The Wounding of John Connally – Burying the Single Bullet Theory
By Russell Kent 2005

Introduction

Three people were injured by gunshot fire on 22nd November 1963 in Dealey Plaza, Dallas. One, unfortunately, died in the trauma room at Parkland Memorial Hospital. A second would have died from his wounds on the way to the hospital but for the actions of his wife. The third was only lightly peppered on his cheek by flying material from a bullet hitting the kerb. Yet it was his wounds that forced a flawed investigation into some incredible manoeuvring to support an unsustainable theory.

The cornerstone of the Warren Commission's conclusions on who killed President John F. Kennedy and how they did it is a theory. This theory is often called “the single bullet theory” (SBT) and sometimes the “magic bullet theory”. It was probably invented by Arlen Specter, although other members of the Warren Commission have claimed it has their own. It states that one bullet, fired from the sixth-floor East-most window of the Texas School Book Depository (TSBD) caused seven wounds to two people in the Presidential limousine [1].

In this paper, I will show that the central pillar of the SBT, the alleged wounding of Texas Governor John Connally by one bullet, cannot be sustained by the evidence. Furthermore, I will show that the evidence was manipulated by the Warren Commission in the 1960s and, to some extent, by the House Select Committee on Assassinations (HSCA) in the 1970s.

I am not looking at how the three men were wounded that day or who did the shooting. I am only concerned with how the Warren Commission said they were wounded. In doing so, I have been drawn to the conclusion that elements of the Warren Commission and of the HSCA conspired to cover up the truth.

Forming an Investigation

From the very beginning, the US government worked hard to contain the investigation into the killing of JFK and the wounding of Connally. It is well known that the Dallas Police Chief Curry, Head of the FBI Hoover and
Deputy Attorney General Katzenbach were determined to limit the responsibility for the crime to one individual, Lee Harvey Oswald, who was himself murdered on 25th November 1963. On that day, Hoover wrote a memo containing, among other things, the following statement:

"The thing I am most concerned about, and so is Mr. Katzenbach, is having something issued so that we can convince the public that Oswald is the real assassin"[2].

On the same day, the infamous Katzenbach memo to Bill Moyers stated, “The public must be satisfied that Oswald was the assassin; that he did not have confederates who are still at large; and that the evidence was such that he would have been convicted at trial.”

Again, on the same day, President Lyndon Baines Johnson (LBJ) ordered the FBI and the Department of Justice to investigate the assassination of JFK and the murder of Oswald. There were, however, others proposing investigations. By November 27th, Senator Everett M. Dirksen had proposed a Senate Judiciary Committee investigation and Representative Charles E. Goodell had proposed a joint Senate-House investigation. Also, Texas Attorney General Waggoner Carr had announced that a state court of inquiry would be established [3].

Many have argued that the Warren Commission was conceived partly due to a desire to limit the number of investigations. It seems that LBJ and Hoover, good friends that they were, decided that the FBI investigation should be confirmed by a panel of the good and great. According to Walt Brown [4], based on tape recordings released by the Lyndon Baines Johnson Library, “. . . the Warren Commission’s charge was to verify the FBI’s findings in the assassination; a secondary function . . . was to ambush proposed investigations by both the House and the Senate.”

A deal was struck with Waggoner Carr by the Warren Commission’s chairman, Chief Justice of the United States Earl Warren. Carr was invited to sit in on the Commission’s hearings, which he often did. In this way, a Texan investigation was avoided [5].

The FBI summary report was published in December 1963. The Warren Commission had no choice but to substantiate it. To do otherwise would
have involved an independent investigation for which it had no resource. Additionally, should the Warren Commission discover anything contrary to the FBI report; they risked embarrassing a powerful establishment including Hoover and LBJ himself (the very person that had appointed them). Worse, the Warren Commission could not investigate any evidence which suggested Oswald was innocent or other parties were guilty because the FBI didn’t provide any.

The Necessity of a Single Bullet Theory

The FBI summary report concluded that Oswald alone had assassinated the President. He had fired three shots (which were the only shots fired) all of which hit occupants of the presidential limousine:

- § The first shot hit JFK in the back
- § The second shot hit John Connally in the back
- § The third shot hit JFK in the head.

This scenario, whilst requiring world-class marksmanship and the superhuman working of a poor weapon, did not require any “magic” bullet. The problem was that the FBI had ignored the wounding of the third man in Dealey Plaza, James Tague, who had received several small cheek wounds from flying debris after a bullet struck the kerb close to where he was standing watching the motorcade.

The Warren Commission could only work with three shots fired from the TSBD - that's where Oswald was during the assassination, that's where the Dallas Police Department found three spent cartridges and that’s where the FBI had concluded that Oswald had committed the crime. The Warren Commission also had their rather doubtful "clock" - the Zapruder film. This had shown that the President and John Connally both received their non-fatal wounds in less time than it takes to reload a Mannlicher-Carcano rifle (the type of weapon allegedly owned by LHO).

The Zapruder film also indicated a period of about six seconds when all of the shots must have been fired (calculated from the first sign of JFK reacting to a shot until the fatal head shot). The FBI had tests done which proved that it is physically impossible for one man to fire more than three shots in six seconds with a Mannlicher-Carcano [6]. With one shot causing the President's head wounds and one shot missing and wounding James
Tague, the Warren Commission were left with only one shot to account for the remaining seven wounds to JFK and Connally. They had been painted into a corner – the East-most one on the sixth floor of the TSBD.

According to the Warren Commission, one bullet caused a perforating wound in the President's neck. The same bullet then went on to perforate the chest and wrist of Texas Governor John Connally and finished up in the Governor's left thigh. This single intact bullet continued by, according to the Warren Commission, dropping out of the Governor's thigh, being found and identified, being proved as causing all seven wounds and being ballistically matched to a weapon found in the TSBD.

The other two shots/bullets, the Warren Commission concluded, had fragmented: One when it hit JFK's head and one when it hit the curb near James Tague. So, once the intact bullet, Commission Exhibit 399 (CE399) was matched to the rifle, it had to be the single bullet. If that bullet had been found anywhere at the scene of the crime or Parkland Memorial Hospital it would have had to be the single bullet. If the bullet had been found in Ladybird Johnson's handbag, inscribed with Hoover's signature, it would still have had to be the single bullet. That's the ridiculous mess that the Warren Commission got into. The Warren Commission had no choice. Regardless of the condition of CE399 and regardless of where it was found, it had to be the bullet that caused all seven wounds to JFK and Connally.

**Not Supported – Refuted**

The Kennedy assassination is a complex case and in some areas, extraordinarily complex. The principal idea, on which the choice of lone gunman or conspiracy rests, however, is a straightforward matter. If one bullet could be proved to have caused the seven wounds to the President and the Governor, the Warren Commission would have been home and dry, with no further investigation required.

But if it can be shown that more than one bullet was responsible for the wounds to the President and the Governor, then there were four or more shots which meant there was a second shooter in Dealey Plaza and thus, a conspiracy.
Few, if any, of the Warren Commission's claims for CE399 are supported by the evidence. On the contrary, there is a mass of evidence that refutes the SBT. This includes:

- **Ballistics evidence** - the bullet itself, CE399 [10], which was barely distorted and almost whole despite claims that it broke 10cm of Connally's fifth rib and shattered his radius (a hefty bone). CE399 also has a very dubious chain of possession. This alone would probably result in CE399 not being allowed as evidence in a court.
- **Trajectory evidence** - Arlen Specter even disproved his own theory when trying to line up the locations of wounds on JFK and Connally in a reconstruction using wires in a garage [9]. The picture of the reconstruction shows Specter having to hold a straight wire well above the marked location of JFK’s back wound in order to line up JFK's throat wound with Connally's back wound.
- **Medical evidence** - the bodies of JFK and John Connally.
- **Eyewitness testimony** - particularly that of John Connally himself [7]. Connally always insisted that he was hit after JFK was wounded in the throat.
- **Photographic evidence** - the Zapruder film, upon which the Warren Commission relied heavily, shows John Connally with his arm above his nipple line and still holding his Stetson after JFK has been hit [8].

Much of this stack of counter evidence is discussed below.

** Bullet Fragments, Weights and Composition**

Unfortunately for the Warren Commission and its supporters, the very piece of physical evidence, CE399, upon which the SBT and the conclusions of the Warren Commission rely, is suspect. While CE399 is not "pristine", it is fair to say that it is barely damaged.

The Warren Commission and the HSCA used the results of two scientists to allege that:

- § Any missing material from CE399 could be accounted for by the fragments of metal in Connally’s body
- § The fragments recovered from Connally’s body could be chemically matched to samples taken from CE399
If this were true, I would never have written this paper and you could stop reading now. In my opinion, however, there is significant doubt over these allegations.

CE399 may have lost only 2.4 grains of its un-fired weight, possibly less as a bullet looses some weight simply by being fired. The Warren Commission would have us believe that this very small loss of weight is accounted for by the lead found in Connally’s wounds. However, the Commission’s own scientist (at least, the only one they called on this matter) FBI ballistics expert Special Agent Robert Frazier testified that the difference between the weight of CE399 and the average for this type of bullet could be accounted for by normal manufacturing variation. Frazier testified that "there did not necessarily have to be any weight loss to the bullet"[11].

