ RR stated that the large skull defect lay 5 cm superior to the EOP entry site. This would locate the (posterior) border of the large defect very near the 6.5 mm object. If so, the large defect would not extend into the occipital bone. On the other hand, the autopsy report describes the large defect as extending *into* the occipital bone.²² *RR does not discuss this overt discrepancy.* Furthermore, the pathologists directed a WC Exhibit (CE 388) with the large defect lying very close to the occipital bone (Figure 6).²³

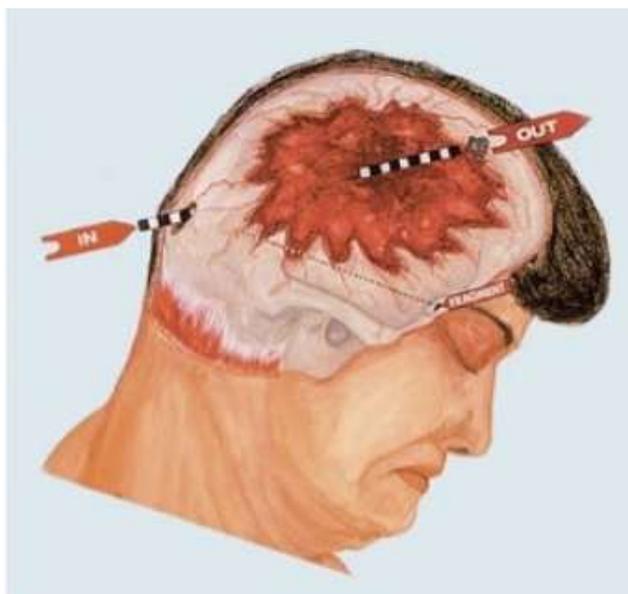


Figure 6. Warren Commission Exhibit 388

In his HSCA interview with Andy Purdy (released in 1993), Boswell clearly described the large defect as extending all the way to the posterior entry site (near the EOP).²⁴ He

²⁰ Also see “HOW FIVE INVESTIGATIONS INTO JFK’S MEDICAL/AUTOPSY EVIDENCE GOT IT WRONG,” by Gary Aguilar and Kathy Cunningham (May 2003): <https://www.history-matters.com/essays/jfkmed/How5Investigations/How5InvestigationsGotItWrong.htm>.

²¹ Letter from RR to Aguilar (January 18, 1994): The frontal bullet “...strikes *far posteriorly* [emphasis added] and causes the exit wound which is 5 cm above the entrance....”

²² <http://www.jfklancer.com/autopsyrpt.html>

²³ Rydberg, the medical illustrator, prepared this sketch under the direction of the pathologists, but actual photographs were not provided for this work. Rydberg has since expressed misgivings about his sketch: <http://assassinationofjfk.net/for-the-sake-of-historical-accuracy/>.

²⁴ Boswell left no doubt that the skull wound extended into the occiput. While before the ARRB, Jeremy Gunn asked, “Was it correct that there was a wound that went from the left [sic] posterior to the right anterior?” Boswell

confirmed this more recently to Aguilar in the clearest possible language. To confirm this argument, Figure 7 shows Boswell's sketch of the skull, which clearly shows missing occipital bone. *RR* does not discuss this overt discrepancy.



Figure 7. Boswell's sketch for the ARRB. Photo by John Hunt at NARA II on April 8, 2003. The central line denotes a scalp laceration. Boswell described all bone between the two lateral lines as absent.

In addition, John Ebersole, the sole radiologist at the autopsy, advised me (in a recorded telephone conversation of December 2, 1992²⁵) that the large skull defect lay within *one inch* of the occipital entry site. This is obviously very near the EOP. *RR* rejects all this evidence. Finally, *RR* states (in the Aguilar letter): "The HSCA diagram of the missing bone is actually pretty accurate...." (See Figure 8.)

replied, "Yes." Gunn followed up with, "When you say left [sic] posterior, what do you mean?" Boswell responded, "The left [sic] occipital area..." (*Inside the Assassination Records Review Board: The U.S. Government's Final Attempt to Reconcile the Conflicting Medical Evidence in the Assassination of JFK* (2009), Douglas P. Horne, Volume I, p. 111; also see <http://jfkassassination.net/russ/testimony/boswella.htm>, p. 59).

²⁵ https://www.maryferrell.org/audio/ARRB/ARRB_Ebersole-Mantik.mp3. Like me, Ebersole practiced as a radiation oncologist. This was his last known conversation about the JFK case.

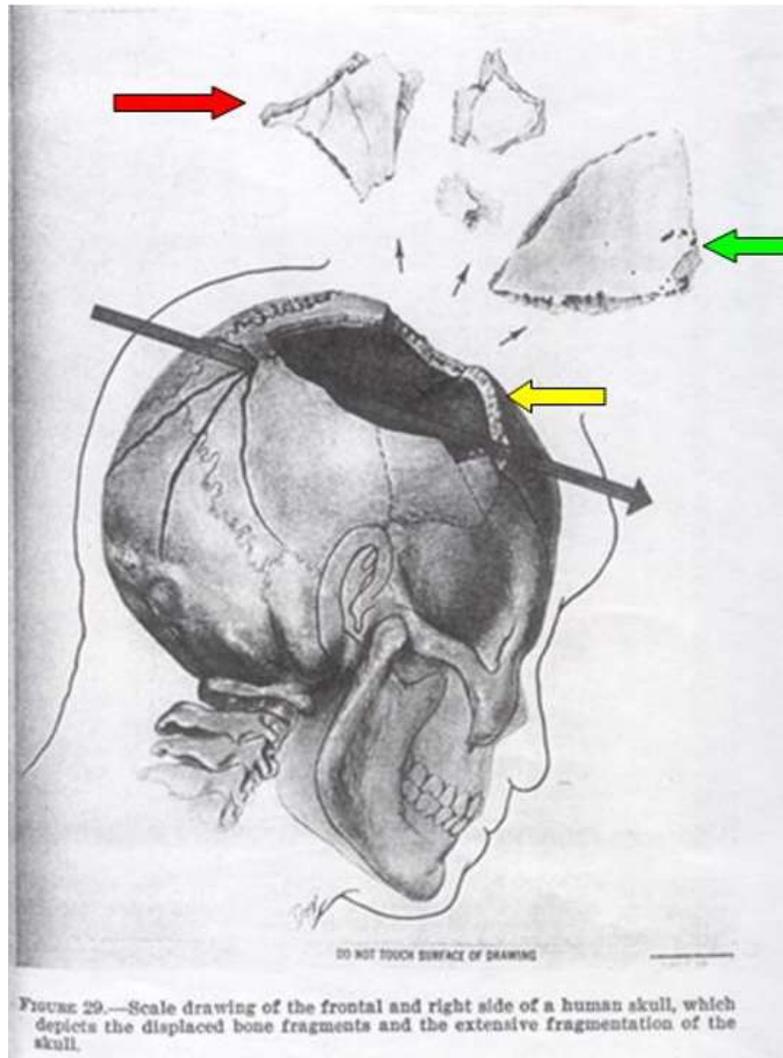


Figure 8. The HSCA sketch of the skull defect and fragments. The red arrow identifies the Harper fragment. The green arrow identifies the triangular (aka “delta”) fragment. The tip of the green arrow points to metallic debris. The yellow arrow locates *intact* frontal skull—in disagreement with Lawrence Angel and John J. Fitzpatrick (and with the OD data, and with me). The long, black arrow represents the HSCA single head shot trajectory. For his unique scenario, RR reverses this arrow, although he never illustrates this. In my opinion, neither the HSCA’s nor RR’s scenarios match the evidence—and the skull defect is clearly wrong.

