

***Inside the Assassination Records Review Board (ARRB) by Douglas Horne:  
A Nearly-Entirely-Positive Review***

This is a Review of Volume IV, which includes

**Part II: Fraud in the Evidence—A Pattern of Deception (continued)  
Chapter 13: What Really Happened at the Bethesda Morgue?  
(and in Dealey Plaza)  
Chapter 14: The Zapruder Film Mystery.**

David W. Mantik, M.D., Ph.D.  
February 26, 2010

*The death of a democracy is not likely to be an assassination from ambush. It will be a slow extinction from apathy, indifference, and undernourishment.*

—Robert Maynard Hutchins, *Great Books* (1954)—

My title here is a parody of my review<sup>1</sup> of *Reclaiming History* (2007) by Vincent Bugliosi. Since that review was (in my opinion) rather devastating for Bugliosi, my title was intended to be sardonic. Despite this, Vince lifted a few quotes from it (out of context and without my permission) and included them with his abbreviated paperback version, *Four Days in November* (2008). The total page count (CD included) of his massive doorstopper was about 2786, almost exactly three times as long as the 888-page *Warren Report*. Horne's book, by contrast, is shorter: 1880 pages, including the front matter (pages i-lxxiii). I had stated that Bugliosi's book was likely to stand forever as the *magnum opus* of this case, though not without serious flaws. As a *magnum opus*, however, Horne's five-volume set is a serious challenge to Bugliosi, but with virtually none of Bugliosi's flaws. The current review, however, focuses (almost) solely on Volume IV, which I regard as Horne's set piece (as that phrase is used in literature and film, but not in soccer).

Although some men believe that women age like fine wine, in this case it is Horne himself who has aged well—he waited the better part of a decade after his experiences with the Assassination Records Review Board (ARRB) before beginning the serious work on his book. He does hint, though, that Bugliosi drop-kicked him (he is an Ohio State Buckeye fan) onto the playing field. Volume IV focuses on the two chief themes of the entire five-volume set: (1) the illicit surgery, before the official autopsy began, by pathologists James J. Humes and J. Thornton Boswell<sup>2</sup> at the Bethesda morgue and (2) the Zapruder film riddles. It is likely that the success or failure of Horne's work will rise or fall with this single volume. In this review, I shall address these two topics in sequence, critique a few puzzles, then draw some conclusions and finish with several suggestions. By way of a *caveat emptor*, I should confess that I initially encountered

---

<sup>1</sup> Google: "A Not-Entirely-Positive Review." Also see Jim DiEugenio's continuing and very extensive review of Bugliosi's book at <http://www.ctka.net/>.

<sup>2</sup> Visit their photographs at Douglas Horne, *Inside the ARRB* (2009), Volume I at Figures 77-80.

Horne at his first COPA (Committee on Political Assassinations) conference (when he interviewed with the ARRB), have intermittently met him since, and consider him a very good friend. He is also a very bright and strong-willed investigator.

### *Illicit Surgery at the Bethesda Morgue*

In order to paint Humes and Boswell (H&B hereafter) as the morbid co-conspirators, Horne needs first to clarify the timeline—which he does brilliantly (see the Appendix at the end of this review). The ARRB learned, for the first time, that JFK’s body initially arrived at the Bethesda morgue at 6:35 PM local time (in a black hearse). That information derives from an after-action report (written on November 26, 1963) by Marine Sergeant Roger Boyajian.<sup>3</sup> Quite astonishingly, Boyajian had retained a copy of his report, which he presented to the ARRB. His report corroborates the recollections of Dennis David<sup>4</sup> who saw the light gray navy ambulance (with the bronze casket from Dallas) arrive at the front of the hospital, where he saw Jackie exit; its arrival time was either 6:53 PM or 6:55 PM (the sources vary).<sup>5</sup> But just about 20 minutes earlier, David had directed his on-duty sailors as they delivered the body in a cheap casket, i.e., the entry described by Boyajian. David estimated (from memory) the delivery time as 6:40 PM, or perhaps 6:45 PM. His estimate is strikingly close to Boyajian’s recorded time of 6:35 PM. Horne concludes that this arrival time of 6:35 PM must now be accepted as a foundation stone in this case. As further corroboration for this time, he emphasizes that even Humes agreed with it: before the ARRB, Humes cited the initial arrival as possibly as early as 6:45 PM.<sup>6</sup> In my opinion, therefore, it is very difficult to disagree with this early arrival time. If this is accepted, though, the repercussions are colossal—it means that the bronze casket (the one that traveled with Jackie) was empty. Horne next compiles a long table<sup>7</sup> of witnesses to the cheap casket and the body bag, both of which were seen at this initial entry. He is also very persuasive here, although he rightfully credits Lifton with much of this groundbreaking work.

Now if the body arrived at 6:35 PM in a cheap shipping casket, when did it exit the bronze casket (the one that left Parkland)? Horne suggests that this transfer occurred right after the bronze casket boarded Air Force One. (Lifton again blazed this trail.) As corroboration for this, Horne<sup>8</sup> describes JFK’s Air Force Aide, Godfrey McHugh, as perturbed about a delay caused by a “luggage transfer” between the two official planes. After this transfer to a body bag, tampering became feasible. Horne suggests that an initial foray into the body took place in the forward baggage compartment prior to the flight to DC; the goal was to extract metal debris or a bullet from the throat wound. (It is not known whether anything was found.) Horne infers that a similar attempt was made on

---

<sup>3</sup> *Ibid.* at Figure 68 and at xxxiii. A more detailed account is in Horne’s Appendix 38; see <http://www.maryferrell.org/mffweb/archive/docset/getList.do?docSetId=1932>.

<sup>4</sup> David Lifton, *Best Evidence* (1988), at 569-588.

<sup>5</sup> For example, see Clint Hill’s statement at <http://www.jfk-online.com/clhill.html>:

“The motorcade arrived Bethesda Naval Hospital at 6:55 p.m.”

Hill also describes landing with Air Force One at Andrews Air Force Base at 5:58 PM.

<sup>6</sup> Horne, *supra*, Volume IV at 1002.

<sup>7</sup> *Ibid.* at 989-992.

<sup>8</sup> Horne cites William Manchester, *Death of a President* (1967).

the brain, but that attempt likely foundered because the requisite tool (e.g., a bone saw) was missing.

The second casket entry (via a light gray navy ambulance) occurred at about 7:17 PM. James W. Sibert and Francis X. O’Neill, Jr. (the two-member FBI team) and Roy H. Kellerman and William Greer (both Secret Service) together delivered the (empty) bronze casket to the morgue.<sup>9</sup> This time is consistent with the arrival time of the bronze casket (shortly before 7 PM) at the front of the hospital. The third casket entry (with the body inside) has traditionally been accepted as the official one—at 8 PM (in a light gray navy ambulance). It was delivered by the Joint Service Casket Team.<sup>10</sup> The transfer of the body must have occurred (in the morgue) after the second entry at 7:17 PM. But it must also have transpired *after* the initial X-rays (for reasons to be discussed below).<sup>11</sup> Finally, this transfer must have occurred well in advance of 8 PM so that the bronze casket could leave the morgue (Tom Robinson recalled this temporary departure<sup>12</sup>), be “found” by the official casket team, and then delivered again at 8 PM. This sequence of three casket entries looks like a classic French farce, i.e., an affair concocted by a half-mad scriptwriter. Unfortunately, all of the evidence points strongly in the direction of three casket entries. Perhaps this would have been unnecessary, as Horne points out, if only Jackie had not insisted on staying with the bronze casket en route to the morgue. (She had declined a helicopter ride to the White House, which would have separated her from the Dallas casket.) Most likely the plan had been to surreptitiously transfer the body between caskets at the Walter Reed Army Medical Center. But Jackie’s unexpected decision to remain with the bronze Dallas casket waylaid those plans, which meant that Kellerman (who Horne nominates as the morgue manager) had to improvise on the spot. It was a highly risky business, during which this escapade was nearly uncovered, according to Horne.

Lifton had argued that body alteration had occurred somewhere *before* Bethesda. He believed that altering the geometry of the shooting through “trajectory reversal”—i.e., turning entrance wounds into exit wounds, and planting false entrance wounds on the body—was the primary reason for the illicit post mortem surgery, and that removing bullet fragments was only a co-equal, or even secondary, goal of the clandestine surgery.<sup>13</sup> Horne takes a different tack: he believes that the reason for assaulting the body (before Bethesda) was merely to extract bullet debris, not primarily to alter wounds.

My own views come into play at this point. Before Horne’s work, I had become convinced that someone had messed with the throat wound, most likely to extract bullet fragments. The evidence for this was that the two sets of witnesses—those at Parkland vs. those at Bethesda—had disagreed so profoundly. Also, Malcolm Perry, the surgeon who performed the tracheotomy, claimed that he had left the throat wound “inviolated,” meaning that it was easily visible after the tube was pulled. In addition, Charles Crenshaw insisted that the tracheotomy at Parkland was nothing like the one in the

---

<sup>9</sup> Horne, *supra*, Volume IV at 1006.

<sup>10</sup> Horne, *supra*, Volume I at Figure 70.

<sup>11</sup> The entire X-ray collection is listed in *Ibid.* at Figure 58.

<sup>12</sup> Horne, *supra*, Volume IV at 1007.

<sup>13</sup> In retrospect, Lifton had been grievously misled by the HSCA’s false statements, namely that the autopsy photographs were authentic and that all the witnesses agreed with them. This falsehood was only discovered after the movie, *JFK*, triggered the release of multiple, sequestered witness statements that disagreed with the photographs.

autopsy photographs. I also had my own (telephone) encounter with the autopsy radiologist, John Ebersole.<sup>14</sup> I still sense the horror in his voice as he recalled the tracheotomy and declared that he would never do one like that. Horne's witnesses (there are more) only validate my prior conclusion about throat tampering.