**How Many Fragments?**

Connally’s body contained many bullet fragments when he was admitted to Parkland Memorial Hospital. During his three hours in surgery, only one or two were removed and they were taken only from his wrist. The rest remained in his body as it was thought that they posed no danger to the Governor's health and that it would be risky to attempt removing them.

Dr Gregory testified that he removed two fragments, but that there were many smaller fragments which were left in the wrist wound [12]. Good, clear testimony, but even the Warren Commission’s own exhibit CE842 (see Figure 1 below), which allegedly shows the fragments removed by Dr Gregory, consists of three or four fragments.
In fact, the confusion over the number of fragments removed from Connally’s wrist is remarkable. Table 1, below, shows fifteen different references to the fragments removed by Dr Gregory from Connally’s wrist [13]. The number of fragments ranges from one to five. Shouldn’t a single exhibit be constant? How can the same exhibit consist of fewer or more fragments each time it is referred to? Such inconsistency would almost certainly result in the exhibit being ruled as inadmissible in a trial because it raises reasonable doubt that the fragments removed during surgery are the ones shown in the exhibit. Furthermore, it’s not acceptable to use CE842, as its provenance is in doubt, in any comparison testing with CE399.

<table>
<thead>
<tr>
<th>Source &amp; Date</th>
<th>Reference</th>
<th>No. fragments</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Gregory’s &quot;Operative Record&quot; (22 Nov 63)</td>
<td>WCR 533–534</td>
<td>More than 1</td>
<td>Several in wound; some removed</td>
</tr>
<tr>
<td>Original evidence envelope, PMH (22 Nov 63)</td>
<td>17H 841 1HSCA 468 7HSCA 392</td>
<td>More than 1</td>
<td>Contains the description &quot;Bullet fragments.&quot; Labeled &quot;Q9&quot;</td>
</tr>
<tr>
<td>WC photo of fragments in plastic box (Nov 64)</td>
<td>17H 841</td>
<td>3–4</td>
<td>One large fragment and 2–3 smaller ones</td>
</tr>
<tr>
<td>Dr. Gregory’s testimony (21 Apr 64)</td>
<td>4H 119–120</td>
<td>2</td>
<td>3 fragments in wound; 2 removed</td>
</tr>
<tr>
<td>Enhanced X-ray of wrist (22 Nov 63)</td>
<td>7HSCA 155</td>
<td>3–4</td>
<td>Before fragments removed</td>
</tr>
</tbody>
</table>
Connally’s left thigh contained at least one fragment (on the axis of his femur). On 29th November 1963, Parkland Memorial Hospital sent Connally’s X-rays to the FBI [14]. The dimensions of the thigh fragment, as shown on one X ray, were 3.5mm by 1.3mm. Figure 2, below is a drawing I made based on the dimensions of the thigh fragment.
Figure 2: Drawing made by the author based on measurements by Dr. Reynolds (PMH)

Having made the drawing, I decided to compare it to CE842 and CE399. Figure 3, below, shows my drawing of the thigh fragment, the base of CE399 and CE842 all at the same scale. Although CE842 is worthless to a prosecution, any insistence on its veracity might be acceptable to a defence because the fragments don’t appear to fit easily with the “missing” portion of CE399. I accept that without an indication of thickness of the fragments and depth of gouging to CE399 it is not possible to say definitively, but add to this Dr. Shires testimony of a bullet fragment being visible on Connally's chest X-ray [15] and I think it reasonable to doubt that the fragments all come from CE399.

Figure 3: Comparison of Figure 3, CE399 and CE842 (same scale)

Bullet Weights
One number often used in discussion of the JFK assassination is the average weight of a Winchester Cartridge Company 6.5mm round-nosed bullet – the same type as CE399.

FBI SA Robert Frazier reported that the average unfired weight of a Winchester Cartridge Company 6.5mm round-nosed bullet is 161 grains. He allegedly weighed CE399 at 158.6 grains and so was able to declare a difference of 2.4 grains \cite{16}. The Warren Commission then allowed itself to speculate that there was metal missing from CE399 and this was probably accounted for by the metal fragments found in Connally.

This conclusion (missing metal) is based on a bullet weighing 158.6 grains being “unusual” or outside the “normal” range of a set of unfired bullets. Finding out whether an unfired bullet weighing 158.6 grains is “normal” depends on knowing the total number of bullets weighed by Frazier. As far as I know, this data is not available. He may have only weighed the three he mentioned in his testimony:

- 160.85 grains
- 161.5 grains
- 161.1 grains

The average of these three is 161.15 grains, close enough to the average of 161 grains to which he testified. However, this might not be a true average and any scientist would immediately see the problem here.

Let’s use an analogy. If I wanted to know the average weight of an American, would it be acceptable to choose three of their Olympic athletes, find their total weight, divide it by three and declare the average American weighs 140 pounds? Of course not, I would need to take a broad sample of heavy (large adults) and light (small children) before I could be confident of a true average.

Any honest investigation would have included a scientist among the questioners and published all the data. The Warren Commission did not. That’s pretty remarkable for an investigation that relied so heavily on medical and physical science evidence and the interpretation of that evidence. What use is having the “experts” give testimony when you don’t know the questions to ask? Some of the medical questions that should
have been asked are discussed later. Regarding the testing of CE399 by Frazier, a scientist would ask at least the following questions:

- “How many unfired bullets did you weigh?” Given that there were millions manufactured, any scientist would know that weighing just three would be woefully inadequate to claim a true average.

- “How random was your sample?” A strictly random sample is an absolute requirement for showing a true average (this is discussed in depth below).

The only reasonable conclusion to be drawn from this is that the FBI science cannot support the conclusion that there is any metal missing from CE399. In fact, Frazier himself testified to this. If that is the case, the fragments in Connally’s body came from other bullets.

Any analysis of bullet weights would be more scientifically shown as a diagram showing the normal distribution of a population – commonly known as a “bell curve”. This type of diagram can only be statistically significant using a large population which usually results in a bell shape curve showing the average individual towards the centre of the bell and the more divergent individuals at the edges. Figure 4, below, shows such a curve.
Figure 4: Normal distribution of a population of bullets

If Frazier only weighed three bullets, they could all have been at the edges of this curve. The “average” he then calculated would have been wrong. Suppose that all of Frazier’s bullets came from the right side of the curve, the average he then calculated would be heavier than the true average. While a bullet such as CE399 would appear to Frazier to be lighter than average, it could well not be. It might even be heavier than the average. This would mean that it had not lost any weight upon firing and that all the metal in Connally had to come from somewhere else.

Dr John K Lattimer at least provided all his results regarding bullet weights in his book comparing the assassinations of Lincoln and Kennedy [17]. He weighed a hundred bullets of the same type as CE399 from the few boxes of ammunition he purchased. His average weight was also close to 161 grains. Depending on Lattimer’s confidence that his sample was truly random, this may or may not be a true average. If 161 grains is not a true average, it is not possible to state whether CE399 has lost any metal.

When calculating an average for a population from a sample, confidence in the sample being random is crucial. This so called “confidence interval”
would be low when a researcher is unsure of the randomness of his sample. A low confidence interval on a large population (such as the number of bullets of the same type as CE399 actually manufactured) would mean that any sample taken would also need to be large. A large sample would increase the degree of randomness. So, Lattimer’s sample of 100 may not have been enough.

Let’s return to the analogy. If I weighed 100 Americans in a Denver ski lodge, would that be a random sample of Americans? Of course not, I would need to include many more Americans of all ages and degrees of fitness. In addition, my sample should be chosen randomly, perhaps by a computer selecting social security numbers, in many locations.

It is also interesting that Lattimer’s lightest bullet weighed 159.8 grains. If that bullet had been fired, we could reasonably expect it to lose 0.7 grains in the barrel of the rifle. Its fired weight would be 159.1 grains - only 0.5 grains heavier than CE399.

What if CE399 was also a “light” bullet? If it had weighed 159.8 grains before being fired and lost 0.7 grains when fired, it would have shed only 0.5 grains after leaving the rifle. I doubt that anyone would argue that the metal left in Connally weighed less than half a grain. If CE399 didn’t leave all the metal, another bullet must have done. Thanks to Lattimer, we have more evidence against the SBT.

The size and randomness of the sample of a large population is absolutely critical to determining which individuals are “deviant” (on the edges of the curve). As far as I know, Frazier didn’t produce any diagrams for the Warren Commission and he certainly didn’t try to explain statistics to Specter. Either Specter knew nothing about statistics or he concealed his knowledge.

**Bullet Composition**

To test whether the fragments allegedly from Connally’s wrist (CE842) came from CE399, Dr Vincent Perry Guinn (Professor of Chemistry, University of California at Irvine) was asked by the HSCA to perform a neutron activation analysis (NAA). Of course, CE842 is useless for this
purpose (I have shown that it is highly suspect), but this is the investigation’s so called “evidence”, so I feel content criticising it.

He reported that the core of CE399 contained antimony at a concentration of 833 ppm (parts per million) and that the alleged Connally wrist fragments contained antimony at a concentration of 797 ppm [18]. He concluded that the miniscule difference in the concentration of antimony between the two samples (36 ppm) was evidence that the alleged Connally wrist fragment came from CE399.