The HSCA defect is, in fact, at the skull *vertex*, not at the rear of the skull. So, under RR's hypothesis, not only were all the Parkland physicians mistaken, but so also were the pathologists. Aguilar has also compiled a long list of *Bethesda autopsy witnesses, who reported an occipital*

*defect.*²⁶ Nearly all of them disagree—rather remarkably—with RR's location of the large skull defect. Instead of the skull vertex, they place it in the right occiput (*in marked agreement with the Parkland witnesses*).²⁷

8. *RR believes that the 6.5 mm object was simply overlooked by all the pathologists—and the other personnel, too—even though the admitted purpose of the X-rays was to discover precisely such an object. Unfortunately for RR, each of the three pathologists, while under oath, specifically denied seeing the 6.5 mm object when asked by the ARRB.*²⁸ Even more amazing is this: most likely one or two dozen individuals saw the X-rays that night—but no one recalls any discussion of this strange object. *RR does not offer any excuse for such a remarkable oversight.* One of these witnesses was Roy Kellerman, who said (when interviewed for the HSCA by Jim Kelly and Andy Purdy) that the X-rays showed a

...whole mass of stars, *the only large piece* [emphasis added] being behind the eye which was given to the FBI agents when it was removed.²⁹

²⁶ Robert McClelland (at Parkland) and James Jenkins (at Bethesda) both recalled a posterior bone flap. In fact, they compared recollections of JFK's posterior skull with one another and found good agreement. At Bethesda, Dr. Robert Canada also noted a posterior exit wound and saw "avulsed occipital bone" (*The Assassination Debates*, (2006) Michael Kurtz, p. 39). Malcolm Perry, M.D., had also described "...a large avulsive wound on the right posterior cranium..." (*WC Hearings*, Volume 17, Commission Exhibit 392). Michael Kurtz (pp. 39, 126) also cites *eight Bethesda MDs* who described the same posterior head wound that the Parkland MDs had seen: George Burkley, Robert Canada, John Ebersole, Calvin Galloway, Robert Karnei, Edward Kenny, David Osborne, and John Stover. Also see Volume IV (2009), Douglas P. Horne, pp. 1003, 1026, 1064.

The recollections of Gloria Knudsen (wife of photographer Robert Knudsen) for the ARRB (May 10, 1996) are also rather dramatic, especially since they include her memories of RR. She recalls that their house had been burglarized shortly after Robert's HSCA deposition. She was also able to confirm that her husband had worked with JFK's autopsy X-rays. His navy colleagues had later confirmed to her that the "back" (i.e., specifically not the "top") of JFK's head had been blown out in one photograph:
<https://www.maryferrell.org/showDoc.html?docId=752#relPageId=8&tab=page>.

²⁷ Much of this eyewitness testimony derives from documents released since 1993—possibly *after* RR published his hypothesis. To my knowledge, RR's article has not been updated during the intervening 20+ years. My handwritten notes while at the Archives in June 1995 refer to RR's hypothesis, so he must have published before that. I was present at RR's presentation for the COPA conference, in late 1995.

²⁸ Here is the transcript (in a logical order) of Humes's deposition before the ARRB (while under oath).

Gunn: What we're referring to is a fragment that appears to be semicircular [sic].

Humes: The ones we retrieved I didn't think were of the same size as this would lead you to believe.

Gunn: Did you think they were larger or smaller?

Humes: Smaller. Smaller, considerably smaller.

Humes: I don't remember retrieving anything of that size.... Truthfully, I don't remember anything that size when I looked at these films. They all were more of the size of these others:

<https://www.maryferrell.org/showDoc.html?docId=788#relPageId=227&tab=page>.

(This is the ARRB Testimony of Dr. James Joseph Humes, 13 Feb. 1996, pp. 213-221.)

Even more ominously, when I asked Dr. John Ebersole (the JFK autopsy radiologist) about this 6.5 mm object, he promptly changed the subject—and never again discussed the JFK case.

²⁹ <https://www.jfk-assassination.eu/warren/wch/vol2/page100.php>

Since it was the 7x2 mm fragment above the right frontal sinus that was removed, the implication is clear—Kellerman, like everyone else knew nothing of a 6.5 mm object at the back of the skull. Humes also clearly confirmed that no object of that size had been removed at the autopsy.³⁰

9. *RR believes that the photograph of the posterior scalp is authentic* (Figure 9). All three pathologists adamantly refused to identify the red spot as an authentic wound.³¹ Furthermore, no one at Parkland (or at the autopsy) had reported such a red spot. *RR does not even seem to recognize this paradox.* No other wound is visible in the photograph, even though the pathologists strongly affirmed to *JAMA*³² that this wound had been obvious when the photographs were taken. I have listed 15 Parkland physicians³³ who did not recognize the back of the head in the autopsy photographs.³⁴ Actually, Humes should not have recognized this photograph either. After all, he told the ARRB that *3-4 centimeters of scalp were still missing—* after the embalming process!³⁵

³⁰ Nor did the morticians report such metal after washing JFK's hair (in order to prepare him for an open-casket funeral).

³¹ James Humes said, "I don't know what that [red spot] is.... I don't, I just don't know what it is, but it certainly was not a wound of entrance" (7 HSCA 254). Pierre Finck believed strongly that the observations of the autopsy pathologists were more valid than those of individuals who might subsequently examine photographs (7 HSCA 115).

Drs. Ebersole, Finck, and Boswell offered no explanation for the upper wound (7 HSCA 115). The panel continued to be concerned about the persistent disparity between its findings and those of the autopsy pathologists and the "rigid tenacity" with which the prosecutors maintained that the entrance wound was at or near the EOP (7 HSCA 115).

FBI agent, Francis X. O'Neill, Jr., claimed, under oath, that the photograph "...looks like it's been doctored in some way" because it failed to show the missing back of the head. He also added that the brain photographs showed too much brain: <https://www.maryferrell.org/showDoc.html?docId=792#relPageId=29&>. (This is the ARRB Testimony of Francis X. O'Neill, Jr., 12 Sep. 1997, p. 29.)

³² *Journal of the American Medical Association*, May 27, 1992, p. 2797.

³³ As one might expect with 15 responses, some disagreement can arise about who said exactly what, but the record is clear that most of these physicians were quite puzzled by the autopsy photographs, especially those of the back of the head.

³⁴ https://www.krusch.com/books/kennedy/Murder_In_Dealey_Plaza.pdf, p. 240.

³⁵ <https://www.maryferrell.org/showDoc.html?docId=788#relPageId=93&tab=page>. (This is the ARRB Testimony of Dr. James Joseph Humes, 13 Feb. 1996, p. 91.)



Figure 9. JFK autopsy photograph. The yellow arrow identifies the “red spot,” which the pathologists did not recognize (at all). Despite that, the HSCA chose that site as their *entry* wound. It lay almost 4 inches above the pathologists’ entry site. Quite paradoxically, RR believes that the “red spot” is an *exit* wound from a frontal bullet. No eyewitness reported a red spot like this. And even if this photograph is authentic, an intact scalp does not prove that the underlying bone was intact. Boswell’s sketch (Figure 7) gives the lie to that. Robert McClelland had also told Harry Livingstone that the skull was not all intact under the visible scalp here.

So where is RR's low occipital entry wound in Figure 9? According to RR, it should lie well below the HSCA's entry site, but it is not there. *RR not only fails to comment on this missing wound, but he seems not even to recognize its absence.* Instead, RR claims, without any supporting data, that *all* the autopsy photographs must be *assumed* to be authentic. And what about RR's exit wound for the frontal bullet (the “red spot” in Figure 9): why does this not lie on the projected trail of the metallic debris? In other words, shouldn't there also be a *second* wound higher in the scalp—where the metallic debris exited (at the thin green arrow in Figure 1)? After all, this trail of debris lies far *superior* to the red spot. *RR does not comment on any of this.*

10. On stereo viewing, the back of the head (Figure 9) yields a 2D image instead of the expected 3D image—uncannily in the most critical area (exactly where the Parkland personnel saw a hole). This striking finding could only occur if each member of the stereo pair contained

exactly the same image—instead of a slightly different one.³⁶ The remainder of the autopsy pairs do not misbehave in this fashion. This issue was discussed by both Robert Groden and by me during the Mantik-Robertson encounter (now on video) cited in footnote 1. Readers may do their own stereo viewing via images from Groden’s book: *Absolute Proof*, p. 174.³⁷ RR has never commented on stereo viewing, so it is likely that he has never done this.

