An Extraordinary Crime Scene

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Abstract
The homicides of attorneys Barbara Scharton and Daniel Lyons occurred in separate bedrooms of their newly constructed home in city of Santa Barbara, California, USA in 2009. The brother of Daniel Lyons, Corey Lyons, was convicted of the homicides. Analyses of the crime scenes showed two or more assailants were likely, contrary to the prosecution’s theory of one assailant presented in the trial of Corey Lyons. The attack on Barbara Scharton in a bedroom on the first floor of the home involved a .22 caliber revolver (four discharges) and a 12 gauge shotgun (one discharge). Scharton’s death was by a shotgun discharge to her face. The attack on Daniel Lyons in a bedroom on the second floor involved a.38 caliber revolver (five discharges), a 12 gauge shotgun (four discharges), a physical struggle between one or more assailants and two blows on his head with a hatchet. Lyons’ death was by exsanguination. Lyons’ body was staged and a bloodied cloth taken from his body. The home was searched by the assailants and items taken. The assailants were careful not to leave evidence of the burglary.

Keywords: Forensic science; Home invasion; Homicide; Crime scene reconstruction; .22 caliber revolver; .38 caliber revolver; 12 gauge shotgun; Ignored evidence; Bloodstains; Body staging; Burglary

Introduction
On May 4, 2009 at approximately 0100 in the city of Santa Barbara, California, Barbara Scharton and Daniel Lyons became victims of homicide. The homicide of Barbara Scharton was in a bedroom on the first floor of the Lyons/Scharton home and was followed by the Daniel Lyons homicide which occurred in a bedroom on the second floor. The analysis of the crime scene of Barbara Scharton is presented in Part 1. The Daniel Lyons crime scene will be examined in Part 2.

The police identified Corey Lyons, the brother of Daniel Lyons, as the suspect in these homicides. Corey was arrested in a nearby city within eight hours of the homicides and subsequently charged with the two homicides. According to the prosecution, these were murders of revenge [1]. A family dispute which became a civil lawsuit allegedly motivated Corey to commit the homicides where he lost most of his assets to Daniel plus his ability to conduct his residential construction business. Corey Lyons was alleged to have committed the homicides of his brother and sister-in-law in retaliation.

The author was retained by the defense to examine the gunshot residue (GSR) evidence and perform crime scene analyses of the two homicides. Most of the inculpatory evidence against Corey Lyons by the prosecution was flawed, wrong or overly simplified. A careful analysis of the crime scenes of Barbara Scharton and especially Daniel Lyons revealed scenes which indicate more than one assailant likely with street gang member(s) involvement. The complexity of the Daniel Lyons’ crime scene took many hours to unravel. This case could be the most bizarre and complex in history.

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Received: May 15, 2018; Accepted: Jun 22, 2018; Published: Jul 02, 2018

Citation: Burnett BR. An Extraordinary Crime Scene. GSL J Forensic Res. 2018; 1:104.
Corey Lyons was convicted in 2011 of the homicides on his third trial. The first trial ended in mistrial due to potential jury biasing testimony by a prosecution witness. The second trial ended in mistrial due to the jury unable to come to a verdict. The jury of the third trial convicted. A survey of the jury members revealed the prosecution’s gunshot residue (GSR) expert’s testimony was the primary reason for conviction.

The examination and interpretation of the GSR evidence by the prosecution’s expert for the third trial was shown to be incompetent [2] and should have had either an appropriate cross examination of that expert or testimony by the author, neither of which occurred. The flawed analysis and misinterpretation of the GSR evidence by the prosecution’s expert was only part of the exculpatory evidence. For unknown reasons Corey Lyon’s defense attorney, despite his knowledge of most of the author’s work product in this case, refused to present this evidence to the jury either in the cross of the prosecution’s experts or having the author testify for the defense.

**Assailant entry: **There was no evidence of forced entry into the Lyons/Scharton home. Assailant entry was on the first floor, likely through the unlocked garage door.

Even though there were reports by neighbors of gunfire coming from the Lyons’ home and the Santa Barbara police arrived shortly after, they did not enter the dark building until approximately six hours later by a swat team. It appears the back of the house was not monitored by the police despite the claim of the establishment of a “perimeter” around the house. The bodies of Daniel Lyons and Barbara Scharton were found by the swat officers.

### Part 1: The homicide of Barbara Scharton

#### Introduction to Part 1

Possibly the assailant (or assailants) was unaware of Scharton being in a bedroom other than the master bedroom with Daniel Lyons on the second floor of the house. She apparently heard trespasser presence and responded by starting to get off her bed (Figure 1A). It was at this time an assailant with a .22 caliber firearm entered her bedroom. Prior to the assailant entry into her bedroom, Scharton pulled at her overlying bed sheet, bringing it up to her neck and partially wrapping it around her (Figure 1B).

Barbara Scharton received five shots [3] while she was on her bed in a bedroom on the first floor of the newly-constructed house (Corey Lyons was the general contractor).

#### The Barbara Scharton Crime Scene Analysis

**The attack**

The trajectories of the three bullets to Scharton’s right arm and upper body indicate the assailant with a .22 caliber firearm started firing when he was at the base of Scharton’s bed. The following analysis of the bullet and shotgun pellet wounds on Barbara Scharton is in order of their likely occurrence. The first three wounds were by .22 caliber bullets, the fourth wound by a 12 gauge shotgun and the final wound by a .22 caliber bullet.

**Gunshot wound 1, .22 caliber revolver (Figure 2):** The assailant fired the .22 caliber firearm entered the bedroom. He rapidly reached the base of the bed and started firing at Scharton who was sitting on the edge of the bed, about to get off (Figure 1A). The first bullet hit Barbara Scharton’s right forearm, near her elbow (Figure 2A, at arrow) and traveled a short distance distally (Figure 2B). It was a distant range shot. Due to the uncertain angle of her body and arm position, the location of the shooter when this shot was fired is approximate: he was likely somewhere at the base of the bed. This bullet wound as well as the following two .22 caliber bullet wounds could not have occurred while Scharton was on her back on the bed, her likely position when she received the final two gunshot wounds.

**Gunshot wound 2, .22 caliber revolver (Figure 3):** The assailant fired his second .22 caliber shot when he was just to the right of Barbara Scharton. Soot was on the bed sheet overlying the wound to her chest (Figure 3A). The muzzle of the .22 caliber firearm was discharged close, likely within two to three inches (5 to 8 cm) to the bed sheet. Scharton

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**Figure 2:** The first shot. A. Autopsy image of Scharton’s right arm showing the entrance (at arrow) wound by a .22 caliber bullet at arrow. B. A mannequin simulation of the homicide estimates the position of Scharton’s body and right arm when she received this bullet; an x-ray taken at autopsy identified (at the “X”) where the bullet stopped. The bullet entrance wound is at the red dot and trajectory indicated by the arrow. Her arm could have been closer to her lap when the bullet hit. C. Drawing showing the trajectory (represented by the arrow) of the bullet and the likely position of the body and right arm to the shooter on the horizontal plane.

**Figure 3:** Shot 2 is a .22 caliber bullet wound, near contact discharge to the sheet covering Scharton’s right chest. A. Part of the bed sheet covering Scharton’s chest; a soot deposit (arrow) is on the sheet overlying the wound. The muzzle of the .22 caliber was likely within 2 or 3 inches (5 to 7.5 cm) of the sheet. B. The location of the .22 caliber bullet entry to Scharton’s chest is simulated on a mannequin by a red dot; the red “X” marks the approximate location of the bullet in Scharton’s chest. C. Graphic shows the trajectory of the .22 caliber bullet on the horizontal plane; the shooter was to the right of Scharton for this shot.

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could have been falling back to the bed when the shot occurred and the sheet was not in contact with her skin. A contact or near contact shot to the sheet is unlikely because the fabric was not torn by the muzzle blast. The actual distance from the muzzle to skin, despite the sheet intermediate target, is estimated to be greater than 5 inches (13 cm) due to there being no soot on or near the chest entrance wound, “no charring, fouling, stippling, tattooing or other coetaneous manifestations of gunpowder residue are noted on or within the depths of the entrance wound proper” [3].

This shot could have occurred after the .22 caliber shot to Scharton’s upper right arm (Gunshot wound 3, see below). Regardless of the shot order, the shooter was quite close to his victim when this and shot 3 occurred.

**Gunshot wound 3, .22 caliber revolver (Figure 4):** The autopsy report noted for this wound “copious amounts of black carbonaceous debris around the entrance defect” and declared this wound as a “contact-range gunshot.” It appears the muzzle of the .22 caliber firearm was firmly pressed against Scharton’s lateral/posterior aspect of her right upper arm near her elbow and fired. The nearly uniform distribution of the soot around the wound (Figure 4A) suggests the muzzle was pressed hard against the skin forcing that skin, but not the arm, to be almost 90 degrees to the muzzle face. The bullet went the length of her upper arm (Figures 4B and 4C, dashed lines) and lodged in the right deltoid muscle at her shoulder (Figure 4C at “X”). Another feature associated with shot 3 is a superficial abrasion on the right elbow (Figure 5). The abrasion was likely caused by the front of the .22 caliber revolver’s frame during the hard contact of the muzzle to the upper right arm.

Scharton was pushed down onto the bed by the hard contact discharge of the revolver so that the final two shots occurred when she was on her back.

**Gunshot wound 4, shotgun (Figure 6):** This is a 12 gauge shotgun wound to Barbara Scharton’s face. The x-ray of Barbara Scharton’s head shows the direction of the shotgun pellet travel was upward as indicated by the arrow in Figure 6A. This x-ray indicates Scharton was lying on the bed when she received this devastating wound.

