Seminar 7: Opinion Evidence

"Are you thinking that that's a glitch?"

Read Chapter 7 of *Uniform Evidence*, pp 146-149 of *Proof and the Preparation of Trials* and ss 76-80 of the *Evidence Act 2008*. Your goal is to be capable of identifying evidence of an opinion and becoming proficient at the factual analysis required to determine whether or not such evidence is admissible in a Victorian trial.

Prepare for this seminar as follows:

- Look through the prosecution witnesses, below, and identify all the opinions that were asserted by each witness. Are all the opinions about the existence of a fact? What other sorts of opinions are there? Identify how each opinion can be used to support the prosecution case. That is, describe the chain of reasoning leading from each opinion to the case.

- Now, use the chart on p. 150 of *Uniform Evidence* to determine whether each witness would have been allowed to state each opinion in testimony.

- Look at all the blood pattern reports. Assess them against the criteria at [7.2] of *Evidence*. In particular, answer the following questions:
  - Think about the factual foundations of the reports. Distinguish between facts particular to the Peterson case and facts that are more general. How are the facts particular to the case going to be proved by the prosecution? Did the experts themselves observe all those facts? Where do the ‘general’ facts come from? Does the report say? Do some research on the internet on the field of ‘blood patterns’ (or ‘blood spatter’). Is it an organised body of knowledge? Is it reliable?
• Look at the document entitled ‘blood pattern examination conclusions’. What is the subject-matter of each of the conclusions? Are any of the conclusions about matters of everyday knowledge? Are they about matters that must be determined by the jury in the Peterson trial? Are they ‘wholly or substantially based on’ Duane Deaver’s expert knowledge? Now, repeat for the opinions contained in Duane Deaver’s testimony.

• Are the opinions in the reports communicated in sufficient detail to allow you to decide for yourself whether the conclusions are accurate? What additional information could have been included in the reports? If the defence called an expert who examined the blood stains and reached a different conclusion, how would you assess the weight to be given to the reports?

• Based on the above, determine whether or not the benefits of admitting the expert reports outweigh the costs of admitting them. Identify whether the prosecution could do anything to cure any problems in the reports.

• Look again at the evidence of Hall (Seminar 2), Haggard (Seminar 2) and Huggard (Seminar 3). Determine the ways the defence might argue that evidence of the opinions should be excluded by the trial judge. (See p148 of Proof.) What could be done by the prosecution or the witnesses to resist such arguments?
Dan George, Durham police department evidence technician

- Had three years’ experience as an evidence technician. He was the lead investigator of the death scene and videotaped it, including Kathleen’s bloody body.
- When he first arrived at 3:07 am, he was met by an unidentified woman (who said she was a doctor), rather than a police officer, and was concerned about the lack of control over the scene. He observed Michael run in from the patio covered in blood, wearing no shoes or socks. He leaned over his wife’s body, too fast for investigators to stop him. He didn’t try to lift her head or hold her close. He was moaning and had to be pried away by Todd. Michael then sat on a couch, transferring blood to it. George did not mention Michael running in his initial report.
- He observed large quantities of blood all over the floor, all over the victim, her hands, her feet, her clothing, the walls and the stair. The blood on Kathleen’s body was dried and the blood on walls and stairs appeared wiped or smeared. He initially thought death was not an accident. Saw a drop of blood on the walkway and one just inside the door.
- Before examining the area more closely, he and Campden waited for Holland’s return with a search warrant. When they re-entered the house, they wore full Tyvec suits and booties and gloves to avoid cross-contamination. When they examined the stairwell, they decided that an expert in blood spatter was needed because of the excess amount of blood that was in the stairwell. They contacted SBI agent Deaver for that purpose and provided him with support.
- Collected Kathleen’s sweatpants and sweatshirt from her body. The top of Kathleen’s clothing was damp but not wet; the bottom part was saturated, drenched in what appeared to be blood. Collected Michael’s tennis shoes, found near Kathleen’s body. He did not collect the eyeglasses at the staircase, because they had no stains on them.
- Collected Michael’s clothing. The clothes were moist when collected. He placed them all in a single paper bag for transporting to the police station for drying. Todd’s clothing was similarly packaged.
- He conceded that mistakes were made, and that he didn’t seize bloody items, such as a telephone and the paper towels under Kathleen’s head, nor Kathleen’s clear plastic sandals (which did not appear to have blood on them.) Nor did he photograph the Luminol trail of footprints in the kitchen. It was not proper collection procedure to fold and bag the clothes without documenting the stains. The SBI initially refused to process the clothing because the stains were transfer
stains. He observed one officer checking his shoes, as if he had stepped in something.