11. *RR’s trajectory for the frontal bullet should traverse obliquely—from JFK’s right to JFK’s left—across the brain* (entering quite posteriorly, he says) heading toward the 6.5 mm object. But the GK gunman fired from the *right front*, i.e., the gunman was not *directly in front*. Yet the autopsy brain photographs show no oblique trajectory (Figure 10). Instead, they show a parasagittal (strictly front to back) laceration just to the right of midline. Because RR has strongly affirmed the authenticity of the seven brain photographs, he must now explain this discrepancy as well. *But nothing is said—nor does he even seem to recognize this paradox.*

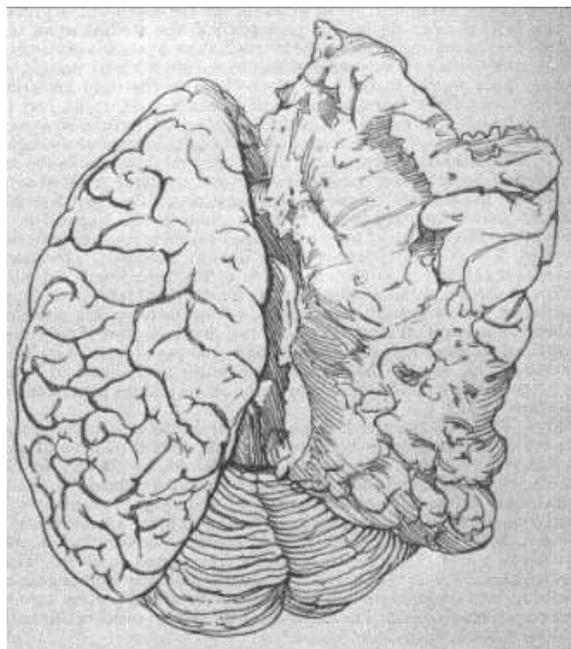


Figure 10. Ida Dox drawing of JFK’s (purported) brain at the National Archives. This does not reveal an oblique trajectory, which is required for RR’s scenario. Furthermore, this laceration extends much too far anteriorly for RR’s “parietal entry.” Nonetheless, RR accepts the brain photographs as authentic.

³⁶ Stereo views are possible due to unavoidable parallax between two successive exposures. This is especially likely when the camera is handheld.

³⁷ Also see slides 35 and 36 from my lecture, “JFK Lancer 2018,” at <http://themantikview.com/>.

12. RR claims that the metallic debris (across the top of the skull X-rays) suggests a second head shot. *Yet the debris is too medial (as seen on the AP X-ray) and too anterior (as seen on the lateral X-ray) for his right parietal entry.* On the lateral X-ray, metal fragments lie far anteriorly—actually against the forehead (Figure 1), whereas RR’s bullet enters the right parietal area, which is far *posterior* to most of the particles in the debris trail. Furthermore, although RR claims that the 6.5 mm object and the metallic trail derive from the same (frontal) bullet, they are mysteriously misaligned—quite badly, in fact. *RR does not discuss these conundrums.*

13. The JFK trail of debris is remarkably *inconsistent* with a full metal-jacketed bullet. Figure 11 shows a typical result for a such a bullet.

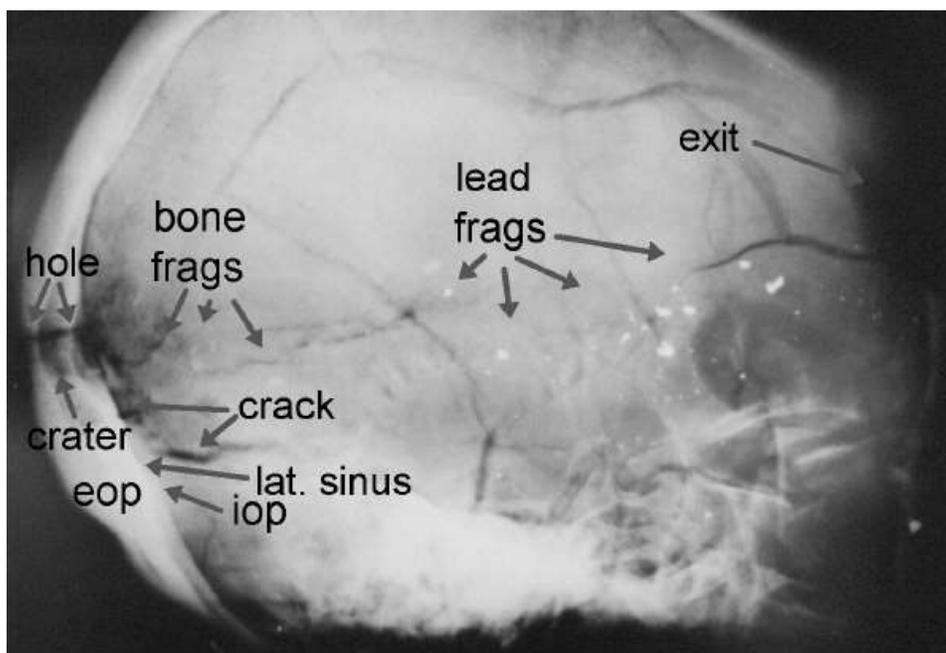


Figure 11. This test skull was shot with a Mannlicher-Carcano (full metal-jacketed bullet) by the Biophysics Division at Edgewood Arsenal. The bullet enters at the rear, where the “hole” is identified. Notice especially that almost all of the fragments lie far from the entry site. This is exactly the opposite of the JFK lateral X-ray, in which most of the metallic debris lies in the first half of the debris trail (assuming a frontal entry). Also note that the largest fragments lie farthest from the entry site.

14. On the AP X-ray (Figure 2), OD measurements show missing tissue on the low right of JFK’s skull, inferior to RR’s “transverse fracture.” *Since brain is not absent at this very low level (as everyone agrees) it is bone that must be missing.* That is why this infraorbital area appears so dark. And if bone is absent, it is impossible for fractures to show.

15. RR notes that two large bullet fragments were found inside the limousine. The WC described them as the nose and tail of a 6.5 mm Mannlicher-Carcano (M-C) bullet.³⁸ That implies that the central portion was missing. But there is a 6.5 mm, nearly round, object on the AP X-ray. Does RR wish to imply that this 6.5 mm object derived from the *middle* of his *second* bullet—and that the nose and tail (much larger pieces than the 6.5 mm object) of this second bullet zoomed on by after exiting the head? If so, how did they then land inside the limousine? Or were the nose and tail from the EOP bullet? If yes, then where did its central portion go? In any case, Robertson fails to explain how an *internal* cross section of a bullet could cleanly dissociate itself from the ends of a bullet (with such precision—very unlike the behavior of a ductile metal) and deposit itself on the outside of the skull. *All of RR's answers to these mysteries are still awaited.*

16. RR concludes that the impact of the second head shot is seen promptly after Z-313. *But JFK's head is rotated too far to his left to yield the debris trail in the X-rays. That trail is nearly straight back* (as best assessed on the AP X-ray.) Unfortunately for RR, it is obvious in Z-315 and Z-316 that JFK's orientation does not match this trail (at all). In fact, Thomas Canning, the HSCA's rocket scientist stated that, at Z-313, JFK was

...turned partially away from Zapruder—approximately 25 degrees past the 90 degree, or profile, direction. His head was tilted away from Zapruder by about 15 degrees, and he appeared to be nodding forward by about 11 degrees (clockwise, as viewed by Zapruder).³⁹

The reader can readily judge for him/herself whether JFK's leftward rotation at Z-316 differs very much from Z-313.⁴⁰ *RR does not address this issue.*

17. RR concludes that the second head shot struck immediately after Z-313.⁴¹ *But JFK's head is tilted too far forward immediately after Z-313 for this scenario* (Figure 12).

³⁸ *Warren Report*, p. 76. Robert Frazier testified that these large bullet fragments (CE-567) were fired from rifle #159 (Oswald's supposed weapon): <http://mcadams.posc.mu.edu/russ/testimony/frazr1.htm>.

³⁹ 6 HSCA 38

⁴⁰ <http://assassinationresearch.com/zfilm/>

⁴¹ Since JFK's head begins to snap back during Z-315 to Z-316, RR's conclusion is mandatory for his hypothesis. In his "Synchronization Study," he confirms his belief that a frontal bullet struck at this time.