Before Horne's work, I was uncertain about head tampering before Bethesda (although Lifton had made a strong case for it). Nonetheless, I had to agree that if the throat had been explored, then of course the head might also have been invaded. Although Horne is still open-minded about illegal tampering of the skull before Bethesda, he believes that such an event can be inferred from (1) Finck's statement (to the defense team at the Clay Shaw trial in 1969) that the autopsy report (presumably an earlier one, as the extant one does not say this) described the spinal cord as severed when the body arrived at Bethesda and (2) Tom Robinson's comment to the ARRB that the top of the skull was "badly broken" when the body was received at Bethesda, but that the large defect (in the superior skull) in the autopsy photographs was "what the [autopsy] doctors did"—i.e., that the missing skull was due to the pathologists, not due an assassin's bullet(s).<sup>15</sup> These reports therefore provide more evidence that the head was explored somewhere *before* Bethesda; the goal was to retrieve bullet debris, but it failed—because the brain could not be extracted from the skull. In summary then, the body arrived at Bethesda as follows: (1) with a radically enlarged tracheotomy<sup>16</sup> and no bullet debris in the neck (perhaps there never was any, as I have suggested elsewhere<sup>17</sup>) and (2) with the same (right occipital) exit wound that was seen at Parkland and with a brain that had not been removed from the skull and that therefore closely, or possibly even exactly, resembled the Parkland brain. Most likely the brain still contained most, or even all, of the bullet fragments from Dealey Plaza. (These metal fragments are, of course, absent from the official record today.) Those are Horne's conclusions about H&B, but let's look at the evidence.

So why does Horne conclude that H&B illicitly removed (and altered) the brain shortly after 6:35 PM, *before* any X-rays were taken, and *before* the official autopsy began? He here introduces two intriguing witnesses—the two R's, namely Reed and Robinson. Edward Reed was assistant to Jerrol Custer (the radiology tech), while Tom Robinson was a mortician. Rather consistently with one another, but quite independently, both describe critical steps taken by H&B that no one else reports. (Horne documents why no one else reported these events—almost everyone else had been evicted from the morgue before this clandestine interlude.) After the body was placed on the morgue table (and before X-rays were taken), Reed briefly sat in the gallery.<sup>18</sup> Reed states<sup>19</sup> that Humes first used a scalpel across the top of the forehead to pull the scalp back. Then he *used a saw* to cut the forehead bone, after which he (and Custer, too) were asked to leave the morgue. (Reed was not aware that this intervention by Humes was unofficial.) This activity by Humes is highly significant because multiple witnesses saw the intact entry hole high in the right forehead at the hairline. On the other hand, the autopsy photographs

---

<sup>14</sup> James Fetzer, editor, *Murder in Dealey Plaza* (2000), at 433 and 436.

<sup>15</sup> Horne, *supra*, Volume IV at 1164.

<sup>16</sup> Horne, *supra*, Volume I at Figure 60.

<sup>17</sup> Fetzer (2000), *supra*, at 258-259.

<sup>18</sup> Horne, *supra*, Volume I at Figure 40, shows a sketch of the morgue floor plan, including the gallery.

<sup>19</sup> Horne, *supra*, Volume IV at 1035, 1163-1171 and Volume II at 426 and 437.

show only a thin incision at this site, an incision that no Parkland witness ever saw. The implication is obvious: this specific autopsy photograph was taken *after* Humes altered the forehead—thereby likely obliterating the entry hole.

Reed's report suggests that Humes deliberately obliterated the right forehead entry; in fact, the autopsy photograph does not show this entry site. Paradoxically, however, Robinson (the mortician) recalls<sup>20</sup> seeing, *during restoration*, a wound about ¼ inch across at this very location. He even recalls having to place wax at this site. So the question is obvious: If Humes had obliterated the wound (as seems the case based on the extant autopsy photograph), how then could Robinson still see the wound during restoration? This question cannot be answered with certainty, but two options arise: (1) perhaps the wound was indeed obliterated (or mostly obliterated) and Robinson merely suffered some memory merge—i.e., even though he added wax to the incision (the one still visible in the extant photograph), he was actually recalling the way it looked before Humes got to it, or (2) the photograph itself has been altered—to disguise the wound that was visible in an *original* photograph. The latter option was seemingly endorsed by Joe O'Donnell, the USIA photographer,<sup>21</sup> who said that Knudsen actually showed him such a photograph.

Regarding Robinson, Horne concludes that he arrived with the hearse that brought the body (i.e., the first entry). After that, Robinson simply observed events from the morgue gallery; contrary to Reed's experience, he was not asked to leave. Just before 7 PM, Robinson<sup>22</sup> saw H&B remove large portions of the rear and top of the skull *with a saw*, in order to access the brain. (Robinson was not aware that this activity was off the record.) He also observed ten or more bullet fragments extracted from the brain. Although these do not appear in the official record, Dennis David recalls<sup>23</sup> preparing a receipt for at least four fragments.<sup>24</sup>

Contrary to Reed and Robinson, Humes<sup>25</sup> declared that a saw was not important:

*We had to do virtually no work with a saw to remove these portions of the skull, they came apart in our hands very easily, and we attempted to further examine the brain....*

Although James Jenkins (an autopsy technician) does not explicitly describe the use of a saw, he does recall that damage to the brain (as seen inside the skull) was *less* than the corresponding size of the cranial defect; this indirectly implies prior removal of some of the skull.<sup>26</sup>

Horne adds an independent argument for multiple casket entries.<sup>27</sup> Pierre Finck told the *Journal of the American Medical Association*<sup>28</sup> that he was at home when Humes

---

<sup>20</sup> Fetzer (2000), *supra*, at 250.

<sup>21</sup> *Ibid.* at 242.

<sup>22</sup> Horne, *supra*, Volume IV at 1005.

<sup>23</sup> Lifton (1988), *supra*, at 492 and 579.

<sup>24</sup> Harry Livingstone actually prints a photograph of four fragments in *High Treason* (1998), at 562. Their provenance, however, seems uncertain.

<sup>25</sup> *Warren Commission Hearings*, Volume II at 354.

<sup>26</sup> Horne, *supra*, Volume IV at 1042-1043.

<sup>27</sup> *Ibid.* at 1000.

telephoned him at 7:30 PM. (In his 2/1/65 report to General Blumberg he cites 8 PM.<sup>29</sup>) Finck, as a forensic pathologist, had been asked to assist with the autopsy. As further confirmation for Finck's overall timeline, he arrived (see his Blumberg report) at the morgue at 8:30 PM. But here is the clincher: during this phone call, Humes told Finck that X-rays had already been taken—and had already been viewed. On the other hand, the official entry time (with the Joint Service Casket Team) was at 8 PM! If that indeed was the one and only entry time, how then could X-rays have been taken—let alone developed and viewed (a process of 30 minutes minimum)—even *before* the official entry time? The only possible answer is that the body did not first arrive at 8 PM. Furthermore, Custer and Reed, the radiology techs, provide timelines consistent with much earlier X-rays; in particular, they recall seeing Jackie enter the hospital lobby,<sup>30</sup> well *after* the 6:35 PM casket entry—an entry they had personally witnessed. In summary, eyewitnesses convincingly support a much earlier timeline than the official entry of 8 PM. Therefore, multiple casket entries are logically required. And that more relaxed timeline gave H&B time both to perform their illicit surgery and also for skull X-rays to be taken and read, most likely all before 7:30-8:00 PM.

The reader might well ask why Reed and Robinson (and Custer, too) were permitted to observe (at least briefly) this illegal surgery by H&B. Horne proposes that the morgue manager that night (Kellerman) was not present for the first casket entry—that's because he was riding with Jackie and the bronze casket. Therefore, before he arrived (most likely that was shortly after 7 PM), there was no hands-on stage manager in the morgue. It is even possible that Kellerman himself ejected Reed and Custer as soon as he arrived. Robinson, on the other hand, dressed in civilian clothing, may have seemed to Kellerman a lesser threat, so Robinson stayed.

Several conclusions follow from the above analysis. First, the official skull X-rays<sup>31</sup> do not show the condition of the skull or the brain as seen at Parkland. Instead, they were taken after tampering by H&B, perhaps even after significant tampering, especially if Robinson and Reed are correct. Furthermore, the massive damage seen in the photographs and X-rays was not caused just by a bullet or even by multiple bullets, but instead by pathological hands. In particular, for a *single*, full metal-jacketed bullet (the Warren Commission's inevitable scenario) to generate such an enormous defect has always defied credibility.<sup>32</sup> Likewise, Boswell's sketch (for the ARRB) on a skull<sup>33</sup> of this enormous defect only shows the condition of the skull after tampering by H&B—and does not reflect the skull as seen at Parkland. (The Parkland witnesses fully concur with this.) On the other hand, many witnesses at Bethesda saw the condition of the skull before such tampering began. These witnesses, both physicians and paraprofessionals,

---

<sup>28</sup> Breo, D.L., "JFK's death, Part II—Dr. Finck speaks out, 'two bullets, from the rear,'" *JAMA* 268:1749 (1992).

<sup>29</sup> <http://www.jfk-assassination.net/weberman/finck1.htm>. Or see Horne's Appendix 29 or 7 *HSCA* 101, 122, 135, 191. The list of appendices is in Horne, *supra*, Volume I at xix-lii. The appendices themselves are at the Mary Ferrell website. See my footnote 3 for a link.

<sup>30</sup> Horne, *supra*, Volume IV at 1005.

<sup>31</sup> Horne, *supra*, Volume I at Figures 37-38.

<sup>32</sup> See Boswell's sketch from the autopsy: Horne, *supra*, Volume I at Figure 11.

<sup>33</sup> *Ibid.* at Figures 12-15.

uniformly describe a right occipital blowout,<sup>34</sup> consistent with a shot from the front. Leaving aside the pathologists, as many as eight Bethesda physicians may be on this list.<sup>35</sup> In photographs,<sup>36</sup> both Parkland and Bethesda witnesses demonstrate with remarkable unanimity, on their own heads, the location of this obvious exit wound on the right rear skull.

The X-rays do, however, show many small fragments distributed across the top of the skull.<sup>37</sup> So why didn't Humes extract more of these? I have previously proposed (based on their actual appearance—as viewed in detail on multiple occasions at the Archives) that they look more like mercury than like lead. If so, then Humes would not have been able to palpate them (mercury is liquid) and would therefore have been unable to remove them during his illicit surgery phase.