**Eric Campen, crime scene investigator, Durham Police Dept.**

- Described Kathleen’s body: her feet and jogging suit were covered in blood and there were paper towels, tissues, socks, and shirts in the hallway and cloth towels under her head. The blood high up on the wall seemed unusual and didn’t “seem right” to him, leading him to request a blood spatter expert from the State Bureau of Investigation. He said it was not the amount of blood that was unusual, as he’d been to bloodier scenes.
- Collected a used condom and linen from a bedroom, as well as hairs from a diet coke can on the patio.
- On the evening of 10 December, performed several Luminol tests and obtained fingerprints at the scene. The Luminol test showed that someone had walked through the kitchen to a cabinet where wine glasses were kept. Two footprints were facing the janitorial sink, as if somebody was standing directly in front of it. There was a “rabbit path” near Kathleen’s body, with too many overlapping footprints to distinguish. He said that outdoor lighting made it too hard to photograph the footprints. They had insufficient black plastic to cover the windows. No contemporaneous diagram was made of the locations.
- Conceded that the streaks on the staircase wall had an appearance consistent with streaks from Luminol, but denied having sprayed Luminol on the wall as the blood was clearly visible. He applied Luminol at the top of the stairs that revealed some reactions near the top landing, at the location of the linen closet.
- No blood was found in the laundry sink or washing machine, nor on a mop or bucket.
- On the stand, identified an evidence bag as containing a metal fragment he found on the 15th step of the staircase. However, when the bag was opened, it was empty.

**Vincent Bynum, homicide investigator, Durham Police Dept.**

- Observed Luminol testing and saw the illumination of footprints in the kitchen area. There were no bloody shoe prints (as opposed to footprints) in the Luminol. It appeared like someone walked from the steps toward the kitchen and then toward the den/laundry area.
- Luminol testing was also performed in the formal dining area, the sink in the laundry area and near the outside doorway with no result.

**Angela Ashby, evidence technician, Durham Police Dept.**

- In charge of photography at the crime scene, took still photos and video. She was a new employee and was assigned by Campbell to photograph the scene as part of her training.
- On Dec. 9, she took some photos in the morning and some after 3:30 p.m. following the autopsy of Kathleen. She did not photograph bloodstains on the kitchen cabinet.
- Collected items from the autopsy, including a metal chip found in Kathleen’s scalp and hair found in Kathleen’s hand.