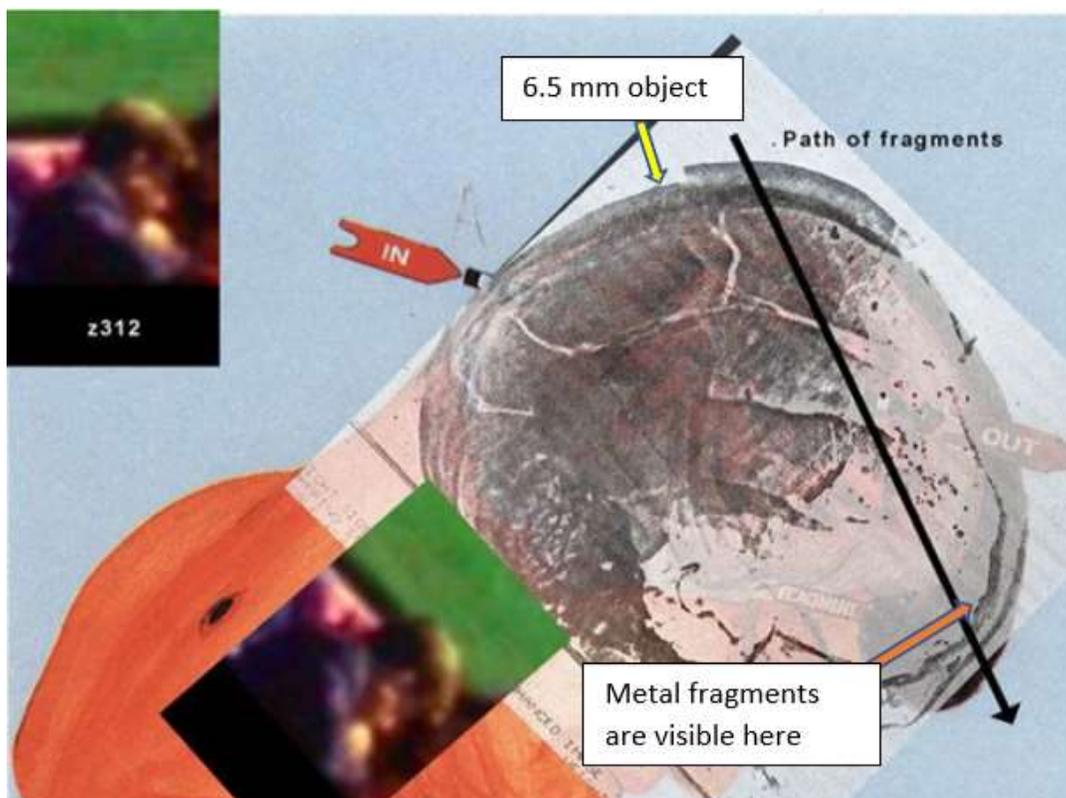


Figure 12. This is the lateral X-ray superimposed over Z-312, as composed by David Josephs. Given JFK's orientation, the expected trail for a frontal bullet should be close to the red arrow (with the arrow reversed). But the gross discrepancy between the expected (reversed red arrow) and the actual bullet trail (reversed black arrow) is ignored by RR. Alas, he does not even illustrate his trail of debris, but he claims that the bullet exits near the 6.5 mm object. His entry site is not clearly defined, but it must begin very near the anterior skull, where the orange arrow locates metallic fragments. (The red arrow, labelled "IN" and "OUT," was the fabrication of the Warren Commission.)

A shot from the storm drain (on the overpass) has a better chance of avoiding this paradox, but even then, JFK's head must be tilted backward, like his orientation in Z-321 (essentially erect). Much ancillary evidence favors a second head shot when his head was erect.

18. Larry Sturdivan, the HSCA ballistics expert, is certain that the 6.5 mm object cannot be the cross section of a bullet.

I'm not sure what that 6.5 mm fragment is. One thing I'm sure it's NOT [sic] is a cross section from the interior of a bullet. I have seen literally thousands of bullets, deformed and undeformed, after penetrating tissue and tissue simulants. Some were bent, some were torn in two or more pieces, but to have a cross-section sheared out is physically

impossible. That fragment has a lot of mystery associated with it. Some have said it was a piece of the jacket, sheared off by the bone and left on the outside of the skull. I've never seen a perfectly round piece of bullet jacket in any wound. Furthermore, the fragment seems to have greater optical density thin face on than it does edgewise (if the only density in that location in the side view is really the same fragment). The only thing I can think is that it's an artifact. For instance, if a drop of dilute acid (sometimes used in the developing process) got on the developed print, perhaps it would bleach out the silver oxide [sic—he means silver halide] leaving a clear, round spot that looks like a density. I don't know whether that is even feasible. I'm just speculating [sic].⁴²

Another ballistics expert (and consummate marksman), Howard Donahue⁴³ reported that neither he, nor the many forensic pathologists whom he had interviewed, had ever seen a full metal-jacketed bullet shear on impact. Cyril Wecht, after many thousands of autopsies, has also confirmed this to me. Nonetheless, against this wide experience of Sturdivan, Donahue, Wecht, and many forensic pathologists, RR insists that this 6.5 mm object must be authentic, and that it cannot be an artifact. *Unfortunately, RR offers no objective evidence for this.*

In fact, Sturdivan's example of a possible artifact won't work. First, note that the location of the 6.5 mm object is spatially consistent on the AP and lateral views. This clearly implies an authentic object. (However, an altered X-ray could yield a similar result.⁴⁴) On the other hand, a drop of acid would not likely fall precisely over a pre-existing (image of a) metal fragment. Furthermore, it is most unlikely that an acid drop would yield such a smooth periphery—and also so precisely match the borders of the pre-existing (image of an) authentic metal fragment. Moreover, it seems unlikely that such an accidental drop would produce a well-defined notch (at the 5 o'clock position on the 6.5 mm object). Finally, even if all of this did occur, the emulsion itself would be visibly altered at this site. *In fact, my inspection of the X-rays at the Archives shows a completely intact emulsion. None of this is discussed by RR.*⁴⁵

Elsewhere in e-mail exchanges with Wexler, Sturdivan proffers another speculation, i.e., a stray metal disk got stuck on the film cassette or on the autopsy table. Presumably he means that (the image of) this accidental disk got superimposed over the (image of) the authentic metal. Supposedly then, the resulting image superposition is what we see today. But where is the corresponding image on the two lateral X-rays? *It does not exist!*⁴⁶

If, by chance, such a stray piece of metal was *inside* the film cassette (between the screen and the film) it would yield not a transparent area, but rather a dark area. This is because the

⁴² e-mail messages from Larry Sturdivan to Stuart Wexler (early 1998).

⁴³ Bonar Menninger, *Mortal Error* (1992), p. 68. I had the pleasure of meeting Donahue and his wife at his home.

⁴⁴ James Fetzer, *Assassination Science* (1998), pp. 120-137.

⁴⁵ Since RR apparently still has access to the Archives (Senator Paul G. Kirk, Jr., the Kennedy family attorney, has banned Chesser and me), he should inspect the emulsion with his own eyes. Evidently, he has not done this.

⁴⁶ Just for the sake of clarity in the present discussion, note that Humes emphasized that the X-rays were taken before any metal fragments were removed:

<https://www.maryferrell.org/showDoc.html?docId=788#relPageId=102&tab=page>.

(This is the ARRB Testimony of Dr. James Joseph Humes, 13 Feb. 1996, p. 100.)

metal would *prevent* visible and UV light (produced in the screen) from striking the film. Such decreased illumination would then be seen on the film as darkness. Of course, that is not what the X-ray shows.

The only remaining possibility is a stray metal disk on the *outside* of the cassette, adjacent to JFK's head. For this to be missed by the technologist, and to remain stuck during the entire procedure, requires an active imagination. Furthermore, it should show up on the lateral X-rays, but it does not. More importantly, from my own experience in reviewing X-rays over four decades, I have never seen such a phenomenon. For such a singular event—at that critical moment in history, and at that precise point on the AP skull X-ray—should guarantee an immediate entry into the Fantasyland Hall of Fame.

In view of the foregoing arguments—which apply quite generally to any proposed artifact—it is most unlikely that any *natural* artifact can ever explain the remarkable optical transparency (on the AP X-ray) of the 6.5 mm object.