This is scientific nonsense and Guinn’s own previous research shows it. It is not possible to use the levels of antimony to show that two fragments are from the same bullet of this type.

Several years before the HSCA investigation, Guinn had performed NAA on several bullets of the same type as CE399 sourced independently (most likely for the Warren Commission). Table 2, below, shows the ppm of antimony that he found in three bullets [19]:

<table>
<thead>
<tr>
<th>Fragment Number</th>
<th>Bullet 1</th>
<th>Bullet 2</th>
<th>Bullet 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>363</td>
<td>358</td>
<td>1062</td>
</tr>
<tr>
<td>2</td>
<td>395</td>
<td>869</td>
<td>1139</td>
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<tr>
<td>3</td>
<td>441</td>
<td>882</td>
<td>1156</td>
</tr>
<tr>
<td>4</td>
<td>667</td>
<td>983</td>
<td>1235</td>
</tr>
</tbody>
</table>

Table 2: Parts per million of antimony found in three WCC bullets by Dr Guinn

This table shows:

- The levels of antimony within any one bullet vary widely.
- Any of the fragments from bullet 1 could be matched with bullet 2.
- The first fragments of bullets 1 and 2 are *more closely matched* than the alleged Connally fragment and CE399. Had Guinn not known they came from separate bullets, using his HSCA nonsense science, he would have concluded that they came from the same bullet.
• *The alleged Connally wrist fragment (which contained 797 ppm of antimony) could have come from bullet 2 or any other similar bullet (and not CE399).*

Of course, there are other problems with Guinn’s analysis: For the HSCA, he tested fragments different from those tested by the FBI for the Warren Commission. Furthermore, the FBI fragments are now “missing” and their weights unknown. They could have been huge pieces weighing tens of grains and thus could not possibly have come from CE399.

**JFK and the Evidence against the SBT**

The Warren Commission concluded that a bullet (CE399) caused a perforating wound when passing through JFK’s neck entering “at the base of the back of his neck” (Warren Commission Report, Page 3) and exiting his throat.

There has been so much argument over the years about the wounds to JFK’s back and throat and I will only give a brief summary here. For an excellent discussion of these wounds, see David Lifton's book “Best Evidence” [20]. The wounds simply do not support the SBT. There is no evidence that the wound in JFK’s back was perforating (transitory). The autopsy doctors, Drs. James Humes, J Thornton Boswell and Pierre Finck did not dissect the path of the bullet [21] and their probes could not define a path [22].

The Warren Commission (and supporters) description of this wound as back to front through the neck would almost certainly not be upheld in court. Even if the wound was transitory, the Warren Commission puts the angle of the perforating path at around 17 degrees and slightly right to left [23]. This angle is 8 degrees shallower than the perforating wound to Connally's chest. What deflected the bullet downwards?

The “base of the back of his neck” entry would probably also fail in court. The autopsy correctly describes JFK’s wound as a back wound and not a neck wound. The JFK autopsy face sheet completed by Dr. Boswell [25] and marked "verified" by the President's personal physician, Admiral Burkley, shows the wound to be in JFK's back. JFK's jacket and shirt [26] both show a hole in the back. The death certificate for JFK [27], prepared
by the Admiral Burkley, also places the hole at the level of the third thoracic (that is, the upper half of the back) vertebra and not at the level of the cervical (that is, the neck) vertebrae. This physical evidence is backed up by the eyewitness statement of Secret Service Agent Glenn Bennett [28] and Secret Service Agent Clint Hill's testimony to the Warren Commission [29].

There is no good evidence that the back wound was a bullet entry wound. On the contrary, there is enough evidence to cast doubt upon this. Dr. Finck testified that the wound did not penetrate deeply [30]. Additionally, by probing the wound with his finger, Humes may have altered its appearance before anybody else got a good look at it. This is significant because if it was an exit wound, by pushing his finger in, Humes may have pushed the avulsed tissues back inside the wound. This would have changed the appearance of the wound from exit to entrance. In Dr. Humes' hand-written original autopsy report, the back wound is described as a "puncture" wound [31]. Even in the published autopsy report, Dr. Humes can only bring himself to call the back wound "presumably of entry." [32]

Similarly, there is no good evidence that the throat wound was an exit wound. During the autopsy, the neck wound was not carefully examined as the doctors assumed that the wound was caused by a tracheotomy. Only after the body was no longer available for examination did Dr. Humes discover that there had been a wound in the throat when JFK was admitted to Parkland Memorial Hospital. The throat wound may have been an entry wound - many of the Parkland doctors testified that it could have been either an entry or exit. The autopsy report prepared by Dr Hume’s hedges and states that the throat wound was "presumably of exit."[33]. Once again, there is reasonable doubt over the evidence.

**The Testimony of Connally’s Doctors**

Connally was treated for his gunshot wounds at Parkland Memorial Hospital by several doctors. He had three wounds:

- A perforating wound of the chest which broke a rib and damaged the pleural sac covering his right lung
- A perforating wound of the right wrist which broke his radius
- A penetrating wound of the left thigh.
He was in surgery for over three hours. The doctors divided into three teams; each concentrating on one wound. Each team was led by a senior doctor, a professor in his field of medicine and unquestionably the best man for the job in the Dallas area. John Connally got the best medical attention available.

Dr Robert Shaw led the surgical team that worked on Connally’s chest wound. He gave testimony to the Warren Commission twice, once in March 1964 and once in April 1964. Dr Charles Gregory led the surgical team that worked on Connally’s wrist wound. Again, he gave testimony twice to the Warren Commission in March 1964 and April 1964. Dr George Shires was head of the surgical team that worked on Connally’s thigh wound. He gave testimony to the Warren Commission only once in March 1964.

Between the two rounds of testimony in March and April 1964, Drs. Shaw and Gregory were allowed to inspect some of the alleged physical evidence and watch the Zapruder film. This occurred during the “Strange Conferences” described in more detail later. The change in what Shaw and Gregory were willing to speculate on after seeing this alleged evidence is discussed in depth later within the sections on each doctor’s testimony.

**Finding the Testimony**

The testimony of the Parkland doctors that treated Connally is central to the conclusions reached by the Warren Commission. The Warren Commission Report makes the following claim:

“In their testimony, the three doctors . . . expressed independently their opinion that a single bullet had passed through his chest; tumbled through the wrist . . . punctured his left thigh . . . and had fallen out of the thigh wound.”

If this were true, it would lend credence to the single bullet theory. We would expect the testimony to be found readily in the volumes of hearings and exhibits, to be easy to understand and, crucially, to support the statement in the Report. Sadly, perhaps even suspiciously, this is not the case:

- The testimony is spread over volumes four and six of the Warren Commission Hearings with the later testimony from April 1964 presented in the earlier volume [34].
On some occasions, only one doctor was questioned by one counsel [35].
On other occasions, several doctors were questioned by several counsellors and other witnesses were present [36]. John Connally was there on one memorable occasion and even took off his shirt and trousers [37].
Hypothetical questions were mixed with specific questions about the case until the doctors may have been unsure which type they were answering.
Even a somewhat medically qualified reader has difficulty following the questions and answers.
Questions were often asked about wounds that the doctors had not seen well or not treated [38].
The doctors were asked complete nonsense questions [39].

Table 3, below, illustrates how preposterously the testimony of Connally’s doctors is presented in the Hearings volumes. I am tempted to believe that whoever put the volumes of Hearings together was either incompetent or deliberately tried to obfuscate critical testimony. If I’m honest, I don’t believe they were incompetent.

<table>
<thead>
<tr>
<th>Chronological to Events</th>
<th>Chronological to Testimony</th>
<th>Alphabetical</th>
<th>Actual</th>
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<tbody>
<tr>
<td>Shaw</td>
<td>Round 1 (23/3/64)</td>
<td>Gregory</td>
<td>Volume 4H</td>
</tr>
<tr>
<td>Gregory</td>
<td></td>
<td>Shaw</td>
<td>Round 2 (21/4/64)</td>
</tr>
<tr>
<td>Shires</td>
<td></td>
<td>Shires</td>
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</tr>
<tr>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Gregory</td>
<td>Shire</td>
<td></td>
<td>Shaw</td>
</tr>
</tbody>
</table>

Table 3: How the testimony of Drs. Shaw, Gregory and Shire was published by the Warren Commission
If the testimony was presented in the Hearings in the order that Connally was actually treated, it would have been as shown in column one of the table. If the testimony was presented in the order that it was taken, it would have been shown as in column two. Finally, if the testimony was presented in alphabetical order according to the doctor’s names, it would have been shown as in column three. The actual order in which the testimony was published (column four) is as illogical as possible. It’s not presented chronologically to the events or when the testimony was taken or even alphabetically. If the editor had thrown the testimony in the air and published it as it fell it could not have been more random.

Given the importance of Connally’s wounds to an understanding of what happened on 22nd November 1963, we might expect a senior medico-legal counselor to have taken the doctors’ testimony. Again, this was not the case; the testimony was taken by Assistant Counsel Specter who had no medical experience. Worse though, the SBT appears to have been Specter’s theory:

- His questions were shamelessly biased to bolstering his theory
- He did not ask simple open and honest questions that might have led to clearer answers such as, “Doctor, with your wide experience of treating gunshot wounds, how do you think Governor Connally sustained these injuries?” or “In your opinion, how did the bullet or bullets that produced this wound behave?” He was the only person at the “Strange Conferences” (see later) who dissented from the view that Connally and JFK were hit by separate bullets in addition to the bullet that hit JFK’s head.