**Joyce Petzka, agent, State Bureau of Investigation**

- A shoe/fingerprint expert.
- Identified prints taken from Michael’s Converse sneakers, found at the scene, and matched them to the footprint found on the back of Kathleen’s sweat
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<tr>
<td>Suzi Barker, forensic serologist, molecular genetics section, State Bureau of Investigation</td>
<td>▪ Blood was found on Michael’s khaki shorts and Converse sneakers; on two diet coke cans, and shoe prints on Kathleen’s sweat pants. ▪ She tested items including the wine bottle, wine glasses, a mop, paper weight, steel knife handle and paper towels for blood but all tested negative. Tested bed linens and towels for semen but those tested negative.</td>
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<td>Mark Boodee, forensic DNA analyst, State Bureau of Investigation</td>
<td>▪ Blood found on Michael’s shorts, his sneaker, the stairway wall and the couch all belonged to Kathleen. ▪ A mixture of DNA from at least two different people were found on Diet Coke cans, and likely belonged to Michael and Kathleen. ▪ Tests for DNA on Michael’s sneaker, the mouth area on the Diet Coke can in the kitchen, the wine glass, and the root from a hair taken from the second step was not matched to anyone.</td>
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<td>James Gregory, special agent, State Bureau of Investigation</td>
<td>▪ A forensic hair and fiber expert ▪ Hairs found on the step belonged to Kathleen and some were broken, cut or forcibly removed. ▪ Kathleen’s hairs were also found on her clothing and in both of her hands, also either broken, cut or forcibly removed. None of the hairs in Kathleen’s hands belonged to Michael, and there were many ways the hairs could have ended up “broken and cut” or forcibly removed.</td>
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<td>John Wayne Bendure, forensic chemist &amp; agent, SBI trace evidence unit</td>
<td>▪ Examined a pair of Michael's khaki shorts and analyzed eight blood splatter spots found on them. ▪ The spots originated from the inside of the shorts.</td>
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<td>Peter Duane Deaver, special agent, SBI</td>
<td>▪ The lead instructor on blood spatter at the North Carolina SBI. He began to perform blood spatter analysis after being mentored by SBI analyst David Spittle. He had issued reports in approximately 200 cases and attended approximately 500. He had been qualified as a bloodstain pattern expert in North Carolina courts on approximately 60 occasions. ▪ Blood spatter analysis is the study of bloodstains at a crime scene to determine how they are caused. Different kinds of forces, including gravity and centrifugal force, come into play regarding blood at a crime scene. Impact spatter comes from an impact and must have a point of origin somewhere. When a source of blood, such as a person’s bleeding, is impacted, a point of origin corresponding to that source of blood can be found by examining the spatter resulting from the impact. Generally, the more force that is applied to blood, the smaller the droplets that will be produced. Even a few small drops in a pattern can indicate force. By making certain measurements and using strings, a spatter analyst can</td>
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find a point of origin out in space of a source of blood that has been impacted. The “stringing” method for locating points of origin in blood spatter is a current technique that experienced bloodstain pattern analysts use. There is an element of subjectivity to determining a point of origin and to selecting and measuring stains for this analysis.

- He was called to Michael’s house and arrived around 5pm on 9 December 2001. He gathered information bearing on analysis and was satisfied that it could be done, as no emergency action or other action had taken place within the stairway of such nature as to prevent it, especially with respect to the walls. It appeared that someone had walked through blood to the stop of the stairs and that the second-bottom step had been cleaned, which would have taken some effort.
- He used the stringing process to find a minimum of three points of origin in space within the stairway (as opposed to impact on a surface.) The location of these points was determined by trigonometric analysis. These impacts in space were inconsistent with a fall. There were other possible points of origin, but these three answered the question of whether some stains were inconsistent with a fall. At least four blows produced the stains corresponding to the points of origin: one to cause the bleeding and three to cause the stains associated with the bleeding. He did not photograph the stringing process, as the photos would be no use to an expert reviewing his work.
- Visible runs (drips) indicated that an effort was made to wash some of the stains off the north wall. Two bloody marks on the staircase itself could have been made by a blowpoke. Stains on the doorway and near the floor showed hair transfer consistent with Kathleen’s head striking the door jamb and her hands coming into contact with this area.
- Kathleen was assaulted inside the stairwell by someone standing outside the stairwell, based on a ‘cast off’ line of five blood drops nine feet above the floor outside the stairwell. No strike marks were found on the walls and there was no cast-off on the ceiling.
- Kathleen was alive for some time based on different positions her body was in when impacts had occurred and stains were produced. Her footprints in blood in the stairway indicated that she was stepping in her own blood.
- Conceded that he did not include the runs, weapon cast-off on the door jamb or clean-up on the second-last step in his notes or report as these were ‘opinions’, which SBI policy precludes him from putting in his reports, as they provide grounds for cross-examination.
- The scene was comparable to many scenes he had been to and the impact spatters were consistent with beatings he had examined in the past. He had personally examined approximately 15 potential crime scenes with bloodstain patterns that were claimed to be caused by falls – he found that 6 of these had in fact involved falls, while the remainder were caused by criminal acts.
- During a break in the work, he went into the kitchen area and smelled alcohol in the sink. He also observed bright red, fresh blood on a kitchen cabinet. After Campen lifted fingerprints from a wine glass, Deaver tested a wine bottle for the presence of blood, but recognised that that was an error as the testing removed any fingerprints.
- Examined blood spatter on the clothing of Michael, Todd and Kathleen. Michael’s shorts had been heavily stained on the outside, including transfer stains. Some very small droplets were visible inside the right leg toward the back. These formed a spatter pattern resulting from an impact when the shorts were very close to the source of blood, with water applied afterward. Microscopic
Opinion Evidence