Scharton had her left arm in front and slightly above her right arm in a defensive posture. Judging from the satellite pellet wounds on Scharton’s left arm (Figure 6B), the shotgun’s muzzle was more than 2 feet (60 cm) from her at discharge, and perhaps as much as 4 feet (120 cm) see (5). Muzzle-target distance is uncertain without the shotgun to test, but likely within this range. Her right arm was struck by the main pellet mass (Figure 6C). The pattern of injury suggests the main body of pellets with satellite pellets that the shotgun might have had a rifled bore [6, p. 176]. In addition, a pillow was in a position on her chest that caught part of the shotgun blast (Figure 6D, arrow). The trajectory of the shotgun pellets was at about 30 degrees to Scharton’s face (Figures 6A and 7).

**Gunshot wound 5, .22 caliber revolver (Figure 8):** The shotgun blast pushed Barbara Scharton’s head back. Following the shotgun discharge, an assailant fired his .22 caliber revolver at Scharton’s distal neck (Figure 8). The assailant was standing left of Scharton when he fired this shot at an indeterminate range. The bullet’s trajectory was from her upper neck to the right part of her head (from left to right). Since it is unlikely the shooter would return to Scharton after her homicide for another shot (as claimed by the prosecution), this shot probably occurred immediately after the shotgun blast and prior to the attack on Daniel Lyons. It is unlikely this final .22 caliber shot occurred before the shotgun discharge since Scharton’s left arm and perhaps the pillow would have been covering her neck.
Figure 6: The shotgun wound to Barbara Scharton’s face. A. X-ray of the side of Barbara’s head showing the trajectory of the shotgun pellets (white arrow); the arrow head points to the .22 caliber bullet that was fired into Scharton, likely after the shotgun pellet wound. B. Scharton’s left arm and hand; the left forearm caught some of the pellets from the shotgun’s discharge and was below the right arm at the time. C. The right anterior forearm showing the avulsed injury caused by the arm being within part of the main shotgun pellet mass. D. Not only were Scharton’s arms involved in the shotgun discharge, but so was the pillow on her chest (arrow).

Figure 7: Reconstruction of the trajectory (red line) of the shotgun discharge to Barbara Scharton’s face; the arms of the mannequin would not flex to their estimated position for the shotgun blast and Scharton’s forearms were probably lower than shown here. The shotgun muzzle was likely more than 2 feet (60 cm) from the face, and could have been as much as 4 feet (120 cm), depending on the characteristics of the shotgun, when discharged at Scharton.
Figure 8: The .22 caliber shot into the anterior distal neck of Barbara Scharton. A. Image showing the .22 caliber wound (arrow) surrounded by satellite shotgun pellet injuries. B. The trajectory of the .22 caliber bullet. The mannequin’s arms would not flex enough to rest on the pillow so they were removed to show the trajectory of the shot.

Figure 9: The reconstruction of the shooting of Barbara Scharton by the prosecution criminalist: representations of distances and angles from the body are erroneous, except, perhaps, for the arrow of “Rt.Arm” See text. The victim also did not suffer a gunshot wound on the right shoulder (“Rt. Shoulder”).

Citation: Burnett BR. An Extraordinary Crime Scene. GSL J Forensic Res. 2018; 1:104.
Discussion

Scenario 1: Single assailant

For the single assailant hypothesis promoted by the prosecution, the homicide of Barbara Scharton was committed by a lone individual who subdue her with three shots from a .22 caliber firearm (shots 1, 2 and 3), followed by a shot to her face with a 12 gauge shotgun (shot 4) and a short time later by another shot under the chin (Shot 5) by the same assailant. The prosecution criminalist presented this interpretation of the shooting of Barbara Scharton in trial (Figure 9). This is an attempt to fashion this reconstruction to a single assailant, Corey Lyons, thereby ignoring the bulk of the angles and distances of the firearm locations at their discharges to the victim. The arrow labeled “Rt.Arm” in Figure 9 likely represents the Scharton’s right forearm (Gunshot wound shot 2). The blue arrow in Figure 9 likely represents the shogun position when discharge to Scharton’s face, although the length of the line (represented to equal muzzle to target distance), is too long. This graphic ignores most of the facts of the shooting of Barbara Scharton.

The .22 caliber revolver was not used in the homicide of Daniel Lyons and the assailant returned to Scharton’s body for a final shot with the .22 caliber revolver? The evidence from both the Scharton and especially the Lyons crime scenes argues against an aggrieved single assailant being responsible as claimed [1] by the Santa Barbara District Attorney.

Scenario 2: Two assailants

Features of the crime scene necessitates two assailants, one (assailant 1) with a .22 caliber revolver and the other (assailant 2) with a 12 gauge shotgun. The evidence indicates the Scharton homicide occurred too rapidly and with two firearms for this to be committed by a lone assailant. Assailant 1 likely had a .22 caliber revolver because of the lack of shell casings at the scene, the weapon was not used for Daniel Lyons’ attack (i.e., it was likely nearly empty after the attack on Barbara Scharton) and the abrasion at the elbow of Scharton’s right arm was likely caused by the front frame of the revolver. Assailant 2 had the shotgun which due to the rapid multiple shots later at Dan Lyons, was likely a 12 gauge semiautomatic shotgun with initially one chambered cartridge and four in its magazine. The Dan Lyons’ attack, which also cannot be reconstructed with only one shooter, could have involved the same two shooters.

Conclusions

The homicide of Barbara Scharton was committed by two assailants, one (assailant 1) with a .22 caliber firearm and the other (assailant 2) with a 12 gauge shotgun. The prosecution proposed there was a single assailant, Corey Lyons, in the homicides of Barbara Scharton and Daniel Lyons. Analysis of the police, autopsy and criminalist reports, and scene and autopsy image evidence indicates there were two assailants in the attack on Barbara Scharton, which is supported by two assailants in the homicide of Daniel Lyons.

Assailant 1 with the .22 caliber revolver incapacitated Scharton which allowed Assailant 2 to attain the position for the killing shotgun discharge. Assailant 2 did not discharge his shotgun until he was in position to be assured of a kill by a stationary victim with only one shot, reserving his remaining cartridges for the second victim, Daniel Lyons. The homicide of Barbara Scharton had to have been performed quickly (likely not more than four or five seconds).

The assailants knew where Daniel Lyons was and in order to avoid potentially fatal resistance to them by him, calling the police or yelling to his neighbor to call the police, they had to immediately attack him after the Scharton homicide. Lyons was attacked within seconds of the homicide of Scharton, suggesting a third assailant with a .38 caliber revolver was already entering the bedroom to attack Lyons when he arose from his bed. This suggests a coordinated attack on Lyons and Scharton. Indeed, the confused Daniel Lyons met an assailant within his bedroom probably within one or two seconds of being aroused. Lyons was naked and unarmad.

Part 2: The homicide of Daniel Lyons

Introduction to Part 2

The assailants and their firearms: The reconstruction of this shooting scene necessitates two assailants. Assailant 1 with the .22 caliber revolver, who participated in the homicide of Barbara Scharton, could have changed firearms to a .38 caliber revolver. But, due to the possibility of being a different, third assailant with a .38 caliber revolver, this person will be designated as Assailant 3. Assailant 3 likely had a five-cartridge .38 caliber revolver because only five shots were fired despite Lyons’ movements after two shooting volleys (reported by neighbors) and .38 caliber unjacketed bullets were recovered from the scene. Assailant 2 is likely the same assailant with the shotgun in the homicide of Barbara Scharton. Due to rapidity and number of shots fired at the victims, the shotgun was likely a semiautomatic 12 gauge shotgun, initially with five cartridges. One of these shotgun cartridges was previously used in the homicide of Scharton in the first floor bedroom.

The autopsy of Daniel Lyons [4] was performed at the same facility and forensic pathologist as the Barbara Scharton autopsy.

The Lyons’ bedroom (Figure 10) was approximately 13 x 17.5 feet (3.9 x 5.1 m).

Assailant entry into Lyons’ bedroom was by stairs from the first floor (green arrow and line, Figure 10).

As in the Jackson case reconstruction [5] timeline graphics of the scene best portray a sequence of events of an unusually complex crime scene. But unlike the Jackson case with one shooter essentially stationary, both the shooters and Lyons in this case were in motion during the shooting and after. The crime scene is broken down into Scenes A through H, where each scene is defined by the movement of the assailants and Lyons from one location in the bedroom to another, most with discharge of firearms (Scenes A through E, Figure 10). Nine shots were fired at the naked victim. Although both shotgun pellets and .38 caliber bullets hit Lyons multiple times, none were immediately fatal. After both firearms ran out of ammunition, Lyons struggled with

Figure 10: The bedroom on the second floor where Lyons was victim of homicide; this diagram was modified from the architectural drawing of the building. Dimensions are in feet. Due to the lack of a crime scene diagram where the furniture positions and measurements are supplied, the estimated furniture positions and sizes were added to this architectural drawing. The green line is the assailant route taken when they went from the first floor after the charton homicide to the Lyons’ bedroom. The red letters indicate the locations of the scenes of the crime scene described in this report. Scene H (the staging of the body) is at G.
his assailants and was twice hit on his head with a hatchet-like weapon. But this murder saga does not end with Lyons’ death. The assailants manipulated Lyons’ body pre- and postmortem (Scene H), followed by a burglary.

Each scene analysis has an initial figure which includes a scene graphic. The scene graphics in the following figures display the reconstructed positions of the two assailants and victim for that scene. The red arrows show bullet/shotgun pellet horizontal trajectories as best estimated from the projectile strikes and bloodstains/spatter. The green arrows show the estimated movement of either assailant or Lyons.

The Lyons crime scene analysis

**Assailants enter Lyons’ bedroom:** Lyons was awakened by the gunfire at his wife in the first floor bedroom. She likely screamed. Before he could understand what was happening he could have heard footsteps approaching. The pattern of bullet and shotgun pellet strikes and bloodstains shows Lyons first encountered his assailants on the north area of the bedroom (Figure 10 at A). He appears to have been attempting to open the bottom left drawer of the north built-in cabinet, perhaps to retrieve a hidden pistol under a drawer. Assailant 3, with a .38 caliber revolver in hand and was first to enter the bedroom. Behind was assailant 2 with the shotgun. Lyons attempted to prevent targeting him by both assailants during the first three shots. The house was dark and remained dark throughout the attacks on both victims and afterwards according to neighbors and police.