**Dr. Robert Roeder Shaw**

Dr. Shaw was Professor of Thoracic Surgery at the University of Texas Medical School at the time of the assassination [40]. He had been an MD since 1933. Crucially, Shaw had been in the US Army Medical Corp during WW2 and had been stationed in both England (1942) and France (1944). Shortly before joining the team at Parkland Memorial Hospital, Shaw had served with the MEDICO team in Afghanistan (1961–63). By the time he treated Connally, Shaw had experience with over 1000 gunshot wounds. I’d guess that was about 1000 more than anybody in the Warren Commission.
He worked on Connally's chest wound and was assisted in surgery by Drs. Fueishier, James Duke, James Boland, David Mebane, Jackie Hunt and Adolf Giesecke [41]. He described the path of the bullet that caused this wound as entering John Connally's back at the right armpit and exiting near his right nipple. The angle of perforation was about 25 degrees downward (a much steeper angle than the Warren Commission has the bullet path through JFK's "neck" wound), only very slightly right to left [42]. Of course the bullet might have been deflected when it shattered 10 cm of Connally's rib, but if that is so, supporters of the Warren Commission cannot hold to the straight flight of CE399 as speculated by Gerald Posner among others (see Figure 5) [43].

Dr. Shaw gave evidence to the Warren Commission twice, first in March 1964 (6H 83), then a month later in April 1964 (4H 101). The difference between the two occasions is that Dr. Shaw was allowed to view the Zapruder film, CE399 and the Governor's clothes (at the second “Strange Conference”) before the second occasion. His testimony was markedly different after viewing the physical evidence.

Dr. Shaw’s testimony is important regarding:

- Whether the entrance wound was made by a tumbling bullet (it had to have been tumbling for the Warren Commission as it had to have gone through JFK first) – see later.
- The angle of trajectory through the chest (it had to be about 25 degrees, preferably slightly less, to match the rest of the Warren Commission Report).

**Was the Bullet Tumbling?**

Figure 5, below, shows the path of CE399 as believed by contemporary Warren Commission apologists. It shows a relatively straight trajectory through JFK and Connally and that the bullet was tumbling after leaving JFK’s throat.
Figure 5: The smooth flight of CE399 according to Warren Commission supporters (from “Case Closed” Gerald Posner)

If the bullet was tumbling when it hit Connally, however, the resulting entrance wound in his back would have been expected by Shaw to contain mohair fibers and/or metallic fragments – neither are mentioned in Shaw’s detailed report. Dr Gregory testified that he asked Shaw specifically whether the chest wound contained foreign material, clothing and so on. Gregory said, “Well, as I recall it, he said none was found, and I would not have expected any to be found as I explained to you, if this was the initial impact of that missile.” [44]

In other words, as there was no debris in Connally’s back wound, the bullet was not tumbling and this wound was the first caused by the bullet. It had not hit JFK or anything else before it hit Connally.

Furthermore, Shaw went off record to state that the entry wound shown on the Gregory Diagram #1 (G#1) was drawn too large [45].
Figure 6: Gregory Exhibit 1 (G#1) – Back entrance wound drawn too large

A larger entrance wound on Connally’s back might suggest a tumbling bullet which would happen if the bullet had penetrated something before Connally. This would support the SBT as the Warren Commission asserted that the bullet had previously perforated JFK’s neck. So the Warren Commission drew the exit wound as large as possible. However, Dr. Gregory also doubted that the bullet that perforated Connally’s chest hit anything first.
He described the entrance wound on Connally's back as "sort of linear, perhaps three-quarters of an inch in length with a rounded central portion" [46]. Draw it yourself, it's small. He then described how a bullet that strikes something before creating a wound begins to tumble. This tumbling, said Gregory, creates an entrance wound that is "usually quite large and the destruction in creates is increased" [47]. Gregory said, "These are only theoretical observations, but these are some of the reasons why I would believe that the missile in the Governor behaved as though it had never struck anything except him" [48].

In other words, the entrance wounds in Connally’s back was smaller than he would have expected a tumbling bullet to make. He therefore concluded that the bullet was not tumbling. If the bullet was flying straight, it probably did not hit anything before striking Connally.

**The Angle Through The Chest**

To support the SBT and match all the photographs of the Dallas motorcade, the angle of perforation through Connally’s chest had to be about 25 degrees.

The best way to have shown this angle would have been either to call in Connally and measure it on him or to produce a diagram similar to Figure 9, below, based on Dr. Shaw’s observation, to show the entrance and exit wounds on Connally’s chest and the angle of perforation
Figure 7: Authors drawing of the angle of perforation through Connally’s chest

The Warren Commission did neither. They had some crude diagrams drawn up and admitted into evidence during Dr Gregory’s testimony (hence their names, the “Gregory Diagrams”). Then using some slick semantics, they attempted to obscure the fact that no doctor produced them, no doctor thought they represented their observations and no doctor ever used them in anything other than testimony. Even then the doctors made numerous changes to them.

The Warren Commission used two sets of body diagrams during the testimony of Shaw and Gregory - Gregory Exhibit 1 (containing five diagrams) and CE 679 & 680. They were not drawn by the doctors at the time of treating Connally; in fact they were not drawn by any doctor. It seems that they were produced by the Secret Service. They are anatomically incorrect and the wounds they depict seem to have been drawn in an effort to confuse and deceive rather than to aid testimony. Why didn’t the commission ask the doctors to produce a set of anatomically accurate diagrams (similar to those used in an autopsy) and simply mark on them their recollections of the wounds? Better still, Connally was actually present during their testimony and did remove his clothing to show the wounds. Why not just photograph them for the record?
The angle of perforation through Connally’s chest was misrepresented in the following way. During Shaw’s first round of testimony, he pointed out that the nipples were drawn too high and repositioned one of them about four inches (relatively) lower [49]. While this might at first appear innocent, even amusing, could it be that Specter was hoping that Shaw would not notice the "high nipple line" and, using the nipple to orient the chest wound, move the exit higher? This would give a shallower trajectory through Connally’s chest and aid the SBT. Compare the angle of perforation in Figure 8 below with Figure 9 shown later.

Figure 8: Gregory Exhibit 1 (G#1) – Nipple line drawn too high
Shaw’s second testimony to the Warren Commission in April 1964 was taken by Cooper, McCloy and Dulles as well as Specter. Also present were Chief Justice Earl Warren, Senator Richard B. Russell, Representative Hale Boggs, Lee Rankin, Francis W. H. Adams, Joseph A. Ball, David W. Belin, and Norman Redlich. Charles Murray and Charles Rhyne were “observers”. Waggoner Carr, Attorney General of Texas, was also present [50]. His second testimony was taken after the second “Strange Conference” (see later) at which time he was allowed to view the Zapruder film and CE399.

During the April testimony, Specter introduced a “new set” of diagrams, “…the diagrams used now are new diagrams which will have to be remarked in accordance with your recollection.” [52].

But these were not new diagrams. They were the same diagrams, Gregory Diagram 1 (see figure 10) and Gregory Diagram 2, as shown to Shaw a month earlier but now renumbered as CE679 and CE680. Furthermore, they still bore the errors pointed out in Shaw’s and Gregory’s March testimony. Why did they need re-marking? Had Specter temporarily lost the originals? Was Specter hoping that the last utterly confusing round in March might change recollections in his favour?

Had CE679 and CE680 really been a new set of diagrams, they should have shown the wounds as testified to by the doctors in March 1963. I cannot think of an innocent reason to explain why the diagrams needed remarking. Underhand dealing with exhibits in this manner is damaging to the credibility of the Warren Commission.

This time, conveniently for Specter’s SBT, Shaw did not mention the "high nipple line", but simply moved up the position of the wound on the diagram. He did this on both CE670 and CE680 [52]. The angle through the chest is radically different – much shallower. In my opinion, this is highly indicative of coaching. We know that Shaw went “off record” several times during his testimony (see later) – who knows the length of these discussions or which topics were discussed?

The phrase “…new diagrams which will have to be remarked in accordance with your recollection” suggests to me that the original markings were not acceptable to Specter (that is, they didn’t support the SBT) and that the required markings were discussed prior to the second round of testimony.
Dealey plaza UK

I’m not suggesting that Shaw was dishonest; I think he merely wanted to help the lawyers out.

Figure 9: CE679
In March 1964, Shaw was happy to speculate that one bullet did all the damage to John Connally, but in April, he won't be held to that and even discusses the possibility of several bullets[53]. Despite his re-marking of the diagrams, this is to Shaw’s credit. He said in April 1964, "Mr. Dulles, I thought I knew just how the Governor was wounded [that is, with one bullet through JFK and John Connally] until I saw the pictures today, and it becomes a little bit harder to explain."[54]. The extent to which the Warren Commission had already committed to the SBT is evident in Dulles'
confusion when Shaw suggests the possibility of three bullets to account for the three wounds suffered by Connally [55].