We could go on to ask: What other evidence exists for such illicit surgery? Lifton initially introduced this issue by citing the FBI report (by Sibert and O'Neill), which quoted Humes as describing surgery to the head.<sup>38</sup> Sibert, in the 2000s, still insisted that they had quoted Humes correctly about such surgery.<sup>39</sup> (I also heard Sibert say this in Fort Myers, Florida, during one of Law's taping sessions.) Furthermore, the FBI had no reason to fabricate such a statement. On Lifton's tape (which I have heard), he queries Humes about this; to me, Humes does sound remarkably suspicious and evasive. But the FBI men are not the only witnesses to his statement. Another is James Jenkins, who quotes Humes<sup>40</sup> as asking: "Did they do surgery at Parkland?" Furthermore, Humes was later told, when some skull fragments arrived at the morgue,<sup>41</sup> that these had been "removed" during surgery at Parkland. We all know that did not happen, so where did they come from? Horne implies that Humes himself had removed them during the illicit phase. Another supporting argument is the remarkable ease of removing the brain from the skull (during the official autopsy phase), but this is not so surprising if it had previously been removed during the unofficial phase. James Jenkins<sup>42</sup> observed that the brainstem had been cut, as if by a scalpel (not severed by a bullet), which also suggests its earlier removal that evening (while Jenkins was absent). In any case, such an early removal was likely essential to successfully search for (and extract) bullet debris. Even Finck<sup>43</sup> bears witness to a transected spinal cord: to the defense team at the Shaw trial in 1969, Finck stated that the autopsy report (presumably an earlier one, as the extant one does not say this) described the spinal cord as severed when the body arrived at Bethesda. Finck was still absent when the brain was removed, so someone must have told him this, most likely Humes.

---

<sup>34</sup> For two eyewitness sketches see *Ibid.* at Figures 21 & 30. Also see the sketch approved by Parkland physician, Robert McClelland: *Ibid.* at Figure 81.

<sup>35</sup> Michael Kurtz includes George Burkley, Robert Canada, John Ebersole, Calvin Galloway, Robert Karnei, Edward Kenney, David Osborne, and John Stover; see *The Assassination Debates* (2006), at 39 and 126.

<sup>36</sup> Robert Groden, *The Killing of a President* (1993), at 86-88.

<sup>37</sup> Horne, *supra*, Volume I at Figures 37-38.

<sup>38</sup> Lifton, *supra*, at 295-307.

<sup>39</sup> William Law, *In the Eye of History* (2005), at 143-288.

<sup>40</sup> Horne, *supra*, Volume IV at 1036 and 1038.

<sup>41</sup> See their X-rays in Horne, *supra*, Volume I at Figure 39.

<sup>42</sup> Horne, *supra*, Volume IV at 1037.

<sup>43</sup> Horne, *supra*, Volume IV at 1036-1037.

Horne comments further on the throat wound. He concludes that H&B were well aware of this wound that night and he provides considerable evidence for this conclusion.<sup>44</sup> However, given the absence of the throat wound from the FBI report, H&B probably learned of it only after the FBI left, i.e., after 11 PM.<sup>45</sup> That information then led to the pathologists' interim discussion of an exit through the throat, as later reported by Richard Lipsey.<sup>46</sup> Horne even speculates that an early version of the autopsy report included exactly this scenario, which later had to be discarded because of timing data from the Zapruder film.

Regarding the throat wound I would add the following. Warren Commission loyalists like to cite medical articles that ER personnel cannot reliably distinguish entry from exit wounds. Even if true, though, that comment obfuscates the situation. To the contrary, in this particular case several facts trump those medical reports: (1) such a tiny exit wound could not be duplicated in experiments<sup>47</sup> and (2) Milton Helpert (who had done 60,000 autopsies) said that he had never seen an exit wound that was so small (under similar conditions).<sup>48</sup> Then there is the question of the magic bullet. As Horne summarizes, its provenance has been extensively investigated by Josiah Thompson<sup>49</sup> (with recent assistance from Gary Aguilar). In the face of the persistent refusal of the pertinent witnesses to identify this bullet, most likely it would never have been admitted at trial—and that alone would thoroughly devastate any Warren Commission case.<sup>50</sup> A final telling blow derives from the National Photographic Interpretation Center (NPIC):

---

<sup>44</sup> Ebersole also confirmed a call to Dallas during our telephone conversations (see my footnote 14). He estimated the time as about 10:30 PM (*Ibid.* at 999). What struck me, though, is the reason why he recalled this event so clearly: he said that *after* they learned about the throat wound, they stopped searching for bullet debris on the X-rays (Fetzer (2000), *supra*, at 437). Quite interestingly, Stringer also seemed to recall such a telephone call (Horne, *supra*, Volume IV at 1011; Volume I at 166; or HSCA interview with John Stringer, Document 013617, at 4). Moreover, Stringer's estimate of the time agreed with Ebersole's estimate. Dr. Robert Karnei (resident pathologist) also recalled a telephone call to Parkland on that Friday night; see Harry Livingstone, *High Treason II* (1992), at 186.

<sup>45</sup> Horne, *supra*, Volume IV at 999. Oddly enough, Malcolm Perry, before the Warren Commission, initially recalled his conversation with Humes as Friday night; see *Warren Commission Hearings*, Volume III at 380 or [http://jfkassassination.net/russ/testimony/perry\\_ml.htm](http://jfkassassination.net/russ/testimony/perry_ml.htm):

*Mr. SPECTER - Dr. Perry, did you have occasion to discuss your observations with Comdr. James J. Humes of the Bethesda Naval Hospital?*

*Dr. PERRY - Yes, sir; I did.*

*Mr. SPECTER - When did that conversation occur?*

*Dr. PERRY - My knowledge as to the exact accuracy of it is obviously in doubt. I was under the initial impression that I talked to him on Friday, but I understand it was on Saturday. I didn't recall exactly when.*

<sup>46</sup> Horne, *supra*, Volume I at Figure 83.

<sup>47</sup> Olivier, A.G., Dziemian, A.J., "Wound Ballistics of the 6.5 mm Mannlicher-Carcano Ammunition. US Army Edgewood Arsenal Technical Report CRDLR 3264." March 1965. Also see Horne, *supra*, Volume IV at 1083 and Kurtz, *supra*, at 35.

<sup>48</sup> Kurtz, *supra*, at 35. Also see Marshall Houts, *Where Death Delights; the Story of Dr. Milton Helpert and Forensic Medicine* (1967).

<sup>49</sup> Horne, *supra*, Volume IV at 1089-1095. Also see Josiah Thompson, *Six Seconds in Dallas* (1967), at 176. Thompson here actually wonders if the bullet had been switched by government agents sometime after its initial appearance. Also see

<http://www.historymatters.com/essays/frameup/EvenMoreMagical/EvenMoreMagical.htm>.

<sup>50</sup> David Wrone has made a similar argument for the chain of possession of the Zapruder film; see Fetzer (1998), *supra*, at 265. Wrone claims that a good lawyer could have kept the film out of the courtroom (although it did surface for the Clay Shaw trial). Given the recent interviews with Dino Brugioni (see below), that argument today is stronger than ever.

before political leverage was exerted, their scenario actually included a *frontal* throat shot!<sup>51</sup>

### *The Zapruder Film Mystery*

Based on his relentless defense of the extant film, Josiah Thompson can justifiably claim the title, “High Priest of Z Film.” His initial claim derives from his work for *LIFE* magazine in the 1960s, which led to *Six Seconds in Dallas* (1967). He claimed (p. 7): “Quite obviously, the Zapruder film contained the nearest thing to absolute truth about the sequence of events in Dealey Plaza.” His most recent public paper (2007)<sup>52</sup> finalized his claim to the above title. Unfortunately for Thompson, Horne’s work has created deep fractures in his purported bedrock, and has pulverized some rockheads into finely ground sand.<sup>53</sup> When Thompson wrote his “Bedrock” article he ignored two witnesses<sup>54</sup> who had been extensively interviewed by the ARRB (actually by Horne himself) and whose interviews were surely already known to Thompson, who is nothing if not a very bright detective. These witnesses were Ben Hunter and Homer McMahon, employees of the NPIC (a subsidiary of the CIA), who received the original (in their view) film from a Secret Service agent. The latter, in turn, had just couriered it from Rochester, New York, headquarters of Eastman Kodak. Moreover, this agent (“Bill Smith”) specifically said that the film had been *developed* (sic) in Rochester. If that was true, then there must have been a second film, one not shot by Zapruder (his film, after all, had been *developed* in Dallas), but rather one filmed from a nearly identical site in Dealey Plaza.<sup>55</sup>

But Horne’s next stroke is the mortal blow to the Zapruder film, one beyond even the skills of a contemporary Parsifal. Horne details Peter Janney’s encounters (including seven interviews) with Dino Brugioni,<sup>56</sup> a founder of the NPIC. John McCone, Director of the CIA, had telephoned the NPIC director, Arthur Lundahl (Brugioni’s superior), asking him to assist the Secret Service in analyzing the original (Zapruder) film.<sup>57</sup> Beginning late on Saturday night (November 23), Brugioni viewed an original, 8 mm film and prepared briefing boards, which were presented to McCone the next morning. Amazingly, Brugioni stated that neither Ben Hunter nor Captain Sands were at his event.

---

<sup>51</sup> Horne, *supra*, Volume IV at 1208-1212; the NPIC proposed such a frontal shot at frame Z-190. Of course, there is also the article by Paul Mandel (*Ibid.* at 1202 and *LIFE*, December 6, 1963) about the Zapruder film: “...the 8 mm film shows the President turning his body far around to the right as he waves to someone in the crowd. His throat is exposed---towards the sniper's nest---just before he clutches it.”

<sup>52</sup> [http://www.maryferrell.org/wiki/index.php/Essay\\_-\\_Bedrock\\_Evidence\\_in\\_the\\_Kennedy\\_Assassination](http://www.maryferrell.org/wiki/index.php/Essay_-_Bedrock_Evidence_in_the_Kennedy_Assassination).

<sup>53</sup> Ironically, a Captain (Pierre) Sands attended the Hunter-McMahon event (see below). The layman should understand that “rockhead” is neither an epithet nor a pejorative for certain types of music lovers. It is merely a geological formation.

<sup>54</sup> Horne, *supra*, Volume IV at 1226-1227.

<sup>55</sup> John Costella, an Australian Ph.D. physicist with expertise in optics, has offered very compelling physical arguments as to why more than just an original Zapruder film was absolutely necessary to fabricate the extant film. See James Fetzer, editor, *The Great Zapruder Film Hoax* (2003), at 145-238. One researcher has advised me that he has made some progress, but identifying the pertinent photographer(s) remains an open question.

<sup>56</sup> Dino Brugioni, *Photofakery: the History and Techniques of Photographic Deception and Manipulation* (1999). His recollections of the Cuban missile crisis are documented at 109-110.

<sup>57</sup> Horne, *supra*, Volume IV at 1220-1243.

(Brugioni did not recall ever meeting Homer McMahon; he could therefore not personally report whether or not McMahon was present at Event I on Saturday night. Of course, since Brugioni was positive that Ben Hunter was absent, and because Hunter and McMahon were linked by their recall of one another, then McMahon should not have been present at Brugioni's event.) In a detailed analysis Horne shows convincingly that two separate events, both highly compartmentalized, occurred on successive nights. During these recent interviews, when Brugioni finally learned—after 46 years—of two unrelated events, both at NPIC, he was stunned!