Examination revealed that the droplets were deposited on the inside surface of the leg as opposed to hitting the outside and soaking through. The shorts were sufficiently baggy to allow deposit in back when the knee was bent. Experiments he performed indicated that some stains on the toes and side of Michael’s shoes resulted from impact by something with a source of blood when the source was directly above the shoes, at a time when either the source or the shoes were in motion.

- When you have done a blood stain pattern analysis at a crime scene, it behooves you to go back to the laboratory to reproduce those patterns by actions you believe caused the patterns at a crime scene. Such confirmatory tests are a readily accepted part of blood stain pattern analysis and literature. He typically performed such analysis in complicated or large scenes, using methodology consistent with that used by other experts in the field.

- Constructed a $7,700 replica of the staircase to do experiments. Concluded that the spatter he examined and the scene were inconsistent with a fall, but was consistent with a fatal beating and that Kathleen was hit, in total, at least four times. Her hair may have produced some droplets, but not the small droplets that constituted the majority of the spatter. Given the autopsy report, he believed the blood came from impacts, rather than from her nose, mouth or hair. Deaver’s socks became stained with blood spatter during the tests.
TO: Officer Ruth Brown  
Durham Police Department  
308 W. Chapel Hill Street  
Durham, North Carolina 27701  
DATE: February 11, 2002  
SBI LAB NO.: R2001-29757  
SBI FILE NO.: 2001-03931  
AGENCY FILE NO.: 03-38139  
EXAMINED BY: Joyce E. Petzka  
SUBMITTED BY: Address  
DATE OF OFFENSE: December 09, 2001  
DATE SUBMITTED: January 17, 2002  
TRACKING NO.: 83444  

LOCATION: Durham County  
TYPE OF CASE: Murder  

SUBJECT(S): Michael Iver Peterson (suspect)  
Kathleen Peterson (victim)  

ITEMS SUBMITTED:  
Item 27: One (1) empty package for a Trojan-Enz condom. (Your Item 17)  

ITEMS RECEIVED FROM S.A.S.L. BARKER ON JANUARY 31, 2002  
Item 16: One (1) pair of white leather Converse All Star athletic shoes. (Your Item 3)  
Item 34: One (1) pair of gray sweatpants and one (1) brown sweatshirt. (Your Item 32-33)  

ADDITIONAL ITEMS RESULTING FROM EXAMINATION:  
Item 16-A: Standard produced from left shoe submitted in Item 16.  
Item 34-A: Photograph of the questioned footwear impression noted on the sweatpants submitted in Item 34.  

TYPE EXAMINATION REQUESTED:  
Latent print examination and comparison.  
Footwear impression examination and comparison.  

RESULTS OF EXAMINATION:  
There were no identifiable latent prints noted or developed on the condom package submitted as Item 27.  
One (1) portion of a questioned footwear impression was noted on the sweatpants submitted in Item 34. That portion of a questioned footwear impression corresponds in physical size, design, and general wear with the heel portion of the known left shoe submitted in Item 16 and could have been made by that shoe or the heel of another left shoe of the same physical size, design, and general condition. Due to the limited detail in the impression, a more positive association was not made.  

1. Ray Cooper, Attorney General of the State of North Carolina, hereby certify that the form identified as North Carolina State Bureau of Investigation, Department of Justice, Laboratory Report is a form approved by me for the purpose of N.C.G.S. § 45-21(b)(1) and approved by me in compliance with the said statute.  

THIS REPORT IS TO BE USED ONLY IN CONNECTION WITH AN OFFICIAL CRIMINAL INVESTIGATION.  