19. RR offers no explanation for the lead-like smear on the Harper fragment (Figure 13A). The X-ray of the Harper fragment (which RR showed at the 1995 COPA conference) strongly suggests metallic debris at the precise site of the smear (Figure 13B). On November 21, 1992, on a Palm Springs radio talk show (KPSI), my colleagues and I interviewed one of these Dallas pathologists, Dr. Gerard Noteboom, who confirmed the occipital origin of the Harper fragment. He had actually held the bone, and he also recalled a trace of metal (like a lead smear from a bullet) on one edge of the Harper fragment. His fellow pathologist, Dr. A. B. Cairns, also interpreted this smear as due to a bullet entry. (*Since the smear unambiguously lies on the outside, it cannot represent a bullet exit site.*⁴⁷) On the other hand, if RR were to attribute this smear to a bullet, he could not ascribe it to an entry—because he has already identified that entry on the triangular fragment.⁴⁸ I have suggested that the smear was caused by the EOP entry, but RR cannot do that—because he places the Harper fragment into the parietal area. So, how exactly did that smear get there—and what does it mean? *RR remains silent.*

⁴⁷ "When a bullet perforates bone, it often leaves a thin deposit of lead on the edges of the entrance hole." And a sentence later: "Examination of the entrance with a dissecting microscope will show the grey rim to consist of fragments of lead." DiMaio, Vincent J. M., *Gunshot Wounds: Practical Aspects of Firearms, Ballistics, and Forensic Techniques*, p. 93.

⁴⁸ RR's only escape from this dilemma is to claim that the metal on each fragment (the triangular and the Harper) represent the same event. But that means that these two bone fragments must have initially fit side by side. That this cannot be true is discussed (and illustrated) in detail in my e-book, *JFK's Head Wounds*; see Figure 32. In any case, RR does not make this claim.

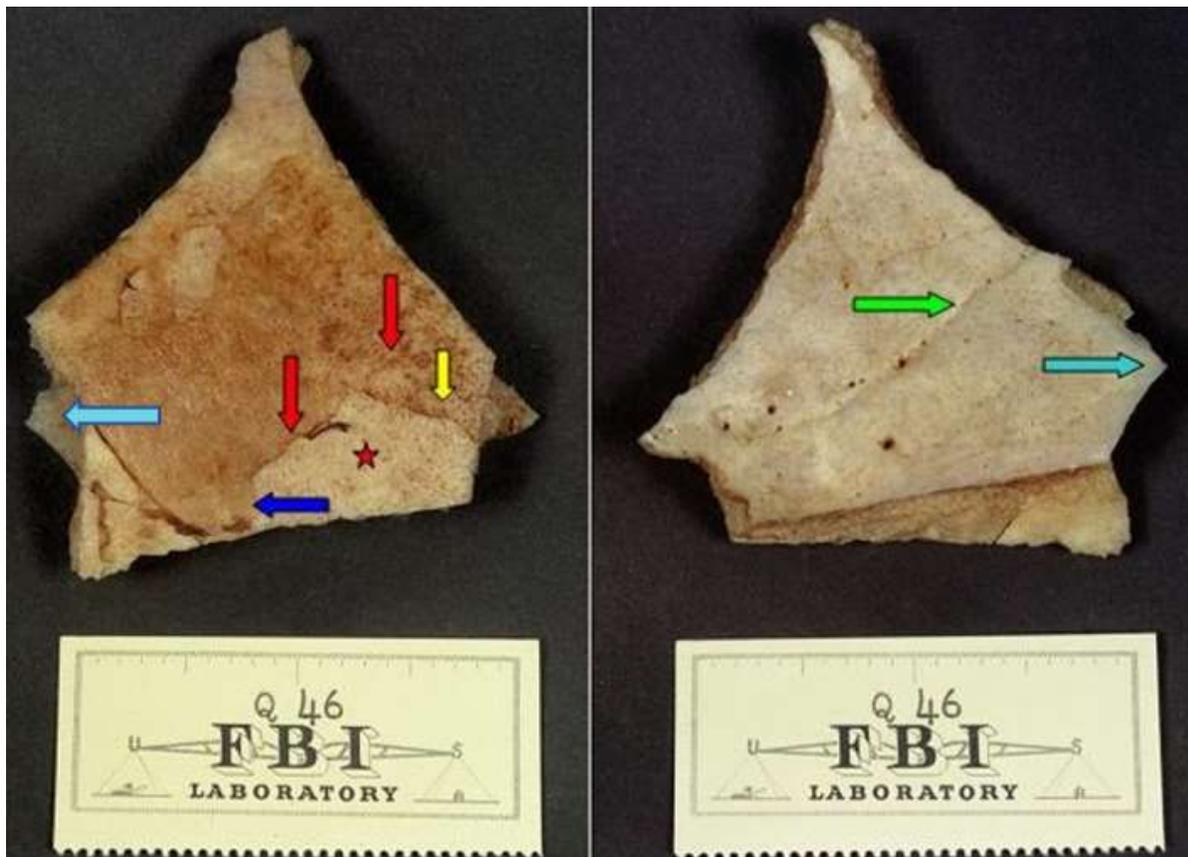


Figure 13A. These are FBI photographs of the Harper fragment, as scanned by John Hunt at the Archives. Angel's suture line might be identified by red arrows in the left image (exterior surface), but he never clarified this. The light blue arrow (on the left) identifies the metallic smear. One area of the bone (red star) is paler, probably due to loss of periosteum. When I had access only to a lower resolution image, I had suspected a suture line (yellow arrow), but based on this higher resolution image, it cannot be a suture line. X-rays of the Harper fragment show no suture lines whatsoever. On the right image (interior surface), the metallic smear is on the opposite surface of the cyan arrow. The rather straight groove (green arrow) may be the sulcus for the superior sagittal sinus.

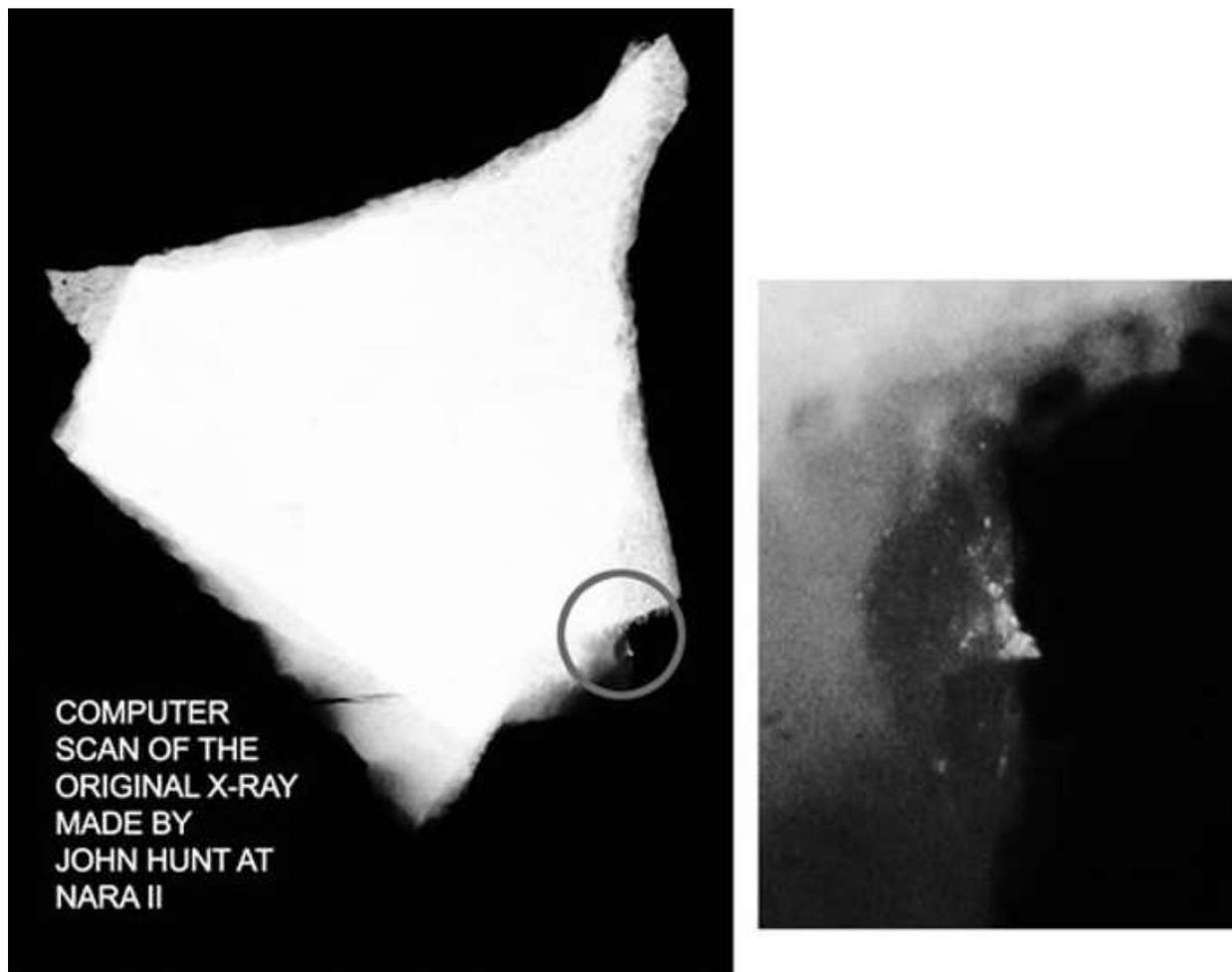


Figure 13B. X-ray of the Harper fragment, courtesy of John Hunt. The metallic smear is circled on the left image, and then shown magnified on the right image. The location of the metal debris on the X-ray precisely matches the location of the visible smear on the photograph. Hunt presented these images at a 2005 conference.