**Scenes A, B and C (Figures 11-16)**

**The first two shots, .38 caliber revolver - Scene A (Figures 11 and 12):**
The assailants entered the bedroom. Assailant 3 with the .38 caliber revolver encountered Lyons in the north part of the bedroom (Figures 10 at A and 11A). Assailant 2 with the shotgun was behind Assailant 3 and either was not in a position to fire at him or he waited until Assailant 3 discharged his revolver two times before attempting to fire his shotgun. In this first part of Scene A (Figure 10), Lyons, perhaps in an attempt to disarm Assailant 3, reached for that .38 caliber firearm. Assailant 3 fired a shot. Lyons’ left palm was close to the muzzle and received a massive exposure of high momentum powder fragments, resulting in stippling from the left palm and wrist (Figure 11B) proximately on the arm almost to the elbow (Figure 11C). The bullet missed and entered a drawer facing in the built-in cabinet on the north wall under the window (Figure 11D, lower arrow).

When Assailant 3 fired again (Figure 12A), Assailant 2 with the shotgun continued his approach. The second shot from Assailant 3 went through Lyons’ left shoulder and exited from his upper back.

**Figure 11:** Scene A, shot 1, revolver. **A.** Floor diagram of the bedroom showing the first part of Scene A; the first bullet trajectory (red arrow) was from the .38 caliber revolver where Lyons’ left hand was close to the muzzle of the revolver. The bullet struck the north built-in cabinet under the window. Assailant 2 with the shotgun was moving into position, as indicated by the larger green arrow. **V:** victim; **A-3:** Assailant 3; **A-2:** Assailant 2. **B.** The left palm and wrist with stippling; the hand was close to the revolver muzzle at discharge so that it was impacted by powder particles with sufficient momentum to penetrated the skin (stippling). **C.** Lyons’ left arm showing stippling along the anterior part of the arm, extending proximally almost to the elbow. **D.** The first .38 caliber bullet went into the built-in cabinet likely at the lower arrow; the upper arrow points to the second .38 caliber bullet hole in the cabinet.

**Figure 12:** Scene A. shot 2, revolver. **A.** Scene diagram showing the likely positions of the assailants and Lyons at this shot; the shotgun shooter was moving into position for his first shot; **V:** victim; **A-3:** Assailant 3; **A-2:** Assailant 2. **B.** This .38 caliber bullet went through Lyons’ left shoulder and was the second bullet to hit the north built-in cabinet (Figure 11D). **C.** The north built-in cabinet of drawers and curtain; area within square is enlarged in D. **D.** Apparent bullet hole in the drapes which corresponds to the upper drawer bullet hit. **E.** A discoloration (within the circle) on the drape might be soot; image is grossly sharpened in Photoshop to accentuate this defect.
Since the revolver’s second shot was likely higher than the first, shots (Figures 12C and 12D). No evidence was collected from the possible bullet strikes on the curtain, but there appears to be tearing (Figure 12D) and a soot deposit (Figure 3E, circle). The scene criminalists did not note these features on the curtain. If the curtain does not show two bullet holes, the scenario of these two shots could be modified where the curtain was somehow not involved. The order of these shots could be reversed.

During the interaction of Lyons and Assailant 3, a suitcase which was between the ottoman and the north built-in cabinet (Figure 1) was moved by either Lyons or assailant or both. The base of the suitcase (wheels and plastic feet) was oriented west when it was likely knocked over.

**Shots 3 and 4, shotgun - Scene B. (Figures 13 and 14):** Lyons backed up and rotated slightly toward the north wall/built-in cabinet. Assailant 2 with the shotgun came into position, one leg possibly on the ottoman, and he was awkwardly leaning forward. The close proximity of the shotgun barrel to Lyons allowed him to push it away and down (Figure 13A) where the shotgun fired. The discharge to the carpet was at the base of the built-in cabinet of drawers which was previously hit with the two .38 caliber bullets (Figure 13B). The small entrance hole in the carpet indicates the shotgun muzzle was quite close (near contact) to the carpet when it fired (Figure 13B) and was close enough that propellant gas accompanied the pellets under the carpet. The pellets/gas deflected off the underlying floor and exited the carpet at the base of the built-in cabinet (Figure 13B).

The pellet, gas and dust from the shotgun discharge, which exited at the base of the built-in cabinet, spewed carpet fragments and white dust into the room. The dust settled on surfaces throughout the bedroom. The window curtain which extended to the floor and built-in cabinet (Figure 12C) should have been hit by part of the shotgun blast with the resulting airborne debris if it were in place as shown in Figure 13C. It appears Lyons either had purposely hidden himself under the curtain or was in the process of opening the bottom left drawer in the built-in cabinet (covered by the curtain) when assailant 3 came into the room. While under the curtain (Figure 12C) during his initial contact with the assailants, he had lifted the bottom of the curtain off the floor. It appears the bottom hem of the curtain received a small amount of dust (Figure 13C), but this could be light reflection from the glossy fabric. Lyons was under the curtain panel which obscured his body in the dark room so that both assailants were initially uncertain of his precise location. He was hit with the second shotgun discharge.

Figure 13: Scene B, shot 3, shotgun; the first 12 gauge shotgun discharge in the bedroom. A. Proposed positions of Lyons and assailants in a diagram of the bedroom at this shot; he was backing from his position after he received the .38 caliber bullet wound to his left upper back. V: victim; A-3: Assailant 3; A-2: Assailant 2. B. Shotgun discharge damage to the carpet at the base of the built-in cabinet under the window; the pellet mass/gas hit several inches out from the built-in cabinet and deflected up through the carpet at the base of the cabinet causing dust and carpet debris to be spread throughout the room. C. A similar image as B, but the curtain is in place as initially found by police; this curtain could not have been covering the built-in cabinet to carpet as shown when the shotgun pellets hit this position.

Figure 14: Scene B, shot 4, shotgun; the second shotgun blast hit Lyons in his right side. A. The ottoman was a hindrance to the assailants, but Assailant 2 managed to get close enough to deliver a direct shot to Lyons' abdomen for his second shotgun discharge. V: victim; A-3: Assailant 3; A-2: Assailant 2. B. The shotgun muzzle was likely within two feet of Lyons' right side so that there were no satellite pellet wounds as this image shows; mesenteric tissue was forced out of the wound. C. The body pulled to its left side at the scene which shows the shotgun wound on the right side of the body. D. Image of the location where Lyons received the devastating shotgun pellet wound to his right side; area of square is enlarged in E. The trajectory rod for the bullet strike at the top of the second drawer from the bottom shows the approximate direction and angle of the shot, but no angle measurements were made. E. Mesenteric tissue debris on the bloodstain which places Lyons near or at this location when he received this wound.
The second shotgun discharge was into Lyons’ right side at the bedroom location shown in Figure 14A. The curtain apparently no longer covered him. Assailant 3 did not shoot again until the second volley of shots (Scene D). The shotgun pellet wound to Lyons’ right side was devastating. The muzzle was close enough upon this discharge that there were no satellite pellet wounds around the entrance wound (Figures 14B and 14C). Upon receiving this wound, there was extensive bleeding and a dropping of mesenteric tissue that extruded from the wound (Figures 14D and 14E) at, or close to the location where he received this shotgun discharge. Lyons was also likely bleeding anally with associated feces. His movements now became quick and erratic as shown by widely distributed drip bloodstains. He paused several times leaving large bloodstains and fecal piles on the carpet. Feces were not present on his legs, except possibly one spot on his medial right ankle, so he was probably crawling at this point.

**Mid-shooting interlude, Scene C (Figures 15 and 16):** The audio witnesses reported an interlude between volleys of shots. Two estimates of this interlude were “very quick” and “a pause of no more than 5 seconds.” Witnesses to an incident such as a shooting are usually not accurate in the details of their accounts [7,8]. Haag [7] notes this is also true for audio witnesses. In this reconstruction of the homicide a pause between shot volleys is supported. But it seems, considering the extent of the carpet bloodstains, that it was a much longer interval than five seconds between the first and second volley of shots. The shotgun wound to Lyons’ abdomen was undoubtedly extraordinarily painful which contributed to his moving quickly and erratically. During this short time period, when the two assailants did not fire their weapons, their victim was erratically moving about in the northwest area of the bedroom leaving blood trails. When Lyons momentarily stopped, he left large bloodstains, blood drips and feces (Figures 15 and 16). Lyons was having frequent bowel movements (Figure 15D, at “F”, Figure 15E (top right) and 13F: “Fecal MATERIAL”) as a result of the severe damage to his lower abdomen. This scene could have been revisited by Lyons after the final volley of shots where he also had a heavily bleeding shotgun wound on his right hand.

In the northwest area of the bedroom it is apparent the bloodstains were smeared (e.g., Figure 15E at “S”). A series of bloodstains and drops were also found under the suitcase (Figures 16B and 16C) which shows that the bleeding Lyons ventured into this area. Figure 16 also shows bloodstain smearing (by assailant shoes or victim’s bare feet) in this area. In addition, there also was a scrape in a bloodstain (Figure 15F at arrows) indicating that a drawer of the built-in cabinet was removed, set into the wet bloodstain, pushed toward the built-in cabinet and then replaced in the cabinet. This aspect of the crime scene will be examined below.