Horne assembles a magnificent table<sup>58</sup> that contrasts these two events: the Saturday night (November 23) event with Brugioni and the Sunday night event (November 24) with Hunter and McMahon. Horne demonstrates how compartmentalized these two events were: they differed in attendees, film format, and briefing boards. Brugioni knew Ben Hunter, but did not see him at his event. Brugioni had handled an 8 mm film (Hunter and McMahon had a 16 mm film) that he considered an original; that it was 8 mm is certain because NPIC had to purchase a projector (near midnight on Saturday) from a private local store. (The NPIC did not own its own 8 mm projector.) Brugioni also viewed photographs of the briefing boards currently in the Archives, which had been authenticated by Hunter and McMahon. However, Brugioni was certain that these were not his. He was even able to recall how his differed from these. Although Hunter and McMahon's film reportedly came from Rochester, Brugioni was not told where his had originated (most likely it was Zapruder's original—diverted from Chicago to DC that Saturday).

Based on these interviews, Horne draws several conclusions: (1) the CIA had an immediate and high level interest in the film; (2) the original film had been split from 16 mm to 8 mm in Dallas, just as the Dallas witnesses had agreed;<sup>59</sup> (3) the extreme compartmentalization implies that the two films were different; (4) Brugioni viewed Zapruder's original (8mm), whereas Hunter and McMahon viewed an altered film (in 16 mm, unsplit format); (5) the alterations were done during the day on Sunday, November 24, in Rochester, New York; (6) most likely aerial imaging was used for these alterations; and (7) the three copies of the original (already in circulation<sup>60</sup>) then had to be replaced by copies of the newly altered film. The reason that Horne chooses Sunday is straightforward: *LIFE*'s next issue reached the marketplace on Tuesday (November 26) and it contained images from the extant film (the one currently in the Archives). Some of these low resolution, black and white *LIFE* images (in Horne's opinion—and mine, too) show signs of alteration, particularly the bizarre debris (sometimes called the “blob”) on

---

<sup>58</sup> *Ibid.* at 1236.

<sup>59</sup> This contradicts Roland Zavada's final verdict on this question, although his initial conclusion had been precisely the opposite; see below for more on Zavada.

<sup>60</sup> It is possible that some copies of these copies (sic) escaped the dragnet. Dan Rather, for example (*The Camera Never Blinks* (1977), at 127), claims that security for the film was extremely poor while he was at CBS. Multiple individuals have reported viewing a very different Zapruder film, actually one more consistent with the eyewitnesses (Fetzer (2000), *supra*, at 354). Millicent Cranor described to me a film that she saw in 1992 at NBC; she added that John Lattimer must have seen a similar film (*Resident and Staff Physician*, May 1972, at 60). The *LIFE* issue of October 2, 1964, had six different versions according to Paul Hoch and Vincent Salandria (Fred Newcomb and Perry Adams, *Murder from Within* (1974), at 143). In one version Z-323 had a caption that described JFK's head as “snapping to one side” (also see my footnote 67); another version replaced this frame with Z-313 and a caption describing JFK's head as going forward.

JFK's face and the disappearance of the white object in the background grass. Horne suspects that the alterations had all been completed by Sunday night, although he seems not finally wedded to this concept. In any case, Loudon Wainwright<sup>61</sup> said that 31 frames were employed for that issue of *LIFE*. Although other frames might have been open to alteration after Sunday, it seems likely that these 31 frames would have restricted later changes. (There are fewer than 500 in the entire film.)

Horne next reviews the momentous technical issues that bedevil the extant film— anomalies that really should not be present. In fact, none of these would have been predicted for an original film. Even a single one casts doubts on authenticity, but when a complete list is compiled the evidence becomes overwhelming. Aside from image content issues (which are very serious) this technical list includes the following items: (1) the location of the punched number 183 is inconsistent on both the extant film and (in photographic images) on the extant copies, (2) the punched numbers unique to each of the three copies are quite strangely located, (3) the absence of intersprocket images on the three copies was not predicted by the Jamieson lab, which had exposed them, (4) Zavada could not reproduce the septum line, (5) the double registration of the Dallas processing edge print is odd, (6) no one in Dallas recalled the bracketing (by exposure differences) that is present in the three extant copies, (7) Zavada has shown remarkable indecisiveness about when Zapruder's film was slit from 16 mm format to 8 mm, (8) the "full flush left" issue<sup>62</sup> was not resolved, and (9) claw flare is still a puzzle. That so many purely technical issues persist would, by itself, be a wonder if the extant film indeed were authentic.<sup>63</sup>

Horne also reviews the curious stories of Dan Rather<sup>64</sup> and Cartha DeLoach.<sup>65</sup> Both had been early viewers of the film and both had reported that JFK's head had gone violently *forward*. To put this into perspective, the reader might ask himself this question: How many individuals have you met who, after once viewing the film, agreed with the reports of these two men? I have never met any. An actual Dealey Plaza witness, James

---

<sup>61</sup> Horne, *supra*, Volume IV at 1346. Wainwright was a *LIFE* employee who published *The Great American Magazine—An Inside Story of LIFE* (1986). This includes a (second-hand) account of these images in *LIFE* (November 29, 1963). He states that 31 enlargements were used in creating a sequential layout for that issue.

<sup>62</sup> I recently viewed an original Zavada report; there is indeed one image of the red truck (*Zavada Report* (1998) at 1285) that does extend very near the left edge, just as Horne states. However, Horne's point is that the images in the extant Zapruder film nearly always extend fully left, whereas Zavada's test images only rarely show this phenomenon. Horne also cites the Janowitz/Myers film (Horne, *supra*, Volume IV at 1290), shot in Dealey Plaza with a camera like Zapruder's. As he viewed it on a DVD it seemed to show "full flush left," but Horne noted that he personally could not authenticate this film and would really prefer to see a film actually shot through Zapruder's camera. For more on this J/M film see <http://educationforum.ipbhost.com/index.php?showtopic=15326>.

<sup>63</sup> Many of these points had previously been made, as Horne acknowledges, both by Harry Livingstone and by me, although our work was admittedly based on Horne's initial efforts. Horne emphasizes that he only read Livingstone's book *after* he had done his own research. That the two of them reached so many common conclusions (they did indeed do so) is taken by Horne as (at least partial) verification of his own work. See Fetzer (1998), *supra*, and Fetzer (2000), *supra*, and also Harry Livingstone, *The Hoax of the Century: Decoding the Forgery of the Zapruder Film* (2004).

<sup>64</sup> Rather, *supra*, at 127.

<sup>65</sup> Noel Twyman and I independently discovered DeLoach's report in his autobiography, *Hoover's FBI: The Inside Story by Hoover's Trusted Lieutenant* (1995), at 139. DeLoach does not comment on his obvious disagreement with the extant Zapruder film.

Altgens, a photographer, also described JFK's head as going forward.<sup>66</sup> Horne also reminds us that early viewers of the film easily saw debris (possibly brain tissue) flying to the rear. One of these witnesses was Erwin Schwartz (Zapruder's partner), who saw the film multiple times the very day that it was developed.<sup>67</sup> Such backward-flying debris is nowhere seen in the extant film. Horne also notes the unrecorded turn from Houston to Elm (which both Zapruder and his secretary recalled filming) as well as the now-ancient problem of the limousine stop (first emphasized by Lifton many years ago). The discrepancies between the autopsy photographs, on the one hand, and the Zapruder film, on the other, are also reviewed. Horne offers likely explanations (of incompetent tampering) for these inconsistencies.

In an Addendum, "The Zapruder Film Goes to Hollywood," Horne recounts his viewing of HD scans based on a 35 mm "dupe negative." His Hollywood contact got her copy of the extant film (for \$795) from a private laboratory, to which she had been referred by the Archives' personnel themselves. (There is no other means to obtain such a copy, as the Archives do not directly reproduce copies.) Horne describes his viewing experiences with several Hollywood professionals (I have seen these, too). Quite striking were (1) the black patch over JFK's head,<sup>68</sup> (2) the oddly truncated corner of the Stemmons Freeway sign,<sup>69</sup> and (3) the "blob" on JFK's face.<sup>70</sup> The black patch, in particular, had sharp and geometric borders and was astonishingly black, especially when compared to earlier frames (before Z-313) of JFK's head and also when compared to the natural shadow on the back and side of Connally's head. I have since viewed the MPI transparencies (copied directly from the extant film at the Archives) at the Sixth Floor Museum in Dallas. These images, too, are quite striking. Since they are accessible by the public, anyone should be able to see them, merely by arranging an appointment with the Museum. Horne concludes this section by printing his FOIA letter to the CIA and associated letters on this subject to President Obama, Senator Webb, and DCI Panetta (the CIA response is still pending). Among other items, he requested information on (1) the highly secret CIA facility in Rochester, New York (Hawkeyeworks), (2) the optical printer(s) available there in 1963, (3) the briefing boards prepared by Brugioni (which might still exist), and (4) Brugioni's personal history of the NPIC. Brugioni told Janney that he himself had written this history, which included a brief mention of his Zapruder film event.

Aside from David Wrone (not discussed here, but worth reading about), the individual who fares worst as Horne's mark is Roland Zavada, author of the now-infamous Zavada Report. Although this was purportedly a study to confirm the authenticity of the Zapruder film, no such claim is actually made in that report. After many *tête-à-têtes* with Zavada, Horne concludes that Zavada has ruined his own

---

<sup>66</sup> Fetzer (2003), *supra*, at 200.

<sup>67</sup> Also see a review by Richard J. DellaRosa at [http://www.jfkresearch.com/book\\_review.html](http://www.jfkresearch.com/book_review.html): "When interviewed in the 1990s, Zapruder's business partner, Erwin Schwartz, said that he vividly recalled watching the film and remembered seeing JFK's head suddenly 'whip around to the left' and saw an explosion of blood and brains from his head and that it had been blown out 'to the left rear.'" Also see my footnote 60.

<sup>68</sup> Horne, *supra*, Volume I at Figures 87-88.

<sup>69</sup> *Ibid.* at Figures 85-86.