20. RR claims that the sagittal suture lies along one edge of the triangular (aka “delta”) fragment (Figures 8 and 16). Unfortunately for him, this suture is somewhat curved, whereas the typical sagittal suture is quite straight. The reader is encouraged to view numerous online images of the sagittal suture. More likely, the suture in question is coronal, which can often be mildly curved. An online search is again suggested. (JFK’s pre-mortem X-ray does not conclusively resolve this issue.)⁴⁹ The coronal suture would, of course, fit with Lawrence Angel’s view that the triangular fragment was frontal bone.⁵⁰ It would also be consistent with Fitzpatrick’s (and

⁴⁹ For an image of sagittal and coronal sutures, see Appendix A, Figure 16, which was taken from John Hunt’s online essay. See the next footnote for this Hunt citation.

⁵⁰ https://www.history-matters.com/archive/jfk/hasca/reportvols/vol7/html/HSCA_Vol7_0120b.htm.

my) conclusion that right frontal bone was missing all the way to JFK's hairline. On the other hand, RR claims that the right frontal bone was mostly intact.

21. RR places the triangular fragment into the right parietal area. But it cannot fit there. In particular, I have demonstrated, with detailed reconstructions via successive iterations of fluoroscopy images, exactly where bone islands lie on both the AP and lateral JFK X-rays. RR's proposed site for the triangular fragment *is already occupied by two significant bone islands*, and simply cannot accommodate another large bone fragment. That is a powerful reason— independent of Angel—that the triangular fragment must derive from frontal bone. During my debate with RR about the Harper fragment (footnote 1 above), I emphasized this point, which remained unanswered by RR. For further discussion (with illustrations) about this reconstruction, see Figure 32 in my e-book, *JFK's Head Wounds*.⁵¹

22. RR does not discuss the overt paradox between the brain photographs (Figure 10), which show mostly intact brain, versus the X-rays (Figures 1 and 2), which show a very large dark frontal area. On the X-rays, OD measurements confirm the near total absence of brain in this dark area. Therefore, either the brain photographs are fraudulent, or the skull X-rays must be fraudulent. It is not possible for both to be authentic. Since RR stipulates that both the photographs and X-rays are entirely authentic, it is incumbent on him to clarify this most primordial paradox in the JFK case, but nothing is said.

23. O.C. Smith, et al.⁵² describe how *a single bullet can produce skull fracture patterns that mimic RR's intersecting fractures*.⁵³ These can be both radial and concentric. An arrest of a subsequent fracture (by a pre-existing fracture) is particularly likely in the case of an exit wound. This conclusion is devastating to RR—because he proposes this precise pattern near his exit wound. So, even if all the preceding objections are ignored, RR's interrupted fracture would not necessarily require two head shots. Just one shot could have produced RR's fracture patterns; if so, his case (for two head shots) is as strong as Pete Rose's claim to the Hall of Fame.⁵⁴

⁵¹ John Hunt has written an excellent review of the conflicting demands for space on the skull surface: <https://www.history-matters.com/essays/jfkmed/ADemonstrableImpossibility/ADemonstrableImpossibility.htm>.

⁵² Smith, O.C., Berryman, H.E., and Lahren, C.H., "Cranial Fracture Patterns and Estimate of Direction from Low Velocity Gunshot Wounds," *Journal of Forensic Sciences* 32:1416-1421 (1987). The following article is also of some ballistic interest: <https://www.sciencedirect.com/science/article/pii/S0015736888728583>.

⁵³ As an analogy, in a nuclear strike, you would first see the explosion, then feel it with your feet, and finally you would hear it. Also, notice that the speed of sound in air is 382 m/sec, while the speed in bone is 3750 m/sec. For comparison, the speed in brain is 1550 m/sec.

⁵⁴ Of course, multiple head shots likely did occur. I have presented the case for three head shots in my e-book, following the earlier conclusion of Douglas Horne. Mike Chesser, MD, also accepts multiple head shots, as do many Warren Commission critics. This review objects only to RR's proof, not to his conclusion. RR's case for multiple head shots is much weaker, and therefore much easier to discount, than the one initially made by Douglas Horne, and then later elaborated by Mike Chesser (and me).

24. The nearly immaculate back of the head (Figure 14) stands in marked contrast to the bloody shirt, which I have seen more than once at the Archives. RR never tries to explain how this minimally damaged scalp caused such extensive bleeding into the shirt. The pathologists agreed that JFK's hair had not been cleaned or combed before this photograph was taken.⁵⁵ In fact, to modify the hair would have violated a fundamental principle of forensic pathology: Do not alter the evidence. Is this head photograph, which shows nearly pristine scalp, credible—especially in view of the extensive bleeding into the back of the shirt, and the cerebellum oozing onto the table at Parkland, to say nothing of the bloody and disheveled hair seen in two other autopsy photographs (particularly the vertex view)?



Figure 14. The bloody shirt versus the nearly pristine hair. How does such a tiny wound (the red spot), produce such massive bleeding into the shirt—especially with no intervening blood on the hair? RR believes that both images are authentic. I do not. Both the Parkland doctors and the Bethesda pathologists raised serious doubts about this photograph of JFK's head.

Other issues persist. The Itek analysis (using Poisson statistics) is a powerful argument against two shots in successive frames of the Zapruder film, even with a significant degree of coordination among shooters. Although he cites Itek's work, and seems to accept their

⁵⁵ <https://www.maryferrell.org/showDoc.html?docId=788#relPageId=169&tab=page>. (This is the ARRB Testimony of Dr. James Joseph Humes, 13 Feb. 1996, pp. 156 and 162.)

conclusions, *RR ignores this Poisson discussion*. In addition, the Itek analysis⁵⁶ of the momentum imparted to the head and upper torso is a compelling argument against a frontal shot as an explanation for the head snap—unless different ammunition and a different weapon are used. The 6.5 mm M-C bullet does not have enough energy to produce the head snap.⁵⁷

Summary: A Dozen Embarrassing Challenges to the RR Hypothesis

RR's hypothesis initially seemed plausible. After all, it promised to integrate isolated and unruly bits of data. And, to the delight of WC critics at least, it concluded that two shots struck the skull. Regrettably, on closer inspection, a startling number of dangerous paradoxes materialize and too many improbable coincidences are required. His singularly remarkable disagreements with many eyewitnesses and experts are listed here.

1. RR's shameless dispute with the Parkland medical witnesses (about the occipital defect), and—even worse—with the pathologists themselves, remains a somber enigma. He believes that the Parkland personnel were mistaken about seeing a large occipital defect—and he even disagrees with the autopsy report itself.⁵⁸
2. He disagrees with many Parkland physicians (including two neurosurgeons) who saw cerebellum through the occipital wound.
3. He disagrees with Lawrence Angel (the forensic anthropologist for the HSCA) about the site of origin of the triangular (aka “delta”) fragment.⁵⁹ (I concur with Angel, as detailed in my e-book.)
4. He disagrees with the HSCA's ballistic expert (Larry Sturdivan). Instead, RR opines that the 6.5 mm object represents an authentic metal fragment. According to Sturdivan, this cannot be true. (In this quite limited matter, I agree with Sturdivan.)
5. He disagrees with the autopsy radiologist, John Ebersole, who also described a large occipital defect, and considered the skull X-rays to be compatible with this.

⁵⁶ Corbett, Francis, *Interoffice Memorandum*, March 22, 1978.