![Figure 15](image1.png)  
**Figure 15:** Scene C; interlude between shooting volleys. A. Diagram showing a position of Lyons and the assailants during the interlude after the first four shots at him; the wound in this right abdomen was profusely bleeding. He was moving erratically about in the pink area and left large bloodstains and feces during this process as well as blood drip lines. V: victim; A-3: Assailant 3; A-2: Assailant 2. **B and C.** Additional views of this part of the crime scene. **D.** Scene where the feces (F) and bloodstains modified by smearing (S). The dashed green line is the proposed path taken by Lyons after the shotgun wound to his right side; he paused a number of times leaving larger stains. E. An enlargement of the northwest area bloodstain and feces; the large bloodstains indicated by “S” at the arrows, were partially smeared. F. False color rendering of E, which allows for better elucidation of the fecal piles; arrows indicate the area where a drawer back scraped the bloodstain. Also see Figure 16B.

![Figure 16](image2.png)  
**Figure 16:** Scene C; interlude between shooting volleys. A. Northwest area of the bedroom; the area outlined in white shows blood trails likely from the bleeding abdominal wound and perhaps the right hand wound where the radial artery was severed (see below). Lyons was moving about quickly and erratically. B. Modified part of the bloodstain in A; this is likely from the back of the left bottom drawer from the north built-in cabinet. C. Image taken later in the scene processing where the suitcase was removed to show the underlying bloodstain (at square). D. Area of carpet bloodstaining indicated in C and enlarged to show the blood drips as well as a smeared bloodstain.
Scenes D, E and F (Figures 17 to 29)

This part of the crime scene shows many bloodstains some overlapping other bloodstains (Figure 17, within white oval). This is especially true for the bloodstains on Lyons' body (included in Scene F). Scenes D and E (the second volley of firearm shots) continue the timeline that will lead into the analysis of many of the bloodstains on the body, the bedspread, the pillow at the base of the bed, and the carpet that were near and under his final body position. An alternative interpretation of the many features of the crime scene will still have to deal with an extraordinarily complex homicide reconstruction, especially the bloodstains described in Scenes F and G. Another crime scene reconstructionist might change the sequences of one or more of the scenes or interpretation, but the end result will likely still have the same conclusions: a physical interaction (fight) occurred between the assailants and the fatally wounded Lyons at this location.

Shot 5, shotgun - Scene D (Figure 18): The first shot in Scene D was from the shotgun and was the start of the second volley of firearm discharges. The estimated positions of Lyons and assailants are shown in Figure 18A.

After the shotgun discharge into Lyons' right side (Scene B), he was still moving in an erratic manner, likely mostly on his hands and knees in the northwest area of the bedroom. The assailants, thinking he would quickly collapse and die, were startled when he got up and moved between the curtain and the sliding glass door on the west side of the bedroom. Wet blood was on his hand when Lyons touched the aluminum door frame as well as some blood dripped from this hand hit the door frame and jam (white arrows, Figure 18D, left). The blood on one of his fingers was thick enough to cause a spatter (Figure 18D, right) when the contact was made. Lyons then moved to his right when Assailant 2 fired his shotgun. The curtain had returned to its original position. The shotgun pellet mass missed him (except for one pellet hitting his upper left leg - Figure 18B), hit the west curtain (Figure 18C) and the west sliding glass door (Figure 18D). The shotgun pellets hit the glass in the door and the door frame. The tempered glass fragmented leaving a pile of shards at the base of the door (Figure 17, evidence marker 8). No measurements were made by the scene criminalists of the pellet hit on the aluminum door frame (Figure 18D). The lower part of the door handle is approximately 29 inches (based on a measurement of a similar door at Meixa Tech) from the floor and the hit was centered approximately half the distance from the floor to the bottom of the handle.

About this time the Assailant 3 moved west in the dark, likely tripping on the suitcase that was between the ottoman and the north wall built-in cabinet and moving it over bloodstains (Figure 13C; suitcase in found position; Figures 16C and 16D: the bloodstains that were beneath the suitcase).

Shot 6, shotgun - Scene D (Figures 19 and 20): Lyons rapidly rotated clockwise, perhaps as a result of the previous shotgun discharge. His right arm was projecting out from his body when Assailant 2 fired his final shot (Figure 19A). The main body of the shot hit the right palm and thumb base removing that tissue (Figure 19B). The lateral aspect of Lyons' hand was also hit, injecting numerous satellite pellets into that part of the hand (Figure 19C). The x-ray of the right hand shows the shotgun pellets (Figure 19D) which traveled proximately from the hand into the wrist.

![Figure 17](image)

**Figure 17:** Scenes D, E, and F; the crime scene in front of the sliding glass doors of the bedroom (15” = 38 cm). The body has been removed revealing the bloodstains that were around and under the body. The likely route of Lyons taken from the first part of the crime scene (dashed green line) as shown by the blood drips from the abdominal wound. Black arrows indicate feces. Shotgun discharges hit the right edge of the door (shot 5); shot 6 hit the center of the right panel of the door. The scene criminalists did not examine the glass pile to determine bloodstains, if any, were beneath or within. The white oval includes the many bloodstains analyzed in Scene F. The white arrowhead points to a heavy bloodstain from the second shotgun blast of Scene D (see below). D. The shotgun pellet strike on the door frame at about 15 inches (38 cm) from the floor (Figure 17B); the reason for putting this event prior to this shotgun firing at this location is the bloodstain on the door frame was deposited prior to a pellet strike (right enlarged inset showing a pellet strike occurred after the blood deposition, at the black arrow head). White arrows on left image point to other blood spatter deposited at the same time.
This final shotgun discharge also hit the drape panel (Figure 20A). The drape strike was a fairly wide pellet spread (i.e., the shotgun muzzle was probably greater than 5 feet from the panel) (Figure 20B). Blood and tissue debris can be seen on the panel (outlined in Figure 20B).

Following the severely injuring of the right hand, Lyons moved towards the sliding glass door, touching the drape panel and transferring blood from his right hand to that panel (Figure 20A, at arrows). He also inserted his injured hand between the drape panels and transferring blood to the central aluminum door frame (Figure 20C). His hand went down smearing a portion of that bloodstain. The two shots from the shotgun for this part of the scene reconstruction might be reversed in this sequence, which would account for bloodstains noted in Figure 18D as occurring quickly after the stain shown in Figure 20C. However, this alternative scenario is a bit more awkward than the one presented here.
Shots 7 and 8 - .38 caliber revolver - (Figure 21): It is apparent from the events following the last shotgun discharge that it was out of ammunition. It is also apparent the five-cartridge .38 caliber revolver had three unfired cartridges remaining. After contact with the glass door, Lyons moved away from the door and rotated counter clockwise and perhaps slightly ducked (Figure 21A). Assailant 3 discharged two .38 caliber rounds at him and missed (Figure 21A). The bullets hit the narrow wall partition between the south side of the sliding glass door and built-in cabinets (Figure 21B). The trajectory rod inserted into the upper bullet hole (Figure 21B) indicates the shooter was standing approximately at the position shown in Figure 21A, although the distance between the shooter and Lyons might have been more than shown here. The height of the two bullet strikes on the wall panel (Figure 21C) supports the reconstruction that Lyons was erect when these shots were fired.

Figure 21: Scene E, shots 7 & 8, revolver. A. The positions of Lyons and the shooters for Scene E, shots 7 and 8 by the .38 caliber revolver; the dashed red arrow indicates the trajectory of the ricochet of the bullet from shot 8. V: victim; A-3: Assailant 3; A-2: Assailant 2. B. The two bullet strikes (at arrow heads) of the drywall/plaster between the built-in cabinet and the south side of the sliding glass window. The angle of the trajectory rod indicates Assailant 3 was standing in the northwest area of the bedroom as shown in A. C. Measurements in inches of the elevation for the two bullets strikes (7: 55 inches (140 cm); 8: 42 inches (107 cm)). D. Bullet fragment under the bedside table which had plaster associated; this is from the lower bullet strike on the bull-nose area bead of the wall (at lower arrowhead in B); the rest of the bullet was apparently not found.
Shot 9 - Scene E, .38 caliber revolver - (Figure 22): The final bullet from the .38 caliber revolver hit Lyons on the left side of his head (Figures 22A and 22B). It disintegrated within his head and a small fragment exited just to the right of midline in the back of the head (Figure 22C). Although this bullet wound would be ultimately fatal, it did not cause his immediate collapse. Remarkably, after nine shots fired by the two assailants, Lyons was still ambulatory. However, this bullet could have been any one of the final three .38 caliber revolver shots.

Physical attack - Scene F (Figures 23 to 29): After nine shots with the .38 caliber revolver and 12 gauge shotgun, Lyons was still ambulatory, but the shotgun wound to his right abdomen and the bullet through his brain would both ultimately be fatal according to the autopsy report [4]. What followed this gunfire was a physical attack on him by one or both assailants.

Scene F involves the bed and the carpet at the northwest area of the bed (Figure 23A). Lyons had momentarily fallen on the bed. The bloodstains attributed to his active bleeding areas on the bed are identified in Figure 23B. Likely an assailant approached the bed and pulled him off onto the floor, his bleeding right hand wound heavily stained the bedspread at the foot of the bed (Figures 23C1 and 23C2) and a nearby pillow (Figures 23D1 and 23D2).

After this time, Lyons sat up or got up again. It was about this time he was attacked with a hatchet-like weapon that created the two blunt force injuries to his head (Figures 25 and 26). These were described by the autopsy pathologist as blunt force injuries. The injuries show features which exclude these being a trough or bullet track created by .38 caliber bullets hypothesized and presented at trial by the prosecution’s criminalist.

The autopsy pathologist noted [4] the laceration, without skull fracturing, on the right occiput (Figure 25) is “...2 x 1/4 inch [50 x ~7 mm] deep laceration of the scalp with prominent tissue bridging...” This means that tissue was pressed into the skull rather than abraded by a passing bullet, a scenario that was present in trial. Enlargement of the image of the laceration of the scalp at either end of the defect (Figures 25C and 25D), shows depressed scalp elevations, but above the depth of the central part of the wound. A feature a bullet would not create.