After seeing the Zapruder film and CE399, Shaw would not agree to one bullet having caused all John Connally's wounds. Even if one bullet did cause all of Connally's wounds, he doubted that it could have been CE399 [56]. And yet, the Warren Commission Report states, "In their testimony, the three doctors . . . expressed independently their opinion that a single bullet had passed through his chest; tumbled through the wrist . . . punctured his left thigh . . . and had fallen out of the thigh wound." This statement is untrue and provably so.

Shaw discusses trying to find a frame from the Zapruder film which would show when Connally was "in position" to be wounded by one bullet. The doctors settled on frame 236 - at least 12 frames after JFK is obviously hit. Given this and Connally's recollections, Shaw says, "I think it is hard to say that the first bullet hit both of these men almost simultaneously."[57]

Dr. Charles Francis Gregory

Dr. Gregory was Professor of Orthopaedic Surgery University of Texas Medical School in November 1963 [58]. He had been a doctor since 1944, been in active service with the US Navy in WW2 and supported the 1st USMC in Korea (1953 – 1956). By 1963, Gregory had treated over 500 gunshot wounds. Again, I'd put money on that being about 500 more than anybody in the Warren Commission.

He worked on Connally's wrist wound and was assisted in surgery by Drs. William Osborne and John Parker [59]. He described the wound on the upper (or dorsal) surface as 2cm round and ragged about 5 cm above wrist joint. The wound on the underside (volar) he described as 1cm round and smooth cut, about 1.5cm above wrist joint [60]. Both were roughly in the midline of the wrist.

Gregory gave evidence to the Warren Commission twice, first in March 1964 (6H 83), then a month later in April 1964 (4H 101). The difference between the two occasions is that Gregory was allowed to view the Zapruder film, CE399 and the Governor's clothes (at the second "Strange Conference") before the second occasion. As with Shaw, Gregory’s testimony was markedly different after viewing the physical evidence.
Dr. Gregory’s testimony is important regarding:

- Whether the wrist wound was made by a deformed bullet
- The trajectory of the penetrating wound of the wrist

**Was the Wrist Wound Caused by a Pristine or Deformed Bullet?**

Gregory testified in April 1964 that he doubted that the SBT was likely because the bullet would not have had sufficient energy to smash the radius and then go on to penetrate the thigh [61]. He said that it was more likely for bullet fragments like CE 567 or CE 569 to have remained after causing Connally’s wrist injury [62]. This is crucial testimony - the orthopaedic surgeon who treated Connally's wrist testified that it was probably not CE399 that damaged it.

Having discarded CE399 as the probable cause of the wrist injury, Gregory speculated that the bullet which caused JFK’s head wound may have fragmented and a piece gone on to injure Connally's wrist [63].

**Figure 11: CE567 and CE569**

By the way, these exhibits are wrongly identified by Specter in Gregory’s testimony as CE568 and CE570

If Gregory’s speculation about fragments of the bullet that caused JFK’s head wounds damaging Connally’s wrist was true, the SBT would only be required to explain JFK’s non-fatal wounding and Connally’s chest wound. But then, of course, the Warren Commission would have been put into the
difficult position of explaining how CE399 came to be found, allegedly in Parkland Memorial Hospital.

**What Was the Trajectory of the Wrist Wound?**

For the SBT to work, the Warren Commission had to have Connally’s penetrating wrist wound going from an under wrist (volar) entry to an upper wrist (dorsal) exit. Connally was sitting in the limousine, arm on the right-side of the car holding his Stetson hat in front of his chest. The most natural way to do this is with the underside of the wrist pointing towards the chest. Any bullet exiting the chest and then going through the wrist had to enter on the underside. Unfortunately for the Warren Commission *it didn’t*.

Gregory states that the wrist wound goes from the upper (dorsal) surface to the under (volar) surface for five reasons [64]:

1. The general ragged appearance of the dorsal wound is typical of an entrance wound.
2. Bits of thread and cloth were carried into the wound on the dorsal side and these correspond with tear in jacket sleeve.
3. Two or three fragments were shed after the bullet had hit the radius. The three fragments taken from the wrist were more volar and caused by the radius flaking them off.
4. The distortion of the soft tissues shows the pathway to be dorsal to volar.
5. Air in the wound is more visible on the dorsal side of the X-ray which is typical of entrance wound.

Remember, Dr. Gregory was a *Professor* of Orthopaedic Surgery and had treated *hundreds* of gunshot wounds. For such a senior and experienced surgeon to give *five* reasons that the wound in Connally's wrist was dorsal to volar casts serious, not simply reasonable, doubt on the SBT. It’s just no use arguing that “since the other evidence shows that all the shooting was done from the rear of the limousine, the trajectory had to be volar to dorsal”. It simply wasn’t - the best orthopaedic surgeon in the area saw the wound, worked on it and gave solid reasons why it couldn’t be.

But, it gets worse for the Warren Commission and its supporters. Let’s pretend for a while that Gregory got it wrong and that the wrist entrance
and exit wounds are as shown on the Gregory diagrams before he corrected them. Please take some time to do the following:

1. Take a pen and mark a point on your upper wrist 5cm from the wrist joint.
2. Now, turn your wrist over and mark another point on the under surface about 1.5cm above the wrist joint.
3. Now draw a straight line arching across your wrist joining both points.
4. Look up the diagram used by the Warren Commission to show the flight of the "Magic Bullet" through Connally (Figure 16, below)
5. Put the mark on the underside of your wrist on your right nipple.

![Figure 12: Photograph of author showing the path of a missile through Connally’s wrist as determined by the Warren Commission](image)

6. Note the trajectory of the bullet path. How would a bullet leaving Connally's body travelling to the right end up in his left thigh?

Now, let’s try with the wounds as correctly identified by Gregory. Imagine that you are holding a hat and try to orient your wrist so that you put the mark on your upper wrist just in front of your chest but twisted so that a bullet exiting your chest would enter where you have marked your wrist. It’s difficult, unnatural and there’s no evidence that Connally did it during those few seconds in Dealey Plaza on 22nd November 1963.

How did Specter deal with this? During Gregory’s first round of testimony in March 1963, he introduced the Gregory Diagrams. When he showed Gregory the first diagram, the wrist wound was incorrectly marked as volar to dorsal. Gregory pointed out the error and marked the diagrams with the correct entrance and exit, see Figure 13, below.
But Specter needed the wound to be the other way to support the SBT best. So during Gregory’s second round of testimony in April 1963 he reintroduced G#1 (then designated CE679) for Gregory to accept again with the entrance and exit wounds incorrectly marked.

Gregory was asked for a second time "whether these documents accurately depict the place and the identity of the entry and exit wounds [in the
Dealey plaza UK

wrist]. He states unequivocally, "They do not ... it is my opinion that the entrance and exit terms have been reversed." [65]

What was going on here? The two doctors had corrected the diagrams in March but now – in April – were being presented with the diagrams as they were before they made their alteration marks. Why don't the "new diagrams" show revised positions, sizes, and wound identities as pointed out to Specter? And why are the diagrams still anatomically incorrect? I cannot help but speculate that it is because the wounds as drawn by the Warren Commission on G#1 support the SBT and that is why he persists with them in CE 679. Gregory wouldn't play ball and once again pointed out the wound reversal and re-marked the diagram accordingly.
Specter and Gregory spent some time during his testimony discussing whether the bullet that injured Connally's wrist had already lost velocity by transecting other tissues [66]. While Gregory's responses in this section seemed to support the SBT, previous penetration is not the only possibility for a slower bullet. Perhaps it was a different type of bullet fired from a different weapon or from a greater range. Perhaps it was deflected from elsewhere. These possibilities are ignored by the Warren Commission.

**Dr George T Shires**

Dr. Shires was Professor of Surgery at University of Texas Medical School at the time of the assassination [67]. He became an MD in 1948 after premed research for the US Navy at Bethesda Naval Hospital and service on the USS Haven (1945) as an associate surgeon. By 1963, he had treated many gunshot wounds. Let’s face it though, if he had only treated one gunshot wound, he would have had more experience than anyone on the Warren Commission.

He worked on Connally's thigh wound and was assisted in surgery by Drs. Robert McClelland, Charles Baxter and Ralph Patman [68]. Dr. Malcolm Perry was also asked to scrub in ready to assist with vascular surgery if it became necessary [69].

Shire’s testimony is important regarding whether a bullet penetrated Connally’s thigh and subsequently fell out, after all, the WC said of CE399 that it had “. . . punctured his left thigh . . . and had fallen out of the thigh wound.” The evidence simply does not show this. Rather, it shows that no whole bullet ever penetrated Connally’s thigh.

Shires described how the surface wound in the skin was larger than the penetrating path and soft tissue damage [70]. The thigh wound looked to Shires like a tangential hit [71] meaning that a missile had struck a glancing blow at a sharp angle to Connally's leg. Shires was very insistent with Specter that the wound had to have been caused by a tangential hit [72]. He said, “. . . The skin wound was either a tangential wound or . . . a large fragment had penetrated or stopped in the skin and had subsequently fallen out.”
If Shires meant a bullet, why did he say "large fragment"?

If it was tangential, G#5 in Figure 15, below, is wrong as it does not show a tangential hit.