<sup>70</sup> *Ibid.* at Figures 89-90.

credibility in matters of the Zapruder film.<sup>71</sup> Horne especially, and appropriately, critiques him for his public dithering on multiple serious issues, all of which are well documented. I myself have accused him of frequently employing *ex post facto* logic.<sup>72</sup> That may be appropriate in the courtroom but is wholly out of place in a scientific investigation. Horne specifically faults him for these items: (1) the printing aperture issue, (2) the bracketing issue, (3) the edge printing light issue, and (4) the inconsistent locations of the punched numbers on the copy films. I concur with all of these—and have previously so stated in print.

### *Critiques*

It is impossible to write any comprehensive treatise about the JFK case and expect to go unscathed (as I well know). The data are simply too complex and, as Horne repeatedly emphasizes, they are too often corrupted. The sole recourse then for the investigator is simply to speculate, based on those data he considers most reliable. Horne clearly recognizes his vulnerability here. Horne and I differ, as he knows, on several issues, the most obvious being the role of Robert Knudsen in the autopsy.<sup>73</sup>

Horne concludes that none (or at least very few) of the autopsy photographs derive from the official photographer, John Stringer. Instead he nominates Knudsen as the source of the extant autopsy photographs. Knudsen was the social photographer for the White House and he told his family that he had been busy that night filming the autopsy (he was not home for three nights in a row). The embarrassing fact, of course, is that no one saw him there. Not even the Secret Service agents mention him, though they surely recognized one another from their White House duties.<sup>74</sup> Horne regards the autopsy photographs as authentic (i.e., not photographically altered), chiefly based on his viewing of high resolution images at Eastman Kodak, in Rochester, while he served on the ARRB. (Nonetheless, he maintains that they are highly misleading.) On the other hand, I regard several images (certainly not all of them) as photographically altered, especially the posterior head images.<sup>75</sup> An entire essay could be spent developing these divergent arguments (of photo-alteration vs. no alteration), but I shall not do so here. My viewing of the posterior scalp, with a large format stereo viewer (on multiple occasions and while sampling all imaginable photographic variations of the two pertinent images), repeatedly showed that the back of the head, precisely at the occipital blowout, did *not* yield a 3D image. This could only occur if the occipital area was *precisely identical* on the two photographs in the stereo viewer; such a resulting 2D image is exactly what would be expected if the *same* photographic patch (a soft matte insertion) had been used for each member of the pair. (Ordinarily the two images should have derived from *slightly different* perspectives.) Otherwise, the expected 3D images were readily obtained, both on other portions of these same suspect photographs and also on all other photographs that I examined. This impression of an anomalous area, precisely where the

---

<sup>71</sup> Horne, *supra*, Volume IV at 1281.

<sup>72</sup> See the Preface (by me—but amputated by Harry) to Harry Livingstone, *The Hoax of the Century: Decoding the Forgery of the Zapruder Film* (2004).

<sup>73</sup> Horne, *supra*, Volume I at 247-254.

<sup>74</sup> *Ibid.* at 251.

<sup>75</sup> *Ibid.* at Figure 65 (autopsy photographs 43 & 44).

witnesses disagreed with the photographs—and *only there*—was inescapably striking to me. Unfortunately, Horne did not perform such stereo viewing, as he acknowledges with some regret.

In addition, other serious problems plague Knudsen's role as assigned to him by Horne. Foremost is his statement to his own son: he rode in the limousine with the bronze casket.<sup>76</sup> Now we know that the bronze casket arrived at the front of the hospital by 6:55 PM and that it arrived at the morgue by 7:17 PM. That is a very tight timeline for Knudsen, *if* he was at the morgue at all. In view of that, it does seem unlikely that he took very early photographs of the right upper forehead. By then (according the timeline offered by Tom Robinson, and also probably by Ed Reed), H&B had already committed at least some of their nefarious manipulations. Some skull X-rays may even have been taken by 7:17 PM. If that is true, how then could Knudsen have photographed the head *before* these alterations—as Horne claims he did? Perhaps he got there much earlier (and did not ride with the bronze casket), but no evidence exists for this. And Stringer himself clearly implies that photography began only after 8 PM. If both Stringer and Riebe are correct about this timeline, then what equipment did Knudsen use? And who set it up for him? That task would typically fall to an assistant, such as Riebe, but Ed Reed tells us that he saw no photographic equipment when he took the initial X-rays.<sup>77</sup> And, since Knudsen was a total novice at an autopsy, how did he know to take two photographs from a similar perspective, in order to create stereo pairs?

Here is another major challenge to Horne's scenario: he proposes that Knudsen took photographs *after* reconstruction by the morticians, when both Riebe and Stringer were absent from the morgue. Horne bases this on Riebe's recollection<sup>78</sup> that they had both left by then. Unfortunately, that is not what Stringer recalled. In fact, he clearly stated that he remained until reconstruction had been completed and that he did not get home until about 4 AM.<sup>79</sup> Who would best remember Stringer's presence during that time: Riebe or Stringer? Therefore, if Stringer stayed around, Knudsen gets left out. There is simply no need for two photographers. Furthermore, Stringer never saw Knudsen.<sup>80</sup>

The record shows Knudsen making many trips to develop the autopsy photographs. And, of all places, they went to the highly secret Anacostia facility. (Ordinarily, Stringer would have developed his own photographs; furthermore, he would never have used Anacostia.) That so many trips were required, over the next several weeks,<sup>81</sup> is suspicious in itself. After all, there are only nine autopsy views and only 52 catalogued photographs.<sup>82</sup> So why were so many trips necessary?

---

<sup>76</sup> Horne, *supra*, Volume IV at 1003 (footnote 3).

<sup>77</sup> Horne, *supra*, Volume II at 435. *Gunn: Did you, at any point, see photographers in the morgue?*

*Reed: Yes, I did. But they didn't have their equipment. There was no equipment at that time with them.*

<sup>78</sup> Horne, *supra*, Volume I at 237.

<sup>79</sup> *Ibid.* at 165 and 167. Of course, both men could be right. Stringer might have been only temporarily absent—shortly after Riebe left. Stringer also added a major observation: no photographs were taken either during or after the embalming. Although Godfrey McHugh reported the opposite, I would be inclined in this case to believe the photographer.

<sup>80</sup> *Ibid.* at 250. Also recall that Knudsen claimed to be the sole autopsy photographer; by implication, therefore, he did not see Stringer.

<sup>81</sup> Fetzer (2000), *supra*, at 275.

<sup>82</sup> Horne, *supra*, Volume I at Figure 57.

My conclusions about Knudsen, only briefly supported here, disagree with Horne's. I instead conclude that Knudsen indeed worked with the autopsy photographs (in the darkroom, but not in the morgue), perhaps by improving them cosmetically for the Kennedy family—or by supervising someone else who did this. I suspect he was an unwitting conspirator, being played by his superiors. Furthermore, if the Oswald evidence photographs were doctored, if Dealey Plaza photographs were touched up, if the skull X-rays were altered (in the darkroom), if the Zapruder film was revised, then why would the autopsy photographs remain pristine? After all, it is much, much easier to alter a photograph than to correctly improvise a misleading autopsy scene in the morgue (especially a scene that was often described by attendees as a madhouse). Furthermore, time limits do not apply in the darkroom, where one can leisurely keep improving the image until success is achieved.

I also disagree with Horne about the semicircular defect (with apparent beveling), as seen in F8.<sup>83</sup> This mysterious photo, which I consider to be the back of the head, was described as precisely that during the initial “military review” by the autopsy personnel on November 1, 1966. In addition, Paul O'Connor (autopsy technician) clearly confirmed this.<sup>84</sup> Horne concludes that this beveled defect represents an important exit site. Because it looks like an exit, I agree with Horne that the pathologists should have discussed it. In fact, they do not—and that is suspicious. However, Roger McCarthy,<sup>85</sup> after his own experiments, concluded that such beveled defects can occur independently of exiting bullets or bullet fragments. Furthermore, this site does not fit with any other metal debris in the skull X-rays—certainly not the fragment trail across the top of the skull nor the two fragments removed by H&B—nor does it match the right occipital blowout. To finally bury this proposal, no witness at either Parkland or Bethesda observed a scalp wound that corresponded to this semicircular beveled defect, so it may simply be a red herring.

How many shots struck JFK's head? Horne argues for three,<sup>86</sup> which will perplex many a reader. Even critics of the Warren Commission typically argue for only two head shots at most. (The Warren Commission's scenario was simple: a single shot entered at the rear, near the external occipital protuberance (EOP).)<sup>87</sup> Although I agree with that shot, a second shot likely entered high on the right forehead, very near the hairline.) I confess that Horne has forced me to think again about a third shot. Although I had previously been inclined to ascribe the supposed *left* temple entry to observer error (confusing left for right—or perhaps just seeing a blood clot<sup>88</sup>), I am now more inclined to believe in such an entry. Horne cites the Parkland physicians—Marion Jenkins, Robert McClelland, Ronald Jones, and Lito Puerto (aka Porto)<sup>89</sup>—who clearly reported a small

---

<sup>83</sup> Horne, *supra*, Volume IV at 1027. Also see Horne, *supra*, Volume I at Figure 66 (autopsy photographs 17&18, 44&45). Larry Sturdivan precisely identifies this site with a pointer; see *JFK Myths* (2005), at 195 (Figure 44). These sites are also identified in PowerPoint slides from my November 2009 lecture in Dallas; see the Mary Ferrell website at [http://www.maryferrell.org/wiki/index.php/Main\\_Page](http://www.maryferrell.org/wiki/index.php/Main_Page). Alternate websites, with slightly updated slides, are at <http://www.assassinationresearch.com> and <http://www.assassinationresearch.com>.

<sup>84</sup> Horne, *supra*, Volume IV at 1027. Stringer also disagreed with Michael Baden's orientation (Horne, *supra*, Volume I at 165).

<sup>85</sup> Fetzer (2000), *supra*, at 282.

<sup>86</sup> Horne, *supra*, Volume IV at 1147-1155.

<sup>87</sup> Horne, *supra*, Volume I at Figure 47.

<sup>88</sup> Horne, *supra*, Volume II at 642.

<sup>89</sup> Horne, *supra*, Volume IV at 1150. Also see Horne, *supra*, Volume III at 757, 765-769.

wound in the left temple. Others include Dr. Adolph Giesecke,<sup>90</sup> Dr. David Stewart,<sup>91</sup> Father Oscar Huber,<sup>92</sup> photographers Altgens<sup>93</sup> and Similas<sup>94</sup> and, more recently, Hugh Huggins (aka Hugh Howell),<sup>95</sup> who was RFK's emissary to the autopsy.