The second head laceration was described by the autopsy pathologist [4] as, “low on the central occiput is an obliquely orientated, 2 1/2 x 1/4-inch [63 x ~7mm] deep laceration of the scalp. This laceration has prominent tissue bridging and hemorrhage within the depths of the wound.” Considering the length of this wound and similarity to the other head wound, this wound has the same weapon origin. However, the one end of the wound (Figure 26C) shows penetration rather than depression of the scalp; the other end (Figure 26D) is similar to right occiput wound ends. The 1/2 inch greater length also suggests either a slightly deeper penetration into the scalp or a slight forward or backward vector when the blow was inflicted. It would appear that whatever weapon created these defects, it had a tapered blunt edge, such as a roofing ax. At the other end of the lesion, the weapon left a tool mark (Figure 26E).

There are two objects in the crime scene that needed to be examined more closely for a possible involvement with the two blunt force lesions in Lyons’ head. Part of the bed frame at the base of the bed has an exposed bar (Figure 27A) which could have acted as the source of the lacerations.
Figure 24: Scene F. A. The supine body in its found position; bloodstain on the carpet (within the rectangle) came from the extruded mesenteric tissue. B. White arrow indicates the direction of the bloodstain transfer that was the result of a carpet contact with the mesenteric tissue; black arrows show a change in direction of the carpet nap transfer bloodstain. This bloodstain was likely created during the struggle between Lyons and his assailants. C. Image taken at autopsy showing the mesenteric tissue in contact with the autopsy table. D. The multiple contact points of the bleeding mesenteric tissue on the autopsy table show that it can create a streaked pattern (carpet in B) when dragged over the carpet.

Figure 25: Scene F; laceration of the on the right occiput of Lyons’ head. A. The posterior of Lyons’ head showing the two lacerations; white arrowhead, the impression left by the sliding glass door track. B. Image of the laceration indicated by arrow in A; this image offered enough resolution to enable enlargement of the ends of the laceration without pixilization. C. Enlargement of the distal part of the laceration from B showing depression of the scalp (at arrowhead) which is not as deep as the rest of the wound; the weapon to accomplish this feature would strike at approximately 90 degrees to the scalp. This is blunt force trauma, not a bullet gouge as claimed by the scene criminalist and the forensic pathologist in a supplemental autopsy report [6]. D. Enlargement of the proximal part of the wound showing a depression of the scalp (at arrowhead) elevated above the rest of the wound; this shows a similar morphology as the distal part of the wound.
Figure 26: Scene F; the transverse laceration of the head (low central occiput). A. The posterior of Lyons’ head showing the lacerations; this image offered the resolution to enable enlargement of the ends of the laceration without pixilization. B. Enlarged image of the laceration indicated in A. C. Enlargement of the right end of the laceration from B showing the weapon’s blade had inserted into the scalp unlike the ends of the other head wound (Figures 16C and 16D). D. Enlargement of the left part of the wound from B showing depression of the scalp but this part of the injury has a tool mark. E. Tool mark in the scalp; the edge traced by the dashed line on right.

Figure 27: Scene F; examination of two objects at the crime scene as to their possible involvement in the two posterior lacerations on Lyons’ head. A. Image showing the foot of the bed. B. Enlargement of the bar (arrow head) at the base of the bed; there is no blood apparent on the bar. C. Image showing the rails of the sliding glass door; the distance from the rails to the door surface was too small to cause the lacerations on the posterior of Lyons’ head. D. Enlargement of the rail area showing no associated blood; a sliding glass door rail could not have inflicted the two lacerations to Lyons’ head. The bloodstains at the base of each arrowhead were made from the same head wound and document a short clockwise rotation of the body likely by the assailants. The heavier bloodstain was deposited at the body location where police discovered it.
Figure 28: Scene F. A. Side view of Lyons’ head on the sliding glass door rail. B. Image of Lyons’ body rotated/pulled off of the sliding glass door rail showing the impression left by that rail. C. Enlargement of the area of interest indicated in A; red arrows from the head and back point to the bloodstains on the carpet caused by these wounds. The white arrow points from the head depression to the rail that caused that impression. D. An enlarged image showing the features of the scalp depression.

Figure 29: The final position of Lyons. A. Image taken early in the processing of the crime scene. B. Diagram of Lyons and bedroom; because of the lack of measurements taken by the scene criminalists, the positions and sizes of the furniture and other items are estimated.
Image enlargement of that bar (Figure 27B) shows no associated blood even though the fabric above the bar had been heavily soaked with blood. When Lyons’ body was found, his head was resting on a rail of the sliding glass door (Figure 28). It left an impression with no scalp penetration on his head (Figure 25A, at the white arrowhead), which is dimensionally similar to the two head lacerations (Figures 25 and 26). Enlargement of the rail (Figure 27D) shows no blood association. There are also physical restraints for the rail not being the cause of the two head lacerations in that the head would have to fit in the space between the door frame and the rail, which it cannot. The bed bar and the sliding glass door rail are not the source of the laceration injuries to Lyons’ head. The lack of profuse bleeding from the head wound (Figure 28) suggests the blunt force injuries were inflicted near the time when Lyons exsanguinated (the autopsy pathologist noted, “there is a paucity of free blood present upon incision of the great vessels of the heart” [4].

One of the assailants had a blunt hatchet-like weapon which he used to strike Lyons on the head. Two blows were delivered with either Lyons or the assailant or both changing positions between the blows. It is unlikely that at this stage of the homicide that Lyons put up a defense to these blows. The lack of skull fracturing suggests the hatchet wielder had little physical strength or awkwardly delivered the blows.

**Scenes G and H (Figures 29-43)**

This part of the examination of the crime scene covers the bloodstains on the pillows, carpet at the northwest area of the bed and Lyons’ body. These bloodstains occurred before, during and after the blunt force trauma to Lyons’ head. Also examined is the evidence of the theft of an object that was under the bottom left drawer in the bedroom’s north built-in cabinet.

**Bloodstains/Spatter of Scene G (Figures 29-39):** The body of Lyons (Figure 29) and the scene immediately under and around (Figure 30) him have many different bloodstains deposited at different times during Scenes F and G. The carpet bloodstains, with the body removed are shown in Figure 30B. Each bloodstain is assigned as to origin (Figure 30B, numbers 1 through 16).

Many of the bloodstains on the carpet and the body are transfer stains which depended on the previously deposited blood on the carpet, pillow and bedspread (Scene F). The complexity of the bloodstains on the carpet and body leads to the conclusion that a physical interaction (fight) between Lyons and one or both assailants occurred. No attempt is made to put the following bloodstain descriptions in order of occurrence.

**Figure 30:** Scene G; carpet bloodstain origins. A. The original image; the area within the rectangle is enlarged in B. B. The bloodstains of the carpet in Scenes F and G; the numbers refer to stain origin. Some parts of this scene were discussed earlier. The gap between bloodstains 2, 3 and 8, 9 (at arrow) indicates deposition was at different times and was not a continuous event.

1. Transfer bloodstain which shows the partial outline of a pillow border (Figure 34).
2. Bloodstain deposited by direct carpet contact with Lyons' extruded mesenteric abdominal tissue (Figure 24).
3. Bloodstain deposited by direct carpet contact with Lyons' extruded mesenteric abdominal tissue (Figure 24).
4. Blood transferred from the body to the carpet when the body was rolled over on left side by scene processors.
5. Bloodstain from right hand at the final position of the body.
6. Transfer stains, likely from smooth-soled shoes.
7. Clotted blood apparently transferred from the large blood clot (8) to this location or could be feces.
8. Large bloodstain/clot formed from the mesenteric wound at the final body position.
9. Large bloodstain/clot formed from the mesenteric wound periphery at the final body position.
10. Smear stains from the back of Lyons created when the body was moved by the crime scene processors.
11. Drip bloodstains when Lyons was ambulatory.
12. Bloodstain from the right hand when Lyons was on his stomach and head orientated southwest.
13. Transfer bloodstain likely created when Lyons' body was moved on his left side (Figure 33A).
14. Bloodstains from the right occiput and occiput lacerations (Figure 27D).
15. Bloodstain from the perforating bullet wound exit on left upper back. The body was moved to its left which elongated the bloodstain (Figure 12B).
16. Large blood drips from either Lyons' abdominal or right hand wound.
1. The crime scene images of the body and head of Lyons did not adequately image his left side. However, one crime scene image did obliquely capture a stain on his left cheek (Figures 22A and 22B). This bloodstain was imaged more fully prior to autopsy (Figure 31C). A close-up of the stain (Figure 31D) indicates it was deposited from a blood-soaked braided edge of the pillow (Figure 23B2) or bedspread (Figure 23B3). The orientation and amount of blood transferred suggests Lyons’ head was pressed against the bloodied braiding at the margin of the pillow or bedspread.

2. Other transfers of blood, likely from the pillow or bedspread cording occurred on the small of Lyons’ back (Figure 32A at 1, 2 and 3) and just above his buttocks (Figure 32A at 4). In addition, it appears that blood-soaked cording transferred blood to the back of the upper left leg (Figure 32B) which documents after deposition he likely stood up since blood flowed towards his feet (Figure 32B, as indicated by arrow). Figure 32C compares the fabric cording to one of the bloodstains. There is another bloodstain on Lyons’ right leg which also shows blood transfer from the pillow or bedspread braiding (Figure 32D).

Figure 31: Bloodstain transfer on the left side of the face of Lyons. A. Image taken at the crime scene documenting the bloodstain occurred at the crime scene. B. Enlargement of the area of interest from the image in A. C. Image showing the left side of Lyons’ face with the transfer stain. D. Enlargement of the rectangle area of interest from the image in C; the features suggest it was from the braiding on the edge of a pillow or the bedspread (Figure 23); 1: Part of stain indicating it was transferred from an object that had such a border. 2: Smearing of the braid transfer distally. 3: Blood flowed posteriorly after this transfer occurred.