⁵⁷ G. Paul Chambers, Ph.D. (physics), in *Head Shot* (2010), corroborates this with detailed calculations. Instead of a 6.5 mm M-C bullet he suggests (p. 207) a smaller, frangible bullet—the Winchester .220 Swift—traveling twice as fast as the M-C (4000 ft/sec vs. 2000 ft/sec), and with four times the energy. It would be interesting to hear RR's response to this; unfortunately, he offers no calculations of his own. (Incidentally, Don Thomas nominates a .30-.30 Winchester rifle.)

⁵⁸ Dr. (Admiral) George Burkley also recalled an occipital wound: In 1983 he admitted to another researcher that JFK had a large wound in the back of the head, which had “all the appearance of an exit wound”: <https://www.lewrockwell.com/2019/07/donald-w-miller-jr-md/if-not-oswald-who-killed-president-kennedy-and-why/>.

⁵⁹ The visible airborne debris in the Z-film traces directly back to JFK's *forehead*. If Angel is correct (as seems likely) then the right frontal bone is missing and there is no inconsistency. However, RR claims that the frontal bone in the X-rays is intact. Therefore, he has no choice but to claim that the debris arises “...from the midparietal region anteriorly.” But that is plainly inconsistent with the inferiorly extrapolated trail in Z-313, which goes directly to the forehead. See my e-book for more about this.

6. He even disagrees with the ARRB's forensic radiologist, John J. Fitzpatrick, who observed a mostly *intact* right frontal bone.⁶⁰ On the other hand, RR concluded that it was mostly missing. I concur with Fitzpatrick. Furthermore, the flying debris in the Z-film originates from the forehead, where *the bone remained intact* (per RR)—*after* the debris exited!
7. Comparing the 6.5 mm object on the AP and lateral X-rays, RR is not perplexed by the optical density inconsistencies between these two views—even though Fitzpatrick was so bewildered by this maddening paradox that he returned a second day to stare at the X-rays. Being assured that the materials had somehow been authenticated, he never resolved this issue. *None of this disturbs RR*. This radical discrepancy (between the lateral and AP X-rays) triggered my own research on X-ray alteration (as done in the dark room).⁶¹
8. He disagrees with *three Dallas pathologists* (who held the bone in their hands); they concurred that the Harper fragment was part of the occipital bone. RR denies this.
9. He disagrees with Sturdivan, Donohue, Wecht, and many others, who have never seen a nearly circular cross section of a bullet deposited on a skull. But RR believes that the 6.5 mm object was not only authentic but was actually present on the X-rays during the autopsy—even though no one recalls any discussion of this most obvious object.
10. *He posits two 6.5 mm-like jacketed bullets*—one entering at the EOP, and a frontal one entering the right parietal area. This is truly ironic since Oswald's supposed weapon was a 6.5 mm M-C. Furthermore, since one bullet breaks up into many (about 40) tiny fragments, *while the other leaves no fragments at all*, these two vastly different outcomes can hardly represent two (nearly) identical bullets, which is what RR claims.⁶²
11. If the frontal bullet entered the right parietal area, and then promptly deposited the 6.5 mm object at the rear, how then did so many particles get deposited into the *front half* of the skull (Figure 1)? In fact, most of them do lie in the anterior half of the skull, and some even lie near the forehead. *RR never addresses this conundrum*.

⁶⁰

<https://www.maryferrell.org/showDoc.html?docId=145280&search=lateral+view+of+human+skull#relPageId=224&tab=page>. Fitzpatrick's deposition is on pages 224-227. "He later [sic] admitted that his specialty was not bullet wounds, but rather was broken bones in child abuse cases." To my knowledge the ARRB never explained why this skill was appropriate for the JFK case. Ironically, JFK had already buried his own infant son Patrick on August 9, 1963. The report summarizes: "He [Fitzpatrick] continued to be disturbed and puzzled by the fact that the large radio-opaque object in the A-P skull X-ray [the 6.5 mm object] could not be located on the lateral skull X-rays." No one else has seen it there either—except for RR. (RR also fails to comment on the ghost images *inside* the 6.5 mm object. He has also ignored the White Patch and he has taken no notice of the presence of emulsion under the T-shaped inscription, where there should be none.)

⁶¹ <http://assassinationofjfk.net/jfk-skull-x-rays-evidence-of-forgery-david-mantik/>. As someone who understands that these autopsy materials were (illegally) altered during the prompt post-assassination cover-up, there is no longer any mystery about this paradox. The 6.5 mm object is an artifact, but not a natural one. It was *deliberately* produced via a double exposure in the darkroom (most likely by Ebersole).

⁶² Vincent J. M. DiMaio discusses an X-ray "lead snowstorm" appearance in *Gunshot Wounds: Practical Aspects of Firearms, Ballistics, and Forensic Techniques*, 3rd edition, p. 279. He concludes that a full metal-jacketed bullet would *not* produce such a result. In other words, the 40+ metallic particles on JFK's X-rays should *not* derive from a 6.5 mm bullet—which directly contradicts RR's proposal of a 6.5 mm-like bullet from the front.

12. In the case of a *single* bullet, O.C. Smith showed that fracture lines can be arrested by pre-existing fractures. (Puppe's Rule requires that fractures travel faster than bullets.⁶³) In other words, RR's fundamental argument can sometimes fail. In that case, his primary hypothesis immediately falls under a dark shadow. *RR does not discuss Smith's work*, even though it was published at least six years before his own article.

In view of these many alarming disagreements, I cannot escape a profound impression that a well-intentioned, board-certified professional has seized upon a single concept and, rather than following the trail of evidence, he has instead insisted that the evidence must be constrained to his personal roadmap. Where contrary evidence exists (e.g., the twelve points just above), it is merely ignored. Unhappily, countless thorny issues are not addressed at all. Even worse, given the yawning and recurrent gaps in his logic, RR seems naïvely unaware of his oversights, which are numerous and critical. This is not a recipe for a successful denouement. As a result, RR's scenario has long been due for a post-mortem. *Requiescat in pace* (rest in pieces).

And Now Comes More Trouble (for RR)

Technical reasons also exist for not interpreting RR's transverse dark area (on the AP X-ray) as a fracture line, as follows.

A. On the AP X-ray, this right infraorbital area looks rather like its mirror image on the left side, which is clearly not a fracture (Figure 2). *This implausible coincidence is not discussed by RR*. Actually, for most patients both areas look somewhat dark due to the maxillary sinuses. But JFK's right occipital blow-out causes the right side to appear especially dark.

B. On the AP X-ray, the inferior-superior height of this transverse dark area is much greater than it is on the lateral X-ray. These heights, if the correlation were true, should be similar. One possible explanation is that the skull bones shifted significantly between the two X-rays. On this score, both the radiologist (John Ebersole) and the technologist (Jerrol Custer) have assured me that these X-rays were taken sequentially, with as little accidental movement of the skull as possible. The relative heights of the other fracture lines (visible on both AP and lateral X-rays) do not show such discrepancies, nor is this characteristic of other autopsy skulls with fatal gunshot injuries (such as those twenty or so cases that Douglas DeSalles, MD, and I reviewed). *RR does not address this inconsistency*.

C. Figure 15 shows the direction that two rays of the X-ray beam would have traveled while the AP X-ray was being exposed.⁶⁴ Notice that the 6.5 mm object is properly positioned

⁶³ Gonzales, T. A., Vance, M., Helpert, M., and Umberger, C. J., *Legal Medicine Pathology and Toxicology*, 2nd edition, 1954, pp. 424-425. Also see <http://biology.kenyon.edu/slouc/bio3/2001projects/Bone/gunshots.html>.

⁶⁴ The divergence shown in Figure 15 is based upon Jerrol Custer's reported 44-inch source-to-skin distance (SSD) for the GE 250 X-ray machine (as used during the autopsy). He provided this information verbally to me, as well as to others: <https://debunked.wordpress.com/2015/12/13/an-analysis-of-the-arb-testimony-of-jerrol-custer/>. The divergence also depends on the length (front to back) of JFK's skull, which I measured as 20.0 centimeters directly on the JFK X-rays at the Archives.

here (i.e., it is consistent with the AP X-ray) between the orange and blue arrows. In other words, it lies appropriately in the upper part of the right eye socket. On the AP X-ray, RR's transverse fracture lies immediately below the inferior orbital rim. On the other hand, in Figure 15, RR's transverse fracture lies 1-2 cm below the (lower) blue line. Given the accuracy of the lines in Figure 15, RR's transverse fracture lies far too low. In view of this, his transverse line must represent something else, as we shall soon explain.