Although I was reluctant to visualize Greer with a pistol during the shooting, Secret Service agents did pull their pistols during the tussle over JFK's body in the ER. It is even possible that Greer fired, though I can't imagine what his target was. But it is most unlikely that he deliberately fired at JFK. That would have been far too risky—multiple witnesses would have fingered him, yet no one has done so. Furthermore, no photograph shows him doing this (although it is theoretically possible that such photographs have been culled or altered). Besides, although he may have disliked JFK, we have no evidence that he was involved in the plot to kill JFK.

In the end, though, I must admit that evidence of a third shot to the head persists. Perhaps the major clue is the right occipital blowout. The right forehead shot<sup>96</sup> likely produced the debris across the top of the skull X-rays (neither the Warren Commission's scenario nor the HSCA's scenario match that trail), but that fragment trail does not fit (at all) with a right occipital blowout. Furthermore, if the bullet that caused the visible fragment trail had been mercury filled (as I suggested), then perhaps much of the mercury remained inside the skull. So what produced the occipital blowout? The Warren Commission shot (from the rear) surely could not do that. But a shot from the left front could be just right. What is odd, though, is that no witness at Bethesda, absolutely no one, ever reported such an entrance hole.<sup>97</sup>

Then there is the Clarence Israel story, related by Janie Taylor, a biologist at NIH, across the street from the Bethesda Hospital.<sup>98</sup> Israel (now deceased), an orderly in the morgue that night, saw a doctor working at a "hurried" pace to mutilate *three bullet punctures to the head area*. Like Jeremy Gunn, I don't know what to do with this tale, although it is striking that *three* head wounds are cited.

Diana Bowron, a Parkland nurse,<sup>99</sup> told Livingstone that less than 50% of the right brain remained (the right rear quadrant was most effected) and about a quarter of the left hemisphere was also missing. I am not aware of any other Parkland comments about the left hemisphere, and there is very little clear-cut information from Bethesda either. But if Bowron is correct, then her report constitutes powerful evidence for a left frontal shot. Of course, her report also flatly contradicts the official brain photographs, which show no missing left brain.<sup>100</sup> The optical density data also support Bowron; they show that only 60-65% of the *left* brain was present, as measured on the AP skull at the

---

<sup>90</sup> *Warren Commission Hearings*, Volume VI at 74. However, Giesecke also thought the occipital wound was on the left side. He later admitted that he had described the wrong side: <http://www.assassinationresearch.com/v4n2/v4n2part1.pdf>.

<sup>91</sup> Harold Weisberg, *Post-Mortem* (1969), at 60-61.

<sup>92</sup> <http://easyweb.easynet.co.uk/~klark/leftwounds.html>.

<sup>93</sup> Fetzer (2003), *supra*, at 200.

<sup>94</sup> *New York Times*, November 23, 1963; Edgar F. Tatro, *The Quincy Sun*, November 21, 1984, at 1-17.

<sup>95</sup> Bill Sloan, *JFK: Breaking the Silence* (1993), at 183.

<sup>96</sup> See the incision in the high right forehead, near the hairline, in Horne, *supra*, Volume I at Figure 62.

<sup>97</sup> The autopsy photo of the left lateral head also does not show such an entry hole: *Ibid.* at Figure 59.

<sup>98</sup> Horne, *supra*, Volume IV at 1063-64.

<sup>99</sup> *Ibid.* at 1045 (footnote). Also see Harry Livingstone, *Killing the Truth* (1993), at 195.

<sup>100</sup> Horne, *supra*, Volume I at Figure 35.

National Archives.<sup>101</sup> Of course, in view of Horne's conclusions, some of this missing brain might have been due to H&B. But, even if H&B had removed this, that alone would be suspicious—i.e., they would have had no reason to excise left brain tissue at all unless trauma had occurred there.

To all of this, Horne adds the support of Dr. Charles Wilbur, who carefully reviewed the microscopic pathology report of the left brain sample.<sup>102</sup> This showed “extensive disruption ... associated with hemorrhage.” Wilbur concluded: “These observations rekindle my interest in the observations made in Dallas on the ER table (by several medical personnel) ... that there was an entry hole in the left temporal region, in front of the ear and at the hairline.” In conclusion, I would say that the left temple wound seems more likely than ever, especially with support from the optical density data.

It might have been expected the brain photographs would have resolved this mystery; unfortunately, they are not of JFK's brain. Horne was the first to deduce, from multiple lines of disparate data (see his detailed table),<sup>103</sup> that a surrogate brain had been introduced at a second brain examination. Even the (sole) autopsy photographer of the brain, John Stringer, stated in no uncertain terms that these were not his photographs. One reason was that they were on the wrong brand of film.<sup>104</sup> My own optical density data (taken directly from the extant skull X-rays at the National Archives)<sup>105</sup> are totally inconsistent with the brain photographs (which I have observed at the National Archives with Cyril Wecht). Insofar as the amount of residual brain goes, one can accept either the X-ray data as authentic or the brain photographs as authentic, but not both. They are inconsistent with one another—in fact, wildly inconsistent. To date, no Warren Commission supporter has come to terms with this intractable paradox. It should also be emphasized that the optical density data actually *preceded* Horne's proposal, but these data are entirely consistent with his two-brain proposal.

I also object to Horne's proposal that puncture wounds<sup>106</sup> were deliberately created in the scalp that night.<sup>107</sup> Oddly, he does not identify the perpetrator, or even who issued the order. Of course, none of that is in the official record. Horne proposes that the high posterior “red spot” (selected by the HSCA as the official entry site—albeit persistently denied by the pathologists) was deliberately created that night. How the red color was achieved he does not say. And why that particular site was selected is also

---

<sup>101</sup> David W. Mantik and Cyril H. Wecht, “Paradoxes of the JFK Assassination: The Brain Enigma,” in James DiEugenio and Lisa Pease, editors, *The Assassinations* (2002), at 264.

<sup>102</sup> Horne, *supra*, Volume IV at 1151. Also compare Wilbur's description of the wound location to that of Dr. Marion Jenkins before the Warren Commission:  
<http://mcadams.posc.mu.edu/russ/testimony/jenkins.htm>.

<sup>103</sup> Horne, *supra*, Volume III at 777-844: “Two Brain Examinations—Cover-up Confirmed.” The relevant table is at 791. Horne's ARRB memo was dated June 2, 1998. Only while writing this review did I recall that I had asked this same question some years earlier. See Harry Livingstone, *Killing Kennedy* (1995), at 268 (footnote): “Is Boswell describing different brains on these two occasions?” Horne, however, was the one who pursued the question fully.

<sup>104</sup> Horne, *supra*, Volume I at 42-43.

<sup>105</sup> Mantik and Wecht (2002), *supra*, at 250-271.

<sup>106</sup> These sites are precisely identified in PowerPoint slides from my November 2009 lecture in Dallas; see the Mary Ferrell website at [http://www.maryferrell.org/wiki/index.php/Main\\_Page](http://www.maryferrell.org/wiki/index.php/Main_Page). Alternate websites, with slightly updated slides, are at <http://www.assassinationscience.com> and <http://www.assassinationresearch.com>.

<sup>107</sup> Horne, *supra*, Volume IV at 999.

mysterious—did it fit better with the “sniper’s nest” than did the EOP site? If so, who in the morgue would have known that so early in the game? But what madness it would be to create another wound! After all, H&B had already identified a lower (EOP) entry site; therefore this higher one would immediately imply *two* shots to the head—exactly what no one wanted that night. But Horne does not stop there; he also believes that the lower “white spot” (very near the posterior hairline) was deliberately man-made.<sup>108</sup> We might well ask why he takes these risks. But that question has a simple answer: because he refuses to consider photographic alteration, he has no choice. Think about this: that red spot nearly correlates spatially with the 6.5 mm object on the skull X-ray—as it should since both were fakes. However, what breathtaking serendipity such a match was for subsequent government panels—they had their entry site!<sup>109</sup> But because Horne has boxed himself in (no photo-alteration allowed) his only option is to say that the red spot really was present that night. Unless photographic doctoring is permitted, that red spot could not abruptly appear later. But *no one* at the autopsy saw this red spot (let alone its creation)—and the pathologists forever adamantly refused to recognize it (despite Horne’s insinuation that they themselves had created it). All of this, taken together, is quite damning evidence in favor of (at least some) photographic alteration.<sup>110</sup>

Horne suggests that the original Zapruder film may have been shot at 48 frames per second, an option that was available on that camera:

*Removing the Car Stop and the Exit Debris From the Film Would Have Been Simple if Zapruder Had Actually Filmed the Motorcade at ‘Slow Motion,’ or at 48 Frames Per Second, Instead of at the Normal ‘Run’ Setting of 16 Frames Per Second.*<sup>111</sup>

Horne suggests that simple frame excision could then have eliminated much of the evidence of conspiracy. But this cannot work, as Costella has explained: the ghost images (in the intersprocket area) make this impossible.<sup>112</sup> When Zapruder’s camera exposed one frame (call it number 10), the gate (the metal frame that actually admits light to the film) simultaneously exposed (in the intersprocket area) a modest portion of each

---

<sup>108</sup> In his defense, Horne notes that Lipsey recalled seeing the white spot—and also recalled the pathologists’ discussion of it—during his HSCA interview. He even recalled it well enough that he identified this site on a sketch. See [http://www.history-matters.com/archive/jfk/hasca/med\\_testimony/Lipsey\\_1-18-78/HSCA-Lipsey.htm](http://www.history-matters.com/archive/jfk/hasca/med_testimony/Lipsey_1-18-78/HSCA-Lipsey.htm). As further corroboration, Horne adds that Robinson also recalled a probe entering low on the back of the head.

<sup>109</sup> For an unbiased perspective, however, see the summary reports of the three medical experts for the ARRB (Horne, *supra*, Volume II at 583-587). None of them could identify such an entry site on the skull X-rays—and there was great uncertainty about the red spot, as well. For full summaries see Horne’s Appendices at the Mary Ferrell website or visit my November 2009 lecture (about these experts) at the same website: [http://www.maryferrell.org/wiki/index.php/Main\\_Page](http://www.maryferrell.org/wiki/index.php/Main_Page).

<sup>110</sup> Most likely the red spot was simply added in the darkroom; after all, that site fit much better with the “sniper’s nest” than did the EOP site. The white spot was merely an oversight. When the darkroom magicians covered up the large skull defect they simply neglected to extend their new (photographic) hairpiece inferiorly enough.

<sup>111</sup> Horne, *supra*, Volume IV at 1335.