Figure 32: Scene G. A. Transfer bloodstains on the upper buttock and lower back from the cording on the bedspread or pillow margins; there were four such transfer locations on this part of Lyons’ body. Multiple overlapping transfers were at 4. B. Another transfer which might be from a blood-soaked cording on the rear left leg. This transfer does not have as distinctive pattern seen in A which could have been due to a large accumulation of blood on the cording prior to the transfer. The close association of this bloodstain with the smooth transfer from the pillow surface (Figure 34) supports this origin. After this transfer, Lyons’ legs became vertical (he likely stood up) causing the blood to flow down the leg as indicated by the arrow. C. Stain pattern 4 from A rotated 90 degrees and compared to a cording section from the pillow. D. Image from lateral aspect of the right leg at the knee that shows another transfer from the cording of a pillow or the bedspread.
3. At one point, Lyons was face up with his legs on Pillow 1 which was lying flat on the floor. It appears the pillow is a high thread count silk or silk-like fabric so that the previously deposited blood when transferred to the back of his legs was evenly distributed (Figure 33B). A blood transfer outline of part of the pillow can be seen in the scene (Figures 21B at 1, 25A and 25B). This light transfer stain came from a surface with only a thin coating of blood.

4. At another point, Lyons was on his right side over bloodstain 2, 3 (Figure 30B). This is documented by a blood transfer from the carpet to his right side (Figure 35). Not only was he on his right side, he also partly rotated his lower body causing a change of carpet nap transfer direction (Figure 35).

5. A blood transfer from a carpet bloodstain to Lyons’ chest occurred (Figure 36A). He was facedown and the blood transferred likely came from the previously deposited carpet bloodstains 2, 3 (Figure 30B). A part of the chest bloodstain transfer is reflective of the carpet nap pattern (Figure 36B). The direction of the lower chest blood smear (Figure 36A, black arrow) indicates Lyons moved while this transfer was occurring.

6. The final position of the head was on the sliding glass door rail (Figure 28A). Figure 29B is a diagram of the body in relation to the other objects in the room. An image of Lyons’ head lifted off the rail (Figure 28C) shows bloodstains deposited by the head lacerations on the carpet. Relating the head and back wound to the carpet bloodstain (Figure 27D) indicates the right transverse occiput laceration has three deposits on the carpet. His head was shifted to his left two times to the final body position. This is evidence of the manipulation of the body, likely premortem (see below).

**Figure 33**: Scene G. A. The area within the rectangle is magnified in B. B. A smooth layer of blood transfer on the underside of Lyons’ legs indicate his legs were likely on the blood-soaked pillow (Figure 23D1). This is not lividity.
Figure 34: Scene G; transfer outline of blood smear on the carpet of a area of the pillow. A. The location blood smear in the crime scene; this is 1 in Figure 30B. B. Enlargement the smear with a dashed line indicating the pillow outline (see Figure 23D1).

Figure 35: Scene G; change of direction of the carpet nap transfer to the right side of Lyons. He was on his side over a previously deposited carpet bloodstain (likely stains 2,3 Figure 30B).

Figure 36: Scene G; analysis of Lyons’ chest transfer. A. The blood transfer likely from the carper on the chest; arrow indicates the smear direction of the lower chest. The area within the square is enlarged in B. B. The enlarged chest bloodstain transfer showing a linear pattern in spots reflective of the nap of the carpet along with some blood flow downward.
7. Pillow 2 (Figure 29B) was noted to have a small transfer as well as spatter (Figure 37). A very light transfer was observed on the carpet near pillow 2.

8. On Lyons’ left lateral thigh to buttocks are several patterned bloodstains (Figure 38). The lateral left buttocks (Figure 38B at 1) has a two fine filamentous blood flows which appeared to have flowed downward after deposition when his legs were vertical.

9. There are a series of stains (Figure 38B at 2) on the left lateral thigh distal to the one just described. One of these stains might have been a transfer from one of the assailant’s pants (Figure 38C, “TRANSFER FROM UNKNOWN OBJECT”). The transferring fabric could have had a fairly coarse weave and the fabric from which the transfer occurred was soaked with blood. The contact of this fabric could have been to Lyons’ bleeding extruded mesenteric tissue. His lower anterior legs are relatively free of blood and appear to have been smeared in spots. The left leg has obvious blood smearing on the thigh (e.g., Figure 38C).

10. The transfer from the unknown object onto the left lateral thigh which overlies a transfer from the carpet (Figure 38C). Lyons had rolled over at least partially to his right over a blood-soaked portion of the carpet. The transfer from the unknown object occurred over the carpet transfer and he was on his back. In the lower part of Figure 38C, the blood stream shifted direction towards his feet indicating his legs were vertical following this transfer. One other bloodstains indicate that his legs were likely briefly vertical (Figure 32B) at this scene.

11. Additional bloodstain features of Lyons’ legs are shown in Figure 39. Figure 39B shows a series of transfer stains to his left medial calf in which the transferring object appears to have a diamond pattern. These distinctive blood patterns have no apparent source at the crime scene. Was one of the assailants wearing boots with a relief design which became contaminated with blood and part of this design was transferred to Lyons’ leg?

12. On the right medial calf, the bloodstains (Figure 39C) are different from the left. Figure 39C at 1 shows a thick bloodstain above the ankle. The origin is uncertain, but could be blood mixed with feces. The right medial calf has a number of blood streams (Figure 39C at 2) that flowed towards the anterior leg. These formed when Lyons was on his stomach. It appears that the lower right anterior leg surface (shin) had been wiped almost clean. The medial calf (Figure 39C at 3) has a thin smooth blood transfer likely from contact with Pillow 1 as described above.

13. The lateral aspect of the left calf (Figure 39D) shows yet another series of similar bloodstains unlike any of the others. The proximal part of the lateral left leg (Figure 39D at 1) shows a series of bloodstains barely discernable. This area of the leg appears to have been wiped. At the area shown in Figure 39D at 2, a blood flow perpendicular to the long axis of the leg was similar to the pattern seen on the right medial calf (Figure 39C at 2). But these stains had contact with the carpet after their formation. The transfer bloodstain seen in Figure 39D at 3 is likely from the same source as the bloodstains on left medial calf (Figure 39B).

14. The large carpet bloodstain (Figure 17A, at white arrowhead, Figure 30 at 7, 8) is from the extruded mesenteric tissue which was heavily bleeding. The bloodstain streak (Figure 24B, Figure 30B at 2,3) is a reflection of the irregularities of the extruded tissue mass (Figure 24D). This streaked area appears discontinuous (Figure 30B, at arrow) to the heavy bloodstain (Figure 30B at 8, 9). The two bloodstains likely had been deposited at different times.

**Figure 37:** Scene G; blood transfer and some spattered blood on Pillow 2 at 1 (also see Figure 29B at 1). A small amount of blood transfer (at 2) was to the nearby carpet. There are also small blood drips which could be transfers.
Figure 38: Scene G; bloodstains of the lateral aspect of the left thigh. A. Body at the crime scene; rectangle area is enlarged in B. B. An enlargement of the left lateral leg from A showing the multiple bloodstains: 1: Blood of uncertain origin moved down Lyons’ leg while vertical. The flows then shift to a posterior direction when the legs became supine. 2: a complex of bloodstains examined in C. C. The complex of bloodstains one the left lateral leg that are identified.

Figure 39: Scene G; bloodstains of the legs. A. Image from the crime scene. B. Image taken at autopsy of the blood pattern on the left medial calf; this matrix pattern has no corresponding surface in the crime scene and is likely a transfer from one of the assailants. See text. C. Bloodstain patterns from the medial right calf; the anterior lower right leg appears to have been wiped of blood. 1: A likely transfer, source unknown, but could be blood mixed with feces. 2: Blood flow on the medial right leg right anteriorly. 3: The medial part of the calf shows part of the transfer (smooth bloodstain) from the pillow as noted previously. D. The left lateral leg calf region: 1: faint transfer stains that appear to have been partly wiped off. 2: Similar flow stains as see in C at 2, but these made contact with the carpet (the nap pattern can be seen). 3: A similar triangular blood pattern that was observed on the outer left leg (see B).
Pre- and Postmortem Manipulation of the Body- Scene H
(Figures 40-43)

The physical struggle between Lyons and his assailants stopped when he lost consciousness. It was at this time that the assailants shifted (rotated clockwise) Lyons’ body to the location where it was later found by the police (Figure 27D). But this manipulation did not stop with Lyons’ final position. A cloth (likely a pillowcase or t-shirt) was placed over his abdomen to his thighs. Blood was applied to the cloth at multiple spots via the bleeding right hand.

This proposal is unprecedented and requires empirical support. Which was presented elsewhere [9] but will be described here in detail.

Heparin treated cow blood (Sierra Co, P.O. Box 5692, Whittier, California) was poured onto a pillowcase covering a volunteer’s abdomen and wrist. The pillowcase was removed after the blood soaked through the two cotton fabric layers. It appears Lyons’ skin had an oily surface. He either had an oily lotion on his body or seborrhea [10]. Lyons oily skin of was simulated by a thin coating of vegetable oil on a mannequin’s abdomen and upper thighs and was draped with a pillowcase, bloodied with the cow blood (Figure 41) and then removed before the blood dried or coagulated.

**Figure 40:** Scene H. Unusual bloodstains over the abdomen and thighs of Lyons; it appears much of the bloodstains are reflective of beading on skin seen when an overlying wet clothing is removed. The assigned regions, A, B and C, are based on the form of these bloodstains. Region A: beaded stains; Region B: large thick stain with oval voids; Region C: large stains with a fine wavy impression – origin uncertain.