**Figure 15: Gregory Diagram 5 (G#5) – Chest, wrist and thigh wounds misrepresented and caption misleading**

Incredibly, the caption to this diagram reads, in part, "Blue line indicates path of projectile though the body as indicated by examination of wounds." Whose examination? Certainly not the Parkland doctors: Gregory testified that the entrance wound in the wrist is where this diagram shows an exit wound. Moreover, the Warren Commission published his correction of their mistake in G#1 and CE679.

Gregory’s amendments to G#1 and CE679 practically destroy the SBT. By publishing G#5, which ignores Gregory’s previous corrections, the Warren Commission behaves as if Gregory had accepted their trajectory. Furthermore, if we add in a similar drawing of JFK so that a bullet going
through his neck fits with the trajectory shown in G#5, the sheer audacity of the diagram becomes obvious:

Figure 16: G#5 – The position of JFK for the SBT to work

For the trajectory through Connally to “work”, JFK would have had to either be sitting at least 18 inches above Connally or to have stood up just at the moment the shot occurred. Of course, there’s no evidence that he did and G#5 is another part of a mockery of an “investigation”.

Dr Perry told Weisberg that Shires called him in to give an opinion of the thigh wound (Dr Perry was an expert on arterial injury). Perry told Weisberg:

• The hole in Connally’s thigh was too small for a bullet to have caused it.
The fragment next to the femur could not have been deposited by a whole bullet that then backed out [73].

Specter avoided this and never questioned any PMH doctor about it.

The Warren Commission was sent more evidence about the wound to Connally's thigh by the FBI. Another Parkland doctor, Dr. Jack Reynolds, sent a note to the FBI describing the wound and with an X-ray of Connally's left thigh attached [74]. He described the thigh wound as round, 1cm diameter and containing a roughly oval fragment, 3.5mm long, 1.3 mm wide lying on the axis of thigh. The note and X-ray were forwarded to the Warren Commission; however, they chose not to use this information. I expect that this was because it is difficult to explain how a whole bullet could have caused the thigh wound, deposited a fragment of this shape and then dropped out of the wound.

With the testimony of Dr. Shires and the FBI note from Dr. Reynolds, the Warren Commission was well aware that a whole bullet did not penetrate Connally's thigh, only a fragment. Dr. Shires said that the skin wound was either tangential or that a larger fragment (not a whole bullet) had penetrated or stopped in the skin and then fallen out.

**Analysis of the Doctors Questions**

In “Treachery in Dallas”, Walt Brown records how he re-read all of the Warren Commission hearings and analysed the questions asked of the “witnesses” [75]. He divided the questions into eight categories.

Here I want to concentrate on just five (all the others categories of questions I have summed into the “Others“ column):

1. Preliminary – introductory questions regarding the witness’s identity and background.
2. Relevant – questions that had a direct bearing on the assassination of JFK (in this case regarding the wounding of Connally). For example, “Which to you appeared to be the point of entrance?”
3. Clarifications – questions calling for previous answers to be explained.
4. Hearsay – questions calling for the witness to say what he had heard. For example, “What did Mrs. Kennedy say, according to Mrs. Connally?”

Nonsense – gibberish or questions calling for an answer outrageously removed from the point of the “investigation”. For example, Senator Cooper’s question, “In the answers to the hypothetical questions that were addressed to you, based upon the only actual knowledge which you could base that answer, was the fact that you had performed the operation on the wound caused in the chest, on the wound in the chest?” This is either gibberish or was misprinted. Neither is acceptable.

Table 4, below, shows the results of such an analysis of the questions asked of Connally’s surgeons:

<table>
<thead>
<tr>
<th>Doctor</th>
<th>Prelim</th>
<th>Relevant</th>
<th>Clarif</th>
<th>Hearsay</th>
<th>Nonsense</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
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<td>12</td>
<td>13</td>
<td>60</td>
<td>58</td>
<td>0</td>
<td>150</td>
<td>293</td>
</tr>
<tr>
<td>Gregory</td>
<td>11</td>
<td>8</td>
<td>40</td>
<td>16</td>
<td>2</td>
<td>117</td>
<td>193</td>
</tr>
<tr>
<td>Shires</td>
<td>9</td>
<td>19</td>
<td>17</td>
<td>21</td>
<td>0</td>
<td>52</td>
<td>118</td>
</tr>
</tbody>
</table>

Table 4: Analysis of questions

Of Shaw’s and Gregory’s questions, only about 4% were relevant. Of Shire’s questions, 16% were relevant, but he was asked far fewer questions. The average number of questions asked to the doctors was 225. This represents a tiny 0.2% of the total questions asked to all “witnesses”. Compare this to the 3972 questions asked of Crafard, a bum who sometimes slept in Ruby’s Carousel Club. His questions accounted for 3.6% of the total questions asked (second only to the Warren Commission questions champion, Ruth Paine, who was asked 5236 questions). In fact, the top nine (by number of questions asked by the Warren Commission) were all character witnesses for Lee Harvey Oswald. Their total number of questions was 22530 and represented over 20% of all the questions asked (109,930).

Here’s another demonstration that I urge you to try.

- Get two long tape measures and layout 357 inches. This represents the cubic feet of material gathered by the Warren Commission and originally locked away until 2039.
- Now mark four inches on one tape. This represents the four cubic feet of information published by the Warren Commission in its 26 volumes.
- Finally hold a sheet of paper sideways against the tape. The thickness of this sheet of paper, on this scale, represents the total of all medical testimony and exhibits published.

Even in this miniscule amount of information, only a tiny percentage comprises relevant questions. With so little medical evidence to support the SBT, you have to wonder what’s in the other 353 cubic feet.

**Off Record**

Interestingly, Dr. Shaw went off the record with Arlen Specter several times at crucial points in his testimony in March and April 1964:

- When discussing the entrance/exit wounds on John Connally's wrist [76]
- When discussing the degree of injury in the wrist [77]
- When discussing the relatively intact nature of CE399 [78]

Off the record discussion with counsel of this type surely casts reasonable doubt on the evidence given by a witness. It would be far less harmful to the Warren Commission's case if these off the record discussions did not relate to the roots of the SBT. It also does not help the credibility of the Warren Commission when Counsel lies to a witness. Specter tells Shaw that the Warren Commission has ascertained that CE399 came from Connally's stretcher [79], which is simply untrue. Unfortunately for us, Specter was not under oath.

**Logic of CE399’s Discovery**

In fact, Specter went to great lengths to show that CE399 was found on Connally’s stretcher. It had to be there for the SBT to work. It couldn’t have been still in Connally’s thigh wound – it would have been seen during surgery. The fact that CE399 had to be on Connally’s stretcher got me into thinking “How did it get there?” The more I thought about this, the more unlikely it seemed. There are five situations that CE399 would have needed to avoid to have turned up “under the mattress” on Connally’s stretcher:
1.1. It would have needed to remain in Connally’s trousers when he was removed from the limousine and not rolled out when he was lifted onto a gurney
2.2. It would have needed to hide when Connally was stripped in Trauma Room 2 (where it also had to avoid being bundled up with his clothes)
3.3. It would have needed to dodge being noticed on the sheets during examination
4.4. It would have needed to escape being wrapped in the sheets when they were removed from stretcher
5.5. It would have needed to avoid simply sitting on top of the stretcher and somehow wriggle under the mattress.

At the Dealey Plaza UK Seminar 2005 in Canterbury, England, I demonstrated that this was farcical. I secreted a bullet inside my left trouser leg so that it was lying next to my thigh and sat down. When I was lifted from a sitting position onto a covered table, the bullet that I had in my trousers simply fell to the floor. When my trousers were removed, the bullet was obvious on the sheets for all to see. When we imagined that the bullet had hidden on the sheets of the gurney, it remained wrapped up in those sheets when we removed them and not on the table. It is highly illogical for CE399 to have ended up on the mattress, let alone “under the mattress”.

The “Strange Conferences”

Two conferences were held in the VFW (Veterans of Foreign Wars) Building, 200 Maryland Ave, Washington DC, the first on the 14th April 1964 and the second on 22nd April 1963. I call these “strange conferences” for four reasons:

- The subject studied
- The participants
- The results
- The suppression of the records of the conferences – published here, in full, but not by the Warren Commission.
The First “Strange Conference”

According to the memo produced by Assistant Counsel Melvin Aron Eisenberg, a group met “to determine which frames in the Zapruder film portray the instants at which the first and second bullets struck.” This statement is very important. At this stage, the participants still believed that all three shots hit either JFK or JC. The conference was called to find out when the first and second bullets struck (not missed) – it was obvious to all when the third struck.

The significance of this conference is that all but one person agreed that Connally was hit twice. Three bullets, three hits. Once Tague entered the equation, the WC was forced to conclude that only two bullets hit the occupants of the limo and were therefore led into the SBT. When they didn’t have to force a conclusion, they looked properly for evidence.

Drs. Humes, Boswell and Finck (JFK’s “autopsy” surgeons) were there. The FBI was represented by Malley, Gauthier, Shaneyfelt and two unidentified others. Thomas J Kelley (later Assistant Director) and John J Howlett (from the Dallas office) appeared on behalf of the Secret Service. Edgewood Arsenal sent along Dr F W Light Chief of the Wound Assessment Branch, U.S. Army Chemical Research and Development Laboratories, Biophysics Division and Dr A G Olivier (Vet) Chief of the Wound Ballistics Branch. The Warren Commission was represented by Redlich, Eisenberg and Specter.