<sup>112</sup> See these ghost images in Fetzer (2003), *supra*, at 210.

neighboring frame (call these 9 and 11).<sup>113</sup> When Costella examined the film he learned that these ghost images are, in fact, consistent with the central frame in each case—i.e., 10 is always adjacent to 9 and 11 (and this works for any three adjacent frames). In a sense then, each adjacent ghost image “belongs” to its primary frame—and not to any other frame. On the other hand, if frame excision had occurred, each ghost image would become separated from its simultaneously exposed primary frame; i.e., such excision would have led to an adjacent ghost image exposed at a *different* time from the primary frame. For example, for excision of every other frame, 10 would end up next to 8 and 12; for excision of two of every three frames, 10 would end up next to 7 and 13. In either case, these ghost images would not match the frames next to them. And Costella emphasizes that enough information (e.g., motion blur) exists in these ghost images to permit such a deduction. The bottom line is that such inconsistencies are *not* found in the extant film. Furthermore, there is no escape from this problem, i.e., it is not possible simply to erase a ghost image from the intersprocket area—once there, it is always there. Partly based on this very powerful argument, Costella has argued that the extant film must be a fabrication, i.e., a re-creation using parts of multiple films (and probably only a rather modest portion of Zapruder’s film at most). At least one of these films must have been shot during the motorcade, but others could have been shot before or after, even some days before or after. These then had to be stitched together to compose the extant film. Even differences of perspective (as would be expected for films shot from slightly different sites) could be overcome by selecting only pertinent *parts* of frames.

Costella concludes that the Stemmons freeway sign is one example of such a cut and paste job. By analyzing the effects of pincushion distortion<sup>114</sup> he concludes that the sign was placed into the film after the fact, i.e., it looks constant in all frames. On the other hand, if it had been shot from Zapruder’s camera, it should have experienced pincushion distortion: i.e., the sign would successively change its appearance from one frame to the next. Furthermore, after several frames, these changes would accumulate to become even more obvious. But the bottom line is that the Stemmons sign does *not* show such pincushion effects, which means that it was placed after the fact by the film forgers. This situation is closely analogous to the fake hairpiece on the back of JFK’s head, where the image looks 2D rather than 3D via the stereo viewer. In both cases, the *same* fake image was placed (into multiple photographs—or into multiple frames) in a manner that violates the basic rules of optics.

Based on these arguments, Costella concludes that it would have been impossible to alter the film without discarding essentially all of the intersprocket areas and starting all over. In that case, he argues, the total time for (final) fabrication would have taken much longer than several days. Although Horne does not require completion of a final film (i.e., the extant film) by Sunday night (November 24) he does suggest that the Jamieson copies were switched quite promptly, likely within several days. Such a prompt (yet final) switch implies a timeline that sharply contrasts with Costella’s more leisurely pace. Even David Healy (a professional video producer with decades of experience) emphasized in his 2003 Duluth lecture that even if an altered film had been viewed on Sunday night, November 24, it need not have been the final product (i.e., the extant film),

---

<sup>113</sup> Each intersprocket area therefore contains *two* ghost images: one from the frame before and one from the frame after the primary frame that was exposed.

<sup>114</sup> Fetzer (2003), *supra*, at xi, 23, 35, 164-169, 209.

but merely an interim film.<sup>115</sup> Horne ultimately agrees that alterations might have continued for “several weeks” afterwards, especially if a traveling matte had been employed.<sup>116</sup>

Costella also refers to the possibility that the proposed second film of the motorcade (by an unknown photographer—or photographers) might have been shot in 16 mm format. If so, that would have made forgery ever so much easier, particularly since the contemporaneous optical printers were not designed for 8 mm. It might also have made the subsequent first generation copies (the extant ones, which are probably not the Jamieson copies) appear more authentic after fabrication.

Costella goes on to wonder whether the splices in the film (e.g., between Z-208 and Z-212) were unavoidable during forgery for a simple reason: they may have contained telltale ghost images of bystanders who appeared *under* the left edge of the Stemmons sign.<sup>117</sup> A splice is also present at Z-155 to Z-157. Curiously, this is close to frames where Michael Stroschio, a physicist, identified a possible shot at Z-152 to Z-153.<sup>118</sup>

There is a final, simple argument against a 48 fps scenario for Zapruder. If 48 fps had been used, then when the film was shown that weekend, all of the action would have appeared in slow motion—as if the actors were subject to the lesser gravity of the moon. However, no one reported such an odd effect, even though someone surely should have.

My final paragraph in this section is not really a criticism of Horne at all. It merely reflects an unblinking reality: no one (not even Bugliosi<sup>119</sup>) can address everything important in this case. I refer here to the police dictabelt and the acoustics data.<sup>120</sup> Horne implies that the acoustics data support conspiracy—based on the number of audible shots and also on timing problems, i.e., two shots are only 1.66 seconds apart, an interval much too short for the Mannlicher-Carcano. However, he does not cite the work of Don Thomas,<sup>121</sup> which reinvigorated this subject, nor does he mention the fallout from that work. The discussion continues; the interested reader may begin with Wikipedia for current references.<sup>122</sup>

### *Conclusions*

I stand in awe of the scope, detail, and profound insights that Horne has achieved, especially in the medical evidence—to say nothing of his Olympian effort. Given the circumstances of its creation (mostly on weekends, within a cumulative time span of perhaps two years) it is nothing short of phenomenal. Contrast Horne’s effort with Bugliosi’s, which extended over several decades, and which may have included writing assistants and editors. Bugliosi also did not have to self-publish. The bottom line is that I feel a deep debt of gratitude to Horne for further disentangling this nearly half-century

---

<sup>115</sup> Horne, *supra*, Volume IV at 1309. Healy has suggested two weeks for the complete job (*Ibid.* at 1339).

<sup>116</sup> *Ibid.* at 1341 (footnote).

<sup>117</sup> *Ibid.* at 220.

<sup>118</sup> Fetzer (1998), *supra*, at 343-344.

<sup>119</sup> See my footnote 1.

<sup>120</sup> Horne, *supra*, Volume IV at 1127-1131 and 1213.

<sup>121</sup> Thomas, Donald B., “Echo correlation analysis and the acoustic evidence in the Kennedy assassination revisited.” *Science & Justice* (The Forensic Science Society) 41: 21–32 (2002).

<sup>122</sup> [http://en.wikipedia.org/wiki/Dictabelt\\_evidence\\_relating\\_to\\_the\\_assassination\\_of\\_John\\_F.\\_Kennedy](http://en.wikipedia.org/wiki/Dictabelt_evidence_relating_to_the_assassination_of_John_F._Kennedy).

old Gordian knot. By contrast, I should emphasize that I never experienced that sensation with Bugliosi.

If H&B indeed played alterationists with the skull and brain (as I now accept), then Horne has initiated a paradigm shift in our understanding of the cover-up. But, as Horne acknowledges, this does not necessarily convert H&B into villains. After all, they may well have considered themselves to be heroic patriots, who single-handedly aborted World War III,<sup>123</sup> depending on exactly what their military superiors<sup>124</sup> had told them.

Josiah Thompson has proclaimed that the Zapruder debate has been a gigantic waste of time, because it is “junk science” that has produced nothing.<sup>125</sup> Like Einstein’s opinion of quantum mechanics,<sup>126</sup> Thompson’s mind is stuck in the past. In fact, Horne has presented revolutionary new data about the chain of possession. In view of Thompson’s now-shaky bedrock, many will find this new information very convincing indeed—especially younger researchers new to the case, whose minds are still open. I have previously summarized traditional historical (and scientific) views that were later overturned,<sup>127</sup> so no one should be surprised at this dénouement. Without nascent heretics, our world would soon become more impoverished. In retrospect, it was best not to offer obeisance to Roland Zavada (as the inerrant pope of the film), as Thompson implied we should do.<sup>128</sup> The two-event sequence at NPIC has all the hallmarks of a covert operation—but for 46 years not even Brugioni knew what had transpired—and *he wrote the history of the NPIC!* Some of us did not need more evidence, but others did. These fence-sitters may now take their own time to decide. Some may even wish to make a pilgrimage to view the MPI transparencies in Dallas. The real point, though, as Horne states, is that the alteration of the film is, in itself, major evidence of a government cover-up. I could not agree more.

What remains controversial for many though is the timeline for alteration. Horne favors a very short timeline, while Costella prefers a distinctly longer one. The early appearance in *LIFE* of altered frames (e.g., the “blob” on JFK’s face and the disappearance of the white object in the background grass) indicate that *some* frames had been altered before Sunday night, November 24. In addition, the Hunter/McMahon briefing boards show the extremely black patch over JFK’s occiput, as well as the blob. It is possible, though not certain, that incriminating flying debris was also removed by Sunday night. The Stemmons sign and the lamppost (both added after the fact, according

---

<sup>123</sup> LBJ later gave Humes a personal set of presidential cufflinks, which Humes wore during his ARRB visit.

<sup>124</sup> Horne, *supra*, Volume IV at 1188. Horne cites these superiors as Edward C. Kenney (Surgeon General of the Navy), Calvin Galloway (Commanding Officer of the Bethesda National Naval Medical Center), and George Burkley (White House Physician). All were admirals. Also see Vincent Palamara’s summary at <http://www.assassinationresearch.com/v4n2/v4n2part3.pdf>.

<sup>125</sup> Josiah Thompson: “One way of looking at this continuing argument is to see it as a gigantic waste of time, as a prime example of junk science from educated people who ought to know better. It may have amusement value in some chronicle of ‘silly science,’ but, in terms of knowledge about the Kennedy assassination, it has produced literally nothing.” See his entire essay at [http://www.maryferrell.org/wiki/index.php/Essay\\_-\\_Bedrock\\_Evidence\\_in\\_the\\_Kennedy\\_Assassination](http://www.maryferrell.org/wiki/index.php/Essay_-_Bedrock_Evidence_in_the_Kennedy_Assassination).

<sup>126</sup> Rebecca Goldstein (a MacArthur Genius Fellow), *The Mind-Body Problem: A Novel* (1983), at 140-141.

<sup>127</sup> Fetzer (2000), *supra*, at 371-411.