**Figure 41:** Mannequin with a pillowcase over midsection that was soaked with cow blood.
The application of cow blood on a pillowcase covering a volunteer’s arm and abdomen generated a splotchy bloodstain (Figure 42A). The volunteer’s skin was different than Lyons’ skin where it appears Lyons’ skin surface was hydrophobic due to the beading of the blood (Figures 42B and 42C). The blood on the mannequin’s abdomen after removal of the pillowcase (Figure 42D) matched the bloodstains on Lyons’ abdomen and proximal thighs (Figures 42B and 42C). If the covering cloth was a pillowcase, its origin was not from one of the pillows in the bedroom, but likely from Lyons’ linen closet or if a t-shirt, from his closet or built-in cabinet (which may be the reason for the apparent opening of the top drawer in the southwest built-in cabinet, see below).

The heavy bloodstain on Lyons’ right thigh (Figure 40, Region B) had oval voids irregularly distributed. This bloodstain also appears to be on a hydrophobic surface, but because this area received a much heavier blood input than the abdomen and the distal thighs of both legs, it attained this pattern. This could not be duplicated in this study; the likely reason is the cow blood was prevented from clotting by its heparin addition whereas his blood input to this area was likely constant for a time, allowing for coagulation early in this bloodstain’s creation.

Bloodstains of Region C (Figure 40) appears not to be related to the deposition of Regions A and B and was likely deposited prior to A and B during the physical interactions between Lyons and assailants (Scene F).

On the right side of Lyons’ body are blood streams (black arrows, Figure 43A). These streams originate from the abdomen. Small blood spots are on the carpet where some of these blood streams reached the carpet (Figure 43B). Similar blood streams were created on the mannequin with cow blood (Figure 43C) when blood was applied to the pillow case which covered the mannequin.

The bloodstains on the abdomen and thighs of Lyons are associated with a cloth draped over him. These ranged from beaded blood droplets (Figures 42B and 42C) to a heavy coating of blood over the mid right thigh (Figure 40, Region B). For the former, the cloth was close to the skin with a blood soaking, but not nearly the quantity of blood as was applied to the mid right thigh. Some of the blood penetrated the cloth and left a pattern on the skin reflective of the cloth’s small creases in (Figure 42C).

The multiple blood streams from the abdomen to floor (Figure 43A) are a consequence of a cloth draped on the supine body in which blood accumulates between the cloth and the body to a point where it is released in streams down the side of the body to the floor.

The physical struggle between Lyons and his assailants ended when he lost consciousness. The assailants staged his body premortem. His body was moved perhaps to allow better access by the assailants to apply the cloth to the body. The assailants placed a cloth (pillowcase or t-shirt) over the dying victim and positioned his severely wounded, bleeding right hand (Figure 43D) on the cloth and then repositioned it several times in order to blood soak the cloth over much of its surface on the body.

**Figure 42:** Scene H. A. Left wrist of a volunteer where a pillowcase was place in contact with the skin and soaked with cow blood. B. Region of a bloodstain pattern on the right abdomen and thigh from an preautopsy image of Lyons. C. An enlargement of B shows the blood was deposited on a hydrophobic surface due to blood beading; a linearity to many of the stain beads reflect creases in the overlying cloth. D. Cow blood which soaked through a cotton pillowcase (two fabric layers) on vegetable-oiled plastic mannequin surface; the mannequin’s hydrophobic bloodstained surface is quite similar to Lyons’ bloodstain pattern on his abdomen and proximal thighs.
Figure 43: Scene H; blood streams from Lyons’ lateral midsection and thighs to the floor. A. Preautopsy image showing the border of the contact (“CLOTH EDGE”) between the cloth and Lyons’ abdomen. The bloodstreams are indicated by green arrows. B. Crime scene photograph showing five of the bloodstreams that made contact with the carpet as indicated by the arrows; inset: enlargement of the carpet bloodstains that were deposited from the blood streams from the body. C. Mannequin that had the simulation of the pillowcase or t-shirt over the abdomen region and blood applied (Figure 41) which resulted similar blood streams to the floor; green arrow points to the blood streams to the floor from the ventral surface of the abdomen and thigh. D. The severely injured right hand which was likely the source (by severed radial artery) of blood on fabric covering the abdomen and thighs.

A Burglary after the Homicides (Figures 44–49)

Following the homicides of Daniel Lyons and his wife, Barbara Scharton, it is apparent the assailants were in no hurry to vacate the crime scene. The evidence shows that a cloth was put over the body of Lyons and purposely bloodied. The cloth was removed and taken with the assailants. Did the assailants want a souvenir of the homicide in the form of the bloodied cloth? Evidence indicates the bedroom and perhaps the entire house was searched. The assailants were careful not to leave evidence of this activity.

The shotgun near contact discharge into the carpet in front of the north built-in cabinet generated a substantial amount of dust from the exit hole (Figure 44) which contaminated the entire bedroom with dust. The left bank of drawers in the north built-in cabinet received the most dust on their facings (Figure 44A at 1 and 3) which indicates the direction of dust projection (Figure 44C, arrows). The bottom drawer horizontal edge had little deposition of dust (Figure 44A at 5), but a heavy dust layer was projected onto the left vertical edge (Figure 44A at 6). Whereas the southwest built-in cabinet’s horizontal part of the drawer facings show less dust deposition (Figure 44B).

Drawer D4 (Figure 44A) was opened, disengaged from its hardware and placed in the wet bloodstain. The rear of the drawer likely dragged in the bloodstain creating the scrape (Figure 16B) when it was returned to the built-in cabinet.

The same large bloodstain (Figures 15E and 16A) was deposited (or later stepped in) with sufficient force to create satellite spatter on the nearby drawer facing on the bottom left drawer of the north built-in cabinet (Figure 45A). This drawer (Figure 44 drawer D4) was partially open at the time the satellite spatter occurred so that blood droplets were deposited on the cabinet trim under the drawer facing (Figure 45B). The exit hole in the carpet from the shotgun discharge injected dust into the space under the drawer. Some shotgun pellets exited the hole in front of the drawer facing which shows some damage (Figure 48A, lower right). Dust entered the space under drawer D4 (Figure 44A) and coated the plywood surface (Figure 47).

Citation: Burnett BR. An Extraordinary Crime Scene. GSL J Forensic Res. 2018; 1:104.
Along the front of the plywood base of the built-in cabinet (with the drawer removed) the dust layer was disrupted (Figures 47A, 47B1 and 47C). This disruption, which is more clearly defined on the left side of the front of the opening (Figure 47B1), was likely done by running fingers along the built-in cabinet frame edge. The hand/fingers appear to have moved from left to right. During this movement, the fingers were oscillated: inserted further into the space, and then slightly withdrawn lifting them off the surface. This proposed behavior is diagrammed in Figure 47B2. Some retracement could have occurred or the finger search was twice performed. The goal was apparently to feel for an object hidden in this space.

An object was detected and the drawer removed to recover the object (Figure 46C). This was documented by the dust. The dust was also disrupted likely by the hand contact along its entire upper part (as indicated in Figure 48C). It also appears dust was transferred on the facing on the right the dust deposition (Figure 48C, “DUST TRANSPORTED”).

Part of the dust layer on the plywood surface under drawer D4 of the cabinet was disrupted by a criminalist providing a scale for the image of the .38 caliber bullet found at the center of the space under the drawer (Figure 49).

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**Figure 44:** Evidence of dust generation due to the shotgun discharge hitting the base of the north built-in cabinet; drawer numbers are yellow. **A.** Dust deposition on the drawer edges near shotgun discharge exit at the base of the north built-in cabinet; Drawer numbers are yellow. Drawer D2 showing the distribution of the dust: 1- heavy dust deposition; 2- relatively lightly dusted; drawer D3 as in drawer 2; 3- heavy dust; 4- light dust; drawer D4; 5- light dust deposition on edge; 6- heavy dust on the vertical edge. **B.** Image of the southwest built-in cabinet (Figure 10); the dust deposition, although present on the drawer facing horizontal surfaces, is not as thick as the dust on the north built-in cabinet’s edges of drawers D2 and D3. Arrows: this drawer had been opened after the dust deposition as indicated by the removal of dust at arrows. **C.** Projection (back arrows) of the exit dust from the shotgun discharge into the carpet. The right bank of drawers of the north built-in cabinet show little white dust on their edges - indicating the curtain likely covered this part of the built-in cabinet when the dust-generating event occurred.
Figure 45: Satellite blood spatter on the built-in cabinet framing of the bottom left of drawer of the north built-in cabinet; the drawer was partially open at the time of Lyons’ homicide. A. Drawer in place showing spatter on the left lower area of the drawer facing at arrow heads. B. The drawer removed showing blood spatter on the drawer frame (at arrow) which is from the same blood source as the overlying drawer facing.

Figure 46: Evidence a burglary occurred after the homicides. A. The criminalists removed drawer D4 (Figure 44A) in the built-in cabinet to recover a .38 caliber bullet. B. Close up of the plywood under drawer D4 of the built-in cabinet which shows a central void in the dust indicates an object was removed from this area as well as evidence that the overlying drawer was partially opened and fingers were inserted into the gap and traced along the front of the cabinet, likely feeling for such an object (Figure 47). C. The removed of the object that had two notches (black arrows); the .38 caliber bullet which prompted the removal of the drawer is at center.
Figure 47: Examination of the disruption of the front dust margin under drawer D4 of the north built-in cabinet base; the person who performed this search, opened drawer D4 (Figure 44) and inserted his fingers in the opening between the bottom of the drawer and the base plywood and disrupted the dust layer with his fingers. A. The image of the north built-in cabinet with the bottom drawer removed showing the dust layer disruption and the impression of an item that was removed after the dust had been deposited. B1. Enlargement of the left part of the front dust disruption area; the fractured tempered glass of the west sliding glass door further collapsed during the crime scene processing which could have been the source of the glass fragment near the center of the image. B2. Same image as B1, but with a diagram overlay; the fingers were moved left to the right. The fingers were also pressed in with the in stroke and lifted with the retraction so the dust does not show in places the rightward movement. Either retracement occurred or the search was performed twice. Arrows indicate the directions of movement of the finger/hand when this search operation occurred. C. Enlargement of the right part of the front dust disruption which is a continuation of the dust disruption likely by an assailant’s fingers.