Some of these attendees had already attended a meeting on January 27th 1964 to study the Zapruder film. Redlich, Eisenberg and Specter for the Warren Commission met with FBI photographic expert Lyndal Shaneyfelt, FBI visual aids expert Leo Gauthier and Secret Service Inspector Thomas Kelley (5H 141). Obviously, no conclusions had been reached otherwise there would have been little need for the “strange conferences”.

Eisenberg produced a three-page memo (not in the Warren Commission Report or any one of the 26 volumes), later obtained by Weisberg, which speaks for itself.

April 22, 1964

MEMORANDUM FOR THE RECORD
FROM: Melvin A. Eisenberg

Subject: Conference of April 14, 1964, to determine which frames in the Zapruder movies show the impact of the first and second bullets

On April 14, 1964, a conference was held to determine which frames in the Zapruder film portray the instants at which the first and second bullets struck.

Present were: Commander James J. Humes, Director of Laboratories of the Naval Medical School, Bethesda, Maryland; Commander J. Thorton Boswell, Chief Pathologist, Naval Medical School, Bethesda; Lt. Col. Pierre A. Finck, Chief of Wound Ballistics Pathology Branch, Armed Forces Institute of Pathology; Dr. F.W. Light, Jr. Deputy Chief of the Biophysics Division at Edgewood Arsenal, Maryland, and Chief of the Wound Assessment Branch of the Biophysics Division; Dr. Oliver, Chief of the Wound Ballistics Branch of the Biophysics Division at Edgewood Arsenal; Messrs. Malley, Gauthier, Shaneyfelt, and two other unidentified agents, of the FBI; Messrs Kelley and Howlett of the Secret Service; and Messrs. Redlich, Specter and Eisenberg of the Commission staff.

A screening was held of the Zapruder film and of slides prepared by LIFE from the film. Each slide corresponded with a separate frame of film, beginning with frame 171. The consensus of the meeting was as follows:

(a) The President had been definitely hit by frames 224-225, when he emerges from behind a sign with his hands clutching his throat.

(b) The reaction shown in frames 224-225 may have started at an earlier point - possibly as early as frame 199 (when there appears to be some jerkiness in his movement) or, with a higher degree of possibility, at frames 204-206 (where his right elbow appears to be raised to an artificially high position).

(c) If the reaction did not begin at 199 or 204-206, it probably began during the range of frames during which the President is hidden from Zapruder's camera by a sign, namely, frames 215-24.
(d) The President may have been struck by the first bullet as much as two seconds before any visible reaction began. In all likelihood, however, the maximum delay between impact and reaction would be under one second, and it is possible that the reaction was instantaneous. Putting this in terms of frames, the President may have been struck as much as 36 frames before any visible reaction is seen. If the visible reaction begins at 199, the President may have been struck as early as 163; if the visible reaction begins at 204-206, he may have been struck as early as 168-170; if the visible reaction begins while the President is behind the sign, he may have been struck as early as 179-188.

(e) The velocity of the first bullet would have been little diminished by its passage through the President. Therefore, if Governor Connally was in the path of the bullet it would have struck him and (probably) caused the wounds he sustained in his chest cavity.

Strong indications that this occurred are provided by the facts that (1) The bullet recovered from Governor Connally's stretcher does not appear to have penetrated a wrist and (2) if the first bullet did not hit Governor Connally, it should have ripped up the car, but apparently did not. Since the bullet recovered from the Governor's stretcher does not appear to have penetrated a wrist, if he was hit by this (the first) bullet, he was probably also hit by the second bullet.

(f) If Governor Connally was hit by the first and second bullets, it is impossible to say definitively at what point, or by what point, he had been hit by the second bullet.

(g) Governor Connally seems to straighten up at frames 224-226, and may be reacting to a wound at this point. (If so, it would be a wound from the first bullet).
(h) Governor Connally seems to begin showing an expression of anguish around 242. If he was hit with two bullets, this expression may have resulted from his second wound.

(i) After Governor Connally straightened up at frames 224-26, he starts to turn to the right. As a result of this turn, at no time after frame 236 was Governor Connally in a position such that a bullet fired from the probable site of the assassin would have caused the wound in his chest cavity which Governor Connally sustained--that is, after frame 236, the Governor presented a side view to the assassin rather than a back view.*

(j) It is not possible to say whether prior to 236 Governor Connally was ever in a position such that one bullet could have caused the five wounds he sustained.

(k) As in the case of the President, Governor Connally could have conceivably been hit two seconds before he begins to react, but the maximum likely time interval between hit and reaction is one second, and the reaction may have been instantaneous. The likelihood of an instantaneous reaction is particularly great in regard to the wrist wound, since pain is usually felt more quickly in a limb than in the torso.

*/ Mr. Specter disagrees with this, and feels the Governor was in position to receive the chest wound up to 242.

This memo is hugely destructive to the SBT for the following reasons:

- It explains that, “...the bullet recovered from Governor Connally's stretcher does not appear to have penetrated a wrist.” This observation probably came from the Edgewood Arsenal doctors and is completely supportive of Dr Gregory.

- It suggests that the facts better match a different theory, “...if he [Connally] was hit by this (the first) bullet, he was probably also hit by the second bullet”

Of the fifteen people there, including five doctors (three of whom were experts in wounds) and two FBI photographic experts, only Specter, the architect of the SBT, dissented from the three bullets, three hits conclusion.
The man either had guts or he knew that some powerful people were on his side.

**The Second “Strange Conference”**

The second “strange conference” was convened, according to the memo produced by Eisenberg also, “to determine which frames in the Zapruder film portray the instants at which the first and second bullets struck.” Again, the Warren Commission needed to find out when the first and second bullets struck the occupants of the limousine (not missed). In other words, they still believed that the wounds suffered by JFK and Connally were caused by three bullets, not two. This time, they invited people in a better position to answer.

Present were Mr and Mrs Connally along with Drs. Gregory and Shaw who, whilst not present in Dealey Plaza at the time of the assassination, at least got a first-hand look at Connally’s wounds. The FBI sent along Gauthier, Shaneyfelt and one other unidentified agent. Redlich, Eisenberg, Specter, Belin, Rankin, McCloy represented the Warren Commission. From Edgewood Arsenal there was Drs. Light, Dolce and Olivier.

This time, Eisenberg produced a two-page memo (not in the Warren Commission Report or any one of the 26 volumes), later obtained by Weisberg, which again speaks for itself.

April 22, 1964

**MEMORANDUM FOR THE RECORD**

**FROM:** Melvin A. Eisenberg

**SUBJECT:** Conference of April 21, 1964, to determine which frames in the Zapruder movie show the impact of the first and second bullets

On Tuesday, April 21, 1964, a conference was held to determine which frames in the Zapruder film portray the instants at which the first and second bullets struck. Present were: Dr. F. W. Light Jr., Deputy Chief of the Biophysics Division and Chief of the Wound Assessment Branch of the Biophysics Division of the
Dealey plaza UK

Edgewood Arsenal, Maryland; Dr. Olivier, Chief the Wound Ballistics Branch of the Biophysics Division at Edgewood Arsenal, Maryland; Dr. Joseph Dolce, Consultant to the Biophysics Division at Edgewood Arsenal; Dr Charles F. Gregory and Dr. Robert Shaw of Parkland Hospital, Dallas, Texas; Messrs. Gauthier, Shaneyfelt, and one other unidentified agent of the FBI; and Messrs. Redlich, Specter, Belin and Eisenberg. Later in the proceedings, Governor and Mrs. Connally, Mr. Rankin and Mr. McCloy joined the conference.

A screening was held of the Zapruder film and of slides prepared by LIFE from the film. Each slide corresponded with a separate frame of film, beginning with frame 171. The consensus of the meeting was as follows:

(a) The President had been definitely hit by frames 224-25 when he emerges from behind a sign with his hands clutching at his throat. After Governor Connally straightened up at frames 224-26 he starts to turn to the right. As a result of this turn, at no time after frame 236 was Governor Connally in a position such that a bullet fired from the presumed site of the assassin would have entered the wound in his chest cavity which Governor Connally sustained - - that is, after frame 236 the Governor presented a side view to the assassin; rather than a back view. 1/

1/ Mr. Specter disagree.

In many frames up to 250, the Governor’s wrist is held in a position which exposed him to the type of wrist wound he actually received.

After viewing the films and slides, the Governor was of the opinion that he had been hit by frame 231.

The Governor stated that after being hit, he looked to the right, looked to his left and then turned to his right. He felt the President might have been hit by frame 190. He heard only two shots and felt sure that the shots he heard were the first and third shots. He is positive that he was hit after the first shot, i.e. by the second shot, and by that shot only.

In a discussion after the conference, Drs. Light and Dolce expressed themselves as being very strongly of the opinion that Connally had been hit
by two different bullets, principally on the ground that the bullet recovered from Connally’s stretcher could not have broken his radius without having suffered more distortion. Dr. Olivier withheld a conclusion until he has had the opportunity to make tests on animal tissue and bone with the actual rifle.

Once more, the conference and the memo are hugely troublesome for the SBT, especially the final paragraph:

“. . . very strongly of the opinion that Connally had been hit by two different bullets, principally on the ground that the bullet recovered from Connally’s stretcher could not have broken his radius without having suffered more distortion.”