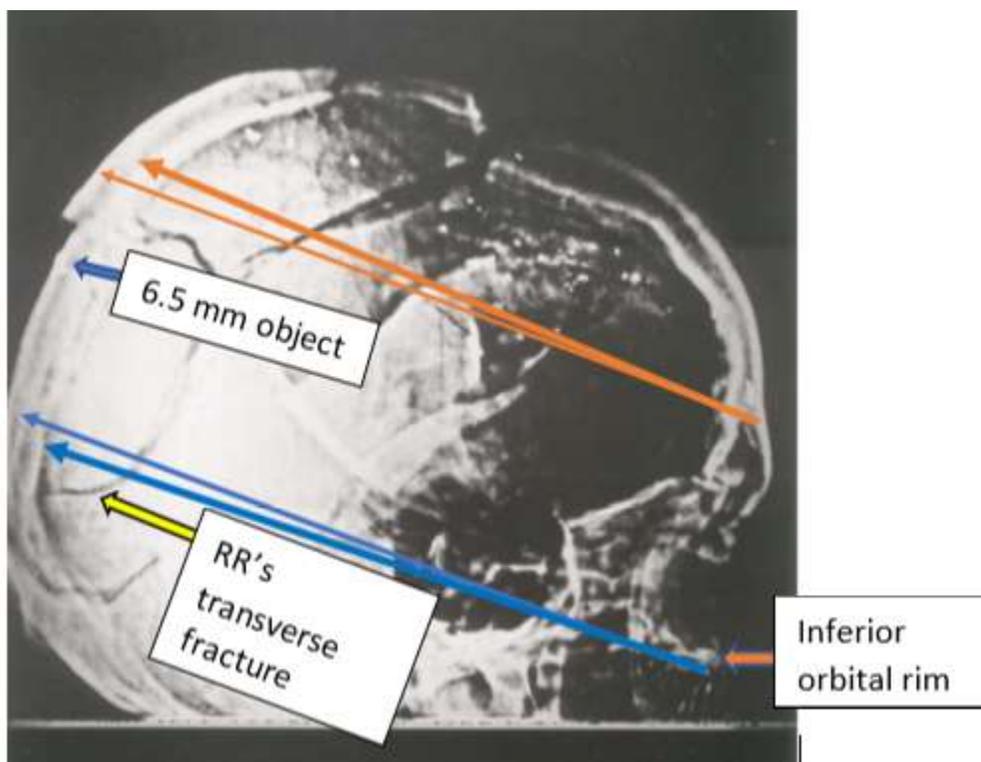


Figure 15. The inner orange and blue lines are parallel to one another. The outer orange and blue lines represent the directions that individual rays of the X-ray beam would have traveled while the AP X-ray film was being exposed. Notice that the blue lines graze the lower border of the inferior orbital rim.

D. On the AP X-ray (Figure 2), the lateral terminus of RR's supposed transverse fracture is puzzling: where exactly does it stop? There is no end in sight; instead, there is simply a large black area. That is not how ordinary fractures end. On the lateral X-ray, such a wide dark area should be notably obvious, but where is it? There is something wrong here.⁶⁵

E. On the lateral X-ray, if RR's transverse fracture is followed superiorly, it extends superiorly and anteriorly to the skull vertex—to a “Wide opening” (Figure 1) in the skull. Since

⁶⁵ Of course, this is no mystery. There is simply no bone at this site—this is the area of the right occipital blow-out. Naturally, if bone is missing, it cannot show fracture lines.

the skull vertex is absent on the right (see Figure 2: “No skull vertex”), this wide opening must necessarily lie on the *left side* of the skull. In other words, RR’s supposed *right-sided* fracture extends *in direct continuity with a left-sided fracture!* On the other hand, RR’s transverse dark line on the lateral X-ray (Figure 1) must appear somewhere on the AP view (Figure 2). My June 16, 1995 examination (with contemporaneous notes) of the AP skull X-ray at the Archives suggests a fracture just inferior to the *left* infraorbital rim.⁶⁶ In fact, this fracture line on the *left* side of the AP X-ray correlates more closely with RR’s transverse line (on the lateral X-ray) than does RR’s dark area just below the right inferior orbital rim. Unbelievably, RR has committed an elementary blunder—he has confused right for left.⁶⁷ *None of these issues is discussed by RR.*

Appendix A.

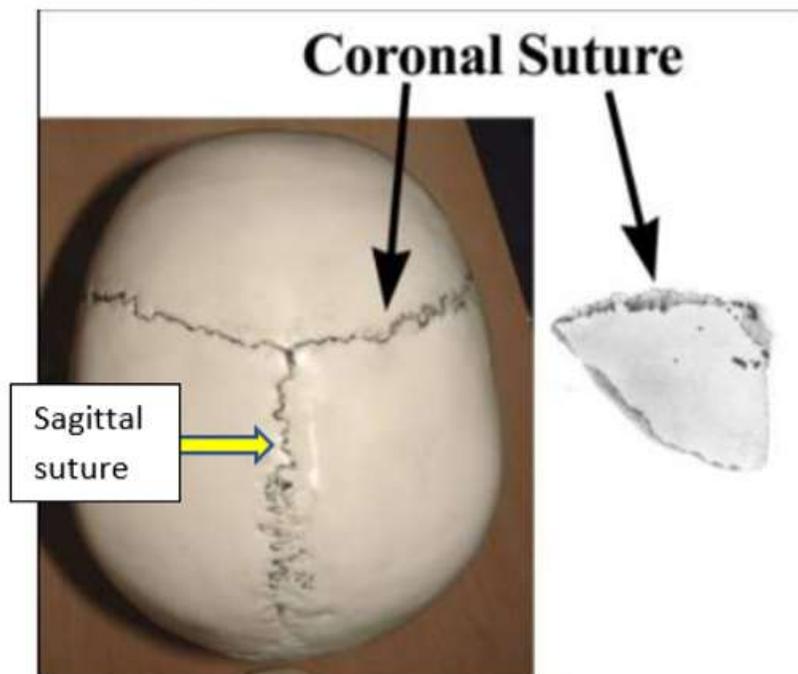


Figure 16. This image is from John Hunt’s excellent essay on the topography of JFK’s skull. The triangular fragment is shown on the right. The “coronal” label was placed by Hunt. The curvature of the sagittal, vis-à-vis the coronal, suture should be noted.

⁶⁶ On the AP skull ray, an apparent second (even lower) fracture lies below the *left* orbit; this fracture is more inferior than RR’s fracture line. (It lies too low to be visible on the public images of the AP X-ray.) This lower fracture site (on the AP) matches quite well to the *lowest* dark line on the lateral X-ray. (This lowest line is not discussed by RR.) In other words, on the lateral X-ray the two lowest fractures at the back of the skull *both lie on the left side!* (Dr. Chesser concurs with this.) Since they are on the wrong side, RR cannot employ either of them for his *right-sided* argument (about intersecting fractures). Mercifully, this case is now closed, and my review is finally done (yet nothing has been said about RR’s ingenuous acquiescence to the profoundly irrelevant acoustics data).

⁶⁷ Here is an e-mail (August 11, 2019) from Michael Chesser, MD: “I agree with you that the two intersecting fractures visible on the lateral film must be situated on the left side of the skull.”

Acknowledgments

In 1995, George Costello and Harry Livingstone initially inspired me to consider writing this review. Soon afterwards, Josiah Thompson arranged an informal and private debate between Robertson and me, which convinced me to begin. Within the past year, Milicent Cranor, Douglas Horne, and Jeff Sundberg incited me to release this revision—after the original had been gathering dust for 20+ years. Besides the images here, John Hunt (recently deceased) contributed more than one insightful essay, which served as background for my own studies. David Josephs produced the luminous illustration of Z-312 superimposed over the lateral skull X-ray (Figure 12). Douglas DeSalles, MD, proposed many useful insights, as well as some preliminary—and highly intriguing—shooting results (not discussed here). Michael Chessner, MD, offered his usual deep insights into the case; his acumen is often reflected in the text. Jeff Sundberg, as is typical for him, proffered meticulous substantive and stylistic suggestions, most of which are on display here. But, in the end, some of this is truly my own work—for better, or for worse.