Figure 48: Shotgun discharge derived dust from the hit at the base of the west built-in cabinet. A. The lowest left drawer D4 (Figure 44A) facing with the dust on its surface: there appears to be pellet damage just above the carpet defect on the lower right. B. Same drawer area as shown in A, but with the drawer D4 removed showing the dust on the cabinet frame. C. Same as B, but labeled. The area of frame wiping is indicated.
Discussion

Lyons’ crime scene was divided into eight scenes, A through H. For Scenes A through E, each scene leads into the following scene and is distinguished by changes in Lyons position and assailant position and/or shots at him. Scenes F, G and H are defined by physical interactions of the assailants with Lyons. There are overlaps between scenes. The entire crime scene is reconstructed by evaluation of the evidence available to the author. New or missed evidence might change one or more scene reconstructions.

This reconstruction has maintained constancy with the audio witness accounts. There were four shots in the first volley (Scenes A and B) which were two .38 caliber revolver discharges followed by two 12 gauge shotgun discharges. There was an interlude (Scene C) between the first and second volley of shots of, by one estimate, five seconds. The extent of the bloodstains in the northwest part of the crime scene suggests the interlude between volleys was greater, probably on the order of ten seconds perhaps even longer. The second volley started with two shotgun discharges (Scene D) followed by three .38 caliber revolver shots (Scene E).

There were two assailants in the attack on Lyons. The rapidity of the shots by the audio accounts and the physical evidence necessitates two assailants. One assailant was carrying a five-cartridge 12 gauge shotgun (Assailant 2) and the other a five-cartridge .38 caliber revolver (Assailant 3). One of the assailants also had a hatchet-like (roofing hatchet?) weapon.

Lyons, who was likely asleep when his wife was attacked, was awakened by the gunfire and perhaps her screaming. The sound of the four .22 caliber revolver discharges (indicates a third assailant) and shotgun discharge in his wife’s bedroom appeared not to have been heard by the neighbors. The naked victim got out of his bed and moved quickly to the north part of the bedroom possibly to retrieve a pistol in its case located beneath the left bottom drawer in the built-in cabinet. The partially open drawer and Lyons first being encountered by the assailants in this area of the bedroom likely alerted them that something of value might be under that drawer.

The attacks on Lyons and his wife occurred in darkness. This prevented the assailants from being able to effectively target him for most of their shots. Lyons also appeared to have used the curtains on the north and west walls of the bedroom to obscure his body, he was moving quickly and erratically. However, two of the nine shots fired at him hit vital organs (lower abdomen with 12 gauge shotgun pellets and his head with a .38 caliber bullet), which, while not immediately incapacitating, both alone would ultimately be fatal [4].

The shotgun wound to Lyons’ abdomen caused mesenteric tissue to be extruded from the entrance wound (Figure 14). Blood was flowing from this wound. His rapid and erratic movements caused drip bloodstains from this source throughout the crime scene. The shotgun wounding of Lyons’ right hand added to the drip blood patterns, especially on the carpet area off the northwest corner of the bed (Scenes D, E,F and G). The radial artery of the right hand wound was likely severed and blood spurted occurred [11]. The abdominal wound also caused Lyons to have multiple bowel movements accompanied by blood, especially in the northwest area of the bedroom (Scenes A, B and C).

In the crime scene near the bed (Scenes F and G), the bed, Pillow 1, carpet and Lyons’ body have a variety of stains. Transfer bloodstains to his body were from the carpet, pillow and bedspread and one or both
of the assailants. He was also attacked near the bed with a hatchet-like weapon (Scene F).

There is no doubt that a physical struggle occurred between Lyons and one or more of his assailants at the northwest foot of the bed (Scenes F and G). The bloodstains indicate that during the struggle, he was in a number of positions including standing, face down on the carpet, lying on both sides of his body and finally face up on the carpet. A pillow (Figure 29B, Pillow 1) that was initially at the base of the bed (Figure 29) was involved in some of these positions.

Although the autopsy report of Lyons [4] does not overtly say he bled to death, the notation of “a paucity of free blood” in “the great vessels of the heart” indicates he died by exsanguination.

Lyons’ premortem state, he was lying with his head oriented more southwest than his final position in the bedroom. The assailants rotated his body (Figure 27D) and placed a cloth over the midsection/upper thighs of the body. Lyons’ bleeding right hand was placed on the cloth in several positions. As the cloth became soaked with blood, the hand was moved to a new location. The bleeding hand remained a longer time on the right thigh or was placed there when the bleeding was more robust where much of the blood soaked through the cloth leaving a thick bloodstain on the body. He died in the position where police found him. The assailants took the blood-soaked cloth with them, likely as a trophy [9].

It is curious there were no assailant shoe prints in the bedroom despite the assailants stepping in the areas of wet bloodstains. Were the assailants wearing heelless footwear, or were they carefully avoiding stepping the bloodstains (suggesting they were instructed to avoid the bloodstains). The most likely explanation is the assailants were wearing smooth-soled shoes, without heels. One of the assailants might have been wearing cowboy-style boots with an apparent embossed design, which appeared in a bloodstain transfer on Lyons’ leg (Figure 39B), but unlikely since no heel prints are present in the carpet bloodstains.

The assailants were no hurry to leave the house:
1. They removed all five of the shotgun casings from the two crime scenes.
2. Disrupted dust associated with the built-in cabinets (e.g., Figure 44B), indicates they searched the bedroom.
3. A drawer from the north built-in cabinet was removed and put into a bloodstain, then moved in the blood towards the cabinet. An object was removed that was from under this drawer. Part of this search was an assailant running his fingers along the gap between the open bottom drawer D4 (Figure 44A) to determine if anything was hidden in the space between the bottom of that drawer and the plywood base. The images of the base of the left part of the north cabinet with the drawer D4 removed showed an object was taken after this area was coated with dust (Figure 46C) which resulted from the shotgun discharge into the carpet at front of drawer D4 (Figure 13B). An assailant had removed that drawer, put it in the wet blood deposit that was on the carpet in front of that built-in cabinet and dragged it towards the cabinet when he returned it to the cabinet (Figure 16B).
4. A cloth was placed on the dying Lyons, bloodied by his wounded right hand and taken with the assailants when they left the crime scene. Such an act suggests one or more street gang members were involved in the homicides.

The assailants made certain there were no overt indications of their search. The house was not entered by the police until morning light, six hours after the homicides. The back of the house appeared to not have been monitored, which allowed the assailants to leave unnoticed.

The Santa Barbara Crime Lab criminalist analysis: The crime scene analyst who processed this case apparently had little experience in crime scene analysis. He basically ignored most of the evidence in the crime scene images and reports and presented in court his conclusion in two graphics (Figures 9 and 50). He was apparently biased by the assumption that there was a single shooter (brother of Lyons) which was concluded the same day of the homicides by investigators.

Figure 50: Reconstruction of the homicide by a crime lab criminalist; it was previously decided a single suspect was responsible for this homicide despite overwhelming evidence that two shooters were involved and there was actually physical contact between Lyons and at least one assailant. This bizarre reconstruction was presented in court and does not account for the physical evidence.
Conclusions

Assailant 1 with the .22 caliber revolver incapacitated Scharton which allowed assailant 2 to attain the position for the killing shotgun discharge. Assailant 2 did not discharge his shotgun until he was in position to be assured of a kill by a stationary victim with only one shot, reserving his remaining cartridges for the second victim, Daniel Lyons. The homicide of Barbara Scharton had to have been performed quickly (likely not more than four or five seconds).

The assailants knew where Daniel Lyons was and in order to avoid potentially fatal resistance by him, calling the police or yelling to his neighbor to call the police, they had to immediately attack him after the Scharton homicide. Lyons was attacked within seconds of the homicide of Scharton, suggesting a third assailant with a .38 caliber revolver was already entering the bedroom to attack Lyons when he arose from his bed. This suggests a coordinated attack on Lyons and Scharton. Indeed, the confused Daniel Lyons met an assailant within his bedroom probably within five seconds of being aroused. Lyons was naked and unarmed.

The homicide of Barbara Scharton was committed by two assailants, Assailant 1 with a .22 caliber revolver and the Assailant 2 with a 12 gauge shotgun. The prosecution proposed there was a single assailant, Corey Lyons, in the homicides of Barbara Scharton and Daniel Lyons. Analysis of the police, autopsy and criminalist reports, and scene and autopsy image evidence indicates there were two assailants in the attack on Barbara Scharton, which is supported by two assailants in the homicide of Daniel Lyons.

The brother of Daniel Lyons, Corey Lyons, was arrested and convicted of the two homicides. The defense attorney did not use any of the exculpatory evidence and conclusions described here which was reported to the defense well in advance of the trial. The Gunshot Residue (GSR) analysis of the defendant’s hands and personal items was also presented in court by a criminalist. The author’s analysis and conclusions of the GSR evidence was contrary to the prosecution’s GSR expert’s testimony [2]. The defendant was convicted and according to a post-trial jury survey, it was due to the invalid presentation by the prosecution’s GSR expert.

Neither the GSR evidence nor crime scene evidence support the defendant, Corey Lyons, being the shooter. Corey is serving two life terms without the possibility of parole.

Addendum

The author was retained by defense council for the evaluation of the discovery for the trial of Corey Lyons. Defense council elected not to use this author’s work product for the defense of Corey in trial, despite the exculpatory evidence generated. The defense council, ordered the author to stop work early in the investigation, allegedly due to costs. Because of the extraordinary nature of this case, the research continued, at the author’s expense, until publication. Independent defense forensic scientists are not subject to disclosures and releases under most circumstances.

Acknowledgement

Many thanks to the two reviewers who obviously put much care and time in evaluating this submission. GSL Journal of Forensic Research is commended for not only adhering to the necessity of peer review but also for the editor’s selection of persons qualified to review this submission.

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