<sup>128</sup> Horne, *supra*, Volume IV at 1290. At the 2003 Pittsburgh conference, Cyril Wecht set his sails in precisely the opposite direction—he advised his audience *not* to trust the experts but instead to do their own analysis; see [www.cyrilwecht.com/journal/archives/jfk/index.php](http://www.cyrilwecht.com/journal/archives/jfk/index.php). I very much side with Wecht.

to Costella) also appear in *LIFE*'s first JFK issue, in low-resolution black and white photographs. Now consider this: McMahon concluded that JFK was hit by 6-8 shots, fired from at least three directions. Evidence for these shots is absent from the extant film, so he must have seen a different film (though probably not the original). If McMahon's observations were correct, then he must have seen a *partly altered* film. That would leave time for Costella's more leisurely scenario.

The chief argument for a short timeline is the need to dispose promptly of the Jamieson (first-day) copies; the problem, of course, is that the longer these persisted the longer the original images might be copied—or recalled—by others. Horne notes that the FBI returned its Jamieson copy to the Secret Service by Tuesday, November 26.<sup>129</sup> However, we do not know the disposition of any other FBI copies, i.e., later generation copies made from the Jamieson copies (that the FBI might have already made by then).<sup>130</sup> So perhaps this cover-up was a two-step process: (1) retrieve quickly all possible copies (including Jamieson copies and all those made from Jamieson's)<sup>131</sup> and (2) sometime later (e.g., within one or two months) replace those earlier ones by copies subsequently made from the extant film. Perhaps the FBI was even given some credible excuse for the delay in replacement (e.g., an improved quality copy was pending); in any case, it is likely that J. Edgar Hoover would have cooperated with any reasonable suggestion to abet the cover-up. But *LIFE*, too, had a copy. However, after their early assassination coverage, they had no need for the film, as a movie film. Given the role of C. D. Jackson (*LIFE*'s publisher), first in the very expensive purchase of the film, and then in his sequestering of the film (with no profit accruing to *LIFE*), it is likely (especially in view of his longtime intelligence connections)<sup>132</sup> that he also would have agreed to such a delayed replacement.

But there is still the matter of the three black and white copies of the *extant* film, discovered in the year 2000 by the Sixth Floor Museum among materials sold to Zapruder in 1975 by Time, Inc.<sup>133</sup> Their format is 16 mm, unslit, with the motorcade on one side and Zapruder home scenes on the other (adjacent) side. These include markings on the film that identify specific frames actually printed in *LIFE*.<sup>134</sup> An irresistible deduction from these markings, of course, is that the extant film had already been completed by that early date. In fact, however, all that is certain is that specific frames (those made public) must have been finalized by that date. On the other hand, if Costella's more leisurely timeframe is adopted, that would imply that these black and white copies were only later placed into the *LIFE* collection—*marked up appropriately after the fact*—so as to give the impression that the markings (and the extant film, too) dated to November. Although this scenario may be true, no eyewitness to date has corroborated it.

---

<sup>129</sup> Horne, *supra*, Volume IV at 1199.

<sup>130</sup> The National Archives does possess later generation copies of the extant film, labeled as being from the FBI.

<sup>131</sup> Costella implies that this collection process was not entirely successful, i.e., that there were "multiple films" in circulation, "not one."

<sup>132</sup> *Ibid.* at 1202.

<sup>133</sup> *Ibid.* at 1199.

<sup>134</sup> That issue was dated November 29, 1963, but most likely it first appeared on newsstands on Tuesday, November 26.

## *Suggestions*

The HD scans (cited above) of selected Zapruder frames should be scanned with an optical densitometer. If possible, multiple wavelengths (colors) should be employed. These scans should then be compared to controls, e.g., JFK's head before Z-313 and Connally's head (at most any time). This might quantify the magnitude of photo-alteration, thus making the conclusions more scientific. Further studies may be forthcoming from the Hollywood nexus. New films shot via a camera like Zapruder's might yet provide further insights. Of course, if extant films (i.e., original ones, not altered ones) from Zapruder's actual camera can still be located that would be even better. As Horne suggests, at the National Archives two autopsy photographs of the posterior scalp (from a matched pair) should be overlaid on a view box. If the images of the suspect area perfectly align, that would constitute powerful evidence of photo-alteration. Control areas should also be extensively compared, just to see what non-identical (but stereo-matched) pairs look like. Surprisingly, no one has done this.

There are three X-ray films of the bone fragments,<sup>135</sup> which seems a bit excessive. Is it possible that these extra films were taken to replace those X-rays that had been discarded—in order that the total number of X-ray films remained fixed at 14? Is it even possible that these three films are *identical* to one another? If so, that would be even more suspicious. To check on this (for the first time—no one has done this), Horne suggests that the films simply be overlaid to see if they match precisely.

I have never looked for the head brace on the X-rays nor, apparently, has anyone else. Since the autopsy personnel did not recognize this, it would be useful to look for this on the X-ray films. (Custer told the ARRB that he had used a blanket behind the head, but Custer's memory has not always been reliable.) In view of Horne's proposal that Knudsen took autopsy photographs with the head brace (apparently while *no* autopsy personnel were present—because no one recalls this), the presence or absence of such a brace on the X-rays might shed further light on Horne's proposed timeline for Knudsen (*if* he was involved at all).

The optical density data from the X-rays should be confirmed. The National Archives have their own densitometer(s); perhaps they would even assist with this. Actually the data need not be too extensive—even a few select data points inside the 6.5 mm object and inside the “white patches”<sup>136</sup> could be highly confirmatory.

My observation at the National Archives of intact emulsion (where there should be none) over the T-shaped inscription on a lateral skull X-ray<sup>137</sup> provided *prima facie* evidence that this X-ray must be a copy. That clearly means that (1) the original is missing and (2) the door lies open to alteration (during copying). Surprisingly, no one has yet attempted to confirm my observation (of the paradoxically missing emulsion), despite the fact that Chad Zimmerman and Larry Sturdivan had that opportunity after my

---

<sup>135</sup> Horne, *supra*, Volume II at 389.

<sup>136</sup> For an image of the white patch, see Horne, *supra*, Volume I at Figure 67.

<sup>137</sup> See my November 2009 lecture at [http://www.maryferrell.org/wiki/index.php/Main\\_Page](http://www.maryferrell.org/wiki/index.php/Main_Page). Alternate websites, with slightly updated slides, are at <http://www.assassinationresearch.com> and <http://www.assassinationresearch.com>.

observation became public.<sup>138</sup> Furthermore, Bugliosi should be a bit red-faced that he did not accompany them at that critical moment. Even he could have made that observation.

Perhaps some other creative minds can think further about three head shots. My fear, though, is that this impasse may never be resolved due to insufficient data. Given the destruction inflicted on the skull by H&B (and perhaps by their predecessors), I am not even certain that a second autopsy would help to resolve that question.

*Addendum: The 6.5 mm Mystery on the AP Skull X-ray*

Although Horne's discussion of the suspicious 6.5 mm object on the AP X-ray is in Volume II, I could not resist a few comments about it here.<sup>139</sup> To date no one else has explained this object, not even the three experts interviewed by the ARRB.<sup>140</sup> Furthermore, each one of the three autopsy pathologists (interviewed separately and under oath) denied either seeing or removing this thing at the autopsy.<sup>141</sup> Even Larry Sturdivan<sup>142</sup> admits that it cannot be a bullet fragment (this admission, almost by itself, destroys the case against the lone gunman), but then after his visit to the National Archives he had to confess that it remained as mysterious as ever. He did, however, offer one half-hearted proposal that he did not really endorse, namely that the fragment had been present on the AP X-ray, but had fallen off before the lateral was taken. (He necessarily assumed that the AP had been taken first.) But this does not explain an awkward fact: the lateral X-ray<sup>143</sup> *still shows a small metal fragment at precisely the expected site!* Furthermore, this proposal disagrees with Reed's sequence of X-rays: Reed said he took the lateral film first.<sup>144</sup> In fact, the only viable explanation for this bizarre 6.5 mm object is photographic addition in the dark room.<sup>145</sup> Horne recounts my own adventures with this fantastic forgery in some detail. Given that he began his odyssey as a layman in medicine and radiology, Horne offers a splendid summary of this entire subject.<sup>146</sup>

---

<sup>138</sup> Sturdivan, *supra*, at 193.

<sup>139</sup> Horne, *supra*, Volume I at Figure 38; look inside JFK's right orbit for this white object. Also see Fetzer (1998), *supra*, at 120-137.

<sup>140</sup> Horne, *supra*, Volume II at 583-587. Detailed summaries of the experts' opinions are in Horne's Appendices; see the list of appendices in Horne, *supra*, Volume I at xix-lii. The appendices themselves are posted at the Mary Ferrell website (see my footnote 3 for a link).

<sup>141</sup> Horne, *supra*, Volume II at 564 (Humes), at 573 (Boswell), and at 580 (Finck).

<sup>142</sup> Sturdivan, *supra*, at 193.

<sup>143</sup> Horne, *supra*, Volume I at Figure 37.

<sup>144</sup> Horne, *supra*, Volume II at 426, 430-431.

<sup>145</sup> Fetzer (1998), *supra*, at 120-137. Also see my lecture (November 2009) at the Mary Ferrell website (see my footnote 137). Alternate websites, with slightly updated slides, are at <http://www.assassination-science.com> and <http://www.assassinationresearch.com>.

<sup>146</sup> Horne, *supra*, Volume II at 546-554.

*Appendix: Three Casket Entries*

Time (PM)	Casket Type	Witnesses	Remarks
6:35	Shipping casket	Paul O'Connor Roger Boyajian Dennis David Donald Rebentisch Floyd Riebe	Black hearse Body bag
Note: this first entry was documented by Boyajian and corroborated by the above witnesses. <sup>147</sup>			
7:17	Bronze viewing casket (from Parkland)	Jim Sibert Frank O'Neill Roy Kellerman William Greer	Light gray navy ambulance Empty casket
Note: this second entry was documented in the report of Sibert and O'Neill. <sup>148</sup>			
8:00	Bronze viewing casket	Joint Service Casket Team Godfrey McHugh	Light gray navy ambulance Body inside, wrapped in sheets—no body bag
Note: this third entry was supervised by Lt. Samuel Bird from Fort Myer. <sup>149</sup>			

<sup>147</sup> Horne, *supra*, Volume IV at 1002-1013.

<sup>148</sup> <http://www.jfklancer.com/Sibert-ONeill.html>. Or see Thompson, *supra*, Appendix G. The time of 7:17 PM appeared in their interview with Arlen Specter (March 12, 1964): FBI 62-109060-2637 at 2. Also see Lifton, *supra*, at 484-485.

<sup>149</sup> Horne, *supra*, Volume IV at 1008 and Volume I at Figure 70. Also see *Military District of Washington, Bird Report* and Lifton, *supra*, at 399, 406-407.