Of the sixteen people there, including five doctors, all of whom were experts in wounds, Specter alone dissented from the three bullets, three hits conclusion. And yet, it was Specter that was allowed the same day, to take the testimony of Shaw, Gregory, Mr Connally and Mrs Connally. That, to me, is appalling. It seems that the entire afternoon of testimony given to Specter was squarely aimed at bolstering the SBT. Had the Warren Commission been the slightest bit interested in the truth, why did they allow the one dissenting person to skew the questioning in this way?

The Wounds Ballistics Experts

Melvin Eisenberg, to his credit, had called in some “independent” experts to look at the wound ballistics evidence. All these experts came from the US Army research departments at the Edgewood Arsenal in Maryland. Three were present at the “strange conferences” and three testified to the Warren Commission, but not the same three. Dr Olivier testified first and supported Specter, but could only produce mangled bullets in his tests some of which are shown in Figure 17, below.
Dr Light testified next, but said, “...I am not quite as sure in my mind as I believe he [Olivier] is that the bullet that struck the Governor was almost certainly one which had hit something else first. I believe it could have produced that wound [in Connally’s chest] even though it hadn't hit the President or any other person or object first.”

Dr Dolce (Consultant to the U.S. Army Chemical Research and Development Laboratories Biophysics Division at Edgewood Arsenal) would naturally have been the third witness, but he was not called to testify. I am left wondering whether he was omitted as he appeared unwilling to support the SBT. Instead, Dr Dzieman (Chief of the Biophysics Division U.S. Army Chemical Research and Development Laboratories at Edgewood Arsenal), essentially Light’s boss, testified. He supported the SBT but was not involved in the “strange conferences” and, therefore, never shown the films, photographs or CE399.

Conclusions

Changing Wounds, Fragments and Weights

The descriptions of all five JC wounds were inaccurate in the WCR and manipulated to support the SBT. For the entrance wound and trajectory to fit the SBT, we firstly have to accept that a bullet perforated JFK’s neck. Then we have to imagine Connally with the upper side of his wrist pressed to his nipple (try it yourself) while holding his Stetson, moving to his left
and up so that a bullet leaving the midline of JFK’s neck travelling right to left could hit him in the back near his armpit. At the same time, Connally would have to lift his left leg two feet diagonally to his right ready to catch a bullet emerging from the underside of his wrist. Most people can’t do this and there’s absolutely no evidence that Connally did it on November 22nd 1963.

The WC changed the wounds several times. The angle through the chest had to be 17 to 25 degrees. If the WC couldn’t show it to be this angle and show that a bullet leaving JFK’s throat could have caused a chest wound in Connally of 17 to 25 degrees, then it never could have a case for the SBT or for a single gunman. I have shown that the WC allowed virtually any angle through the chest from the extremely shallow CE679, to the steeper CE680 and onto the ridiculous G#5 showing about 45 degrees. The WC’s own exhibits are not consistent, do not demonstrate beyond a reasonable doubt that the angle of the wound through the chest was 17 to 25 degrees and, therefore, do not support the theory upon which their whole report relied.

The fragments of metal in evidence, allegedly from CE399, don’t appear to fit easily with the “missing” portion of CE399. Without an indication of thickness of the fragments it is impossible to say for sure whether there is more metal here than can be accounted for by the missing weight of CE399. However, we know that some of that metal was removed for analysis and I have shown that it is entirely possible that CE399 was fully intact before samples were removed.

**Logic of the Thigh Wound**

Connally’s thigh was not penetrated by any whole bullet – certainly not CE399. Both Drs Shires and Perry said that the thigh wound was caused by a tangential strike. They were there and closely examined the wound. I’ll take this evidence against anything that Specter said and so would a court of law.

The testimony of Tomlinson, the alleged finder of the stretcher bullet (note, I do not say CE399 as there’s reasonable doubt that it was not CE399), does not place the bullet on Connally’s gurney. Specter established that Connally’s gurney was the one from the elevator (A). But Tomlinson
insisted that the bullet he found (probably not even CE399) came from the one against the wall (B), see Figure 18, below.

![Figure 18: Tomlinson Exhibit 2 – Tomlinson found bullet on stretcher B](image)

Logically and demonstrably, CE399 could not have been “under the mattress” on Connally’s stretcher. The bullet was not found in Connally’s leg, so for the Warren Commission to be correct that it was found “under the mattress” on Connally’s gurney, it had to have been still in his trousers. The problem is that simply lifting a person onto a gurney causes a bullet loose in the trousers to roll out onto the floor.

Except for Specter, the attendees at two “strange conferences” (including doctors, the top wounds experts, the Secret Service, the FBI photographic experts, Warren Commission councillors and even Connally himself) concluded that Connally was hit at least twice by separate bullets. With the injury to James Tague, that is strong evidence for at least four shots and evidence of a conspiracy in the assassination. The “strange conferences”
were never mentioned in testimony and the memoranda were not part of
the Warren Commission Report or any of the 26 volumes of supporting
hearings and exhibits.

Governor John Connally was wounded by more than one bullet. The injury
to his chest was probably caused by a bullet shot from behind the
limousine. The injury to his wrist was almost certainly caused by a bullet
fired from in front of the limousine. It is more difficult to explain the thigh
wound, but it was not caused by a whole bullet and, therefore, it was not
causd by CE399.

The minutes of the 27 January 1964 meeting of the Warren Commission
record the following statement from the Chief Counsel J. Lee Rankin:

"It seems quite apparent now, since we have a picture of where the bullet
entered in the back, that the bullet entered below the shoulder blade, to the
right of the backbone, which is below the place where the picture shows the
bullet came out the neckband of the shirt, in front. So that how it could turn
and . . . ."

As Harold Weisberg noted, Rankin trails off because he realizes that he has
just talked his way out of the SBT.

The theory cannot be proved beyond a reasonable doubt using the alleged
evidence. The surviving members of the Warren Commission and its
supporters know that the single bullet theory should be replaced by a
multiple bullet theory and conspiracy in the assassination of JFK.

Acknowledgements

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and Richard Livingstone.

References

1. “The Assassination Chronicles (Inquest)” Edward Jay Epstein (Carroll &
Graf 1992)
2. 3 HSCA 471-473
   No.4 1996
6. 3H 403-405
8. Frame 232 of the Zapruder film shows Connally gripping his Stetson hat well after JFK is obviously wounded in the throat. The Warren Commission's single-bullet theory would have us believe that Connally had sustained all his injuries at this point. This is impossible:
   - Connally shows no sign of distress at this point
   - Connally would not be able to hold his hat with a shattered radius, a severed tendon leading to the thumb and a damaged radial nerve (4H 124).
10. There are good pictures of CE 399 in several of the assassination books including page 602 in “Post Mortem” Harold Weisberg (self published, 1975)
11. 3H 430
12. 4H 123
14. 7 HSCA 159-162 & 319-321
15. 6H 111
16. 3H 430
17. “Kennedy and Lincoln: Medical and Ballistic Comparisons of their Assassinations” Dr John K Lattimer (1980)
19. 1 HSCA 549
21. Testimony of Dr. Finck during the Clay Shaw trial
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22. Testimony of Dr. Humes, 2H 361
23. JFK Autopsy Report, CE 387
24. “Murder in Dealey Plaza: What We Know Now that We Didn't Know Then” James H. Fetzer (Catfeet Press, 2000)
25. CE397 (17E 45)
26. See photograph on page 78 of Robert Groden's “The Killing of a President” 1993
27. See photograph on page 79 of Robert Groden's “The Killing of a President” (1993)
28. 23 Nov 1963 Field Report of Secret Service Agent Glenn Bennett
29. Testimony of Clint Hill, 2H 144
30. Testimony of Dr. Finck during the Clay Shaw trial
31. Dr. Humes' original, hand-written autopsy report is reproduced in “Post Mortem” Harold Weisberg (self published, 1975)
32. Autopsy Report, Kennedy, John F., CE 387
33. Ibid
35. For example, see Dr. Shaw's testimony given to Arlen Specter in volume 6H
36. For example, see Dr. Gregory's testimony in volume 4H
38. 4H 109
39. McCloy's question in 4H 115 and Cooper's question in 4H 117
40. Testimony of Dr. Robert Shaw, 4H 102
41. 4H102 and 6H 84
42. 4H 137
43. “Case Closed” Gerald Posner pages 478-9
44. 6H 103
45. 6H 87
46. 6H 97
47. 6H 103
48. Ibid
49. 6H 86
50. 4H 101
51. 4H 104
52. 4H 105
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53. 4H 109
54. Ibid
55. Ibid
56. 4H 113-114
57. 4H 114
58. 6H 96
59. 6H 97
60. 6H 97-98
61. 4H 127
62. 4H 128
63. Ibid
64. 4H 118-120
65. 4H 126
66. 6H 102
67. Testimony of Dr. Shires, 6H 104
68. 6H 106
69. Perry scrub in 3H 383
70. 6H 106
71. Ibid
72. 6H 111
73. “Post Mortem” Harold Weisberg (self published, 1975)
74. Ibid
75. “Treachery In Dallas” Walt Brown (Carroll & Graf 1995)
76. 6H 89
77. 6H 92
78. 4H 114
79. 4H 112