COPIES TO:  
Mr. J. E. Hardin, Jr., DA  
SAC R. R. Sims  
S/A P. D. Daver  

Robin Petersen, Director  
Joyce E. Petzka  

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Opinion Evidence

North Carolina
State Bureau of Investigation
Department of Justice
Raleigh
Laboratory Report

Report 2 (Corrected-Submission Info)
TO: Officer Ruth Brown
Durham Police Department
505 W. Chapel Hill Street
Durham, NC 27701

DATE: June 24, 2003
SBI LAB NO.: R2001-29757
SBI FILE NO.: 2001-09331
AGENCY FILE NO.: 01-38139
EXAMINED BY: Joyce E. Penska
SUBMITTED BY: Addresser
DATE OF OFFENSE: December 09, 2001
DATE SUBMITTED: January 17, 2002
TRACKING NO.: 83444

LOCATION: Durham County
TYPE OF CASE: Murder

SUBJECT(S): Michael Iver Peterson (suspect) Kathleen Peterson (victim)

ITEM RECEIVED FROM S/A S. L. BARKER ON APRIL 8, 2002:
Item 26: Two (2) crystal wine glasses and two (2) empty wine bottles. (Your item 16)

ITEM RECEIVED FROM SBI IDENTIFICATION SECTION VIA NIST ARCHIVES ON APRIL 16, 2002:
Item 35: One (1) set of known inked fingerprint impressions bearing the name Michael Iver Peterson (SID NC053122A).

ADDITIONAL ITEMS RESULTING FROM EXAMINATION:
Item 25-1: Two (2) latent print lifts of ridge detail on one (1) wine glass and one (1) wine bottle.
Item 26-2: One (1) photograph of ridge detail noted on one (1) of the wine glasses.

TYPE EXAMINATION REQUESTED:
Latent print examination and comparison.

RESULTS OF EXAMINATION:
One (1) identifiable latent fingerprint was developed on one (1) of the wine bottles and one (1) identifiable latent fingerprint was developed on one (1) of the wine glasses. The identifiable latent fingerprints were compared to the known inked impressions received as item 35.

The latent fingerprint on the wine bottle was identified as having been made by the right middle finger of the same individual whose prints appear on the card bearing the name Michael Iver Peterson and the latent fingerprint on the wine glass was identified as having been made by the right index finger of the same individual whose prints appear on the card bearing the name Michael Iver Peterson.

DISPOSITION OF EVIDENCE:
The evidence was turned over to R. A. Brown on June 5, 2002.

COPIES TO:
Ms. J. E. Hadlin, Jr., DA
SAC L. Segal
SAC R. G. Sima
S/A P. D. Deaver

Robin Pendergraft, Director
Joyce E. Penska

Confidential: This is an official file of the North Carolina State Bureau of Investigation. To make public or reveal the contents thereof to any unauthorized person is a violation of the General Statutes of North Carolina.

This report is to be used only in connection with an official criminal investigation.

This report represents the factual and technical result of any analysis on the item(s) described.
At the request of the Durham Police Department, a bloodstain pattern examination was conducted on a stairwell and the kitchen area of the listed residence. Senior Crime Scene Investigator Eric Camper and Crime Scene Investigator Angie Powell from the Durham Police Department were present during the examinations. SA P. D. Deaver arrived at the scene at 5:07 p.m. and was briefed on the circumstances by Durham Police Detective A. H. Holland. The stairs, which were examined, led from the first to the second floor of the house. This stairway had an entrance in the front hall between the front door of the house and the kitchen. There were 18 steps in this stairwell. For this report, the steps were numbered from top to bottom, 1 to 18. The top landing was not numbered nor was the floor at the bottom of the steps. The victim’s body was not present during the blood spatter examination. The following points of interest were noted:

A. In the hall outside the stairwell were found blood spatters on the wall across from the stair entrance and on the header over the hall leading to the kitchen area of the house. There were two drops on the header 114" above the floor and three drops on the adjacent wall 38½", 59½" and 96" from the floor. Each of these drops show a downward path and an origin from above the drops.

B. There were smears and transfers in blood on the floor in front of the stairwell. There was also a pair of footprint-like transfers in blood on the floor in front of the stairs. A photograph provided to SA Deaver showed the victim’s body seated on the described floor. The victim’s feet were bare and had bloodstains on the bottoms.
C. The north or left side trim molding for the stairwell opening showed transfers and drips in blood from the floor to 46" in height. Finger and hair-like transfer stains in blood were visible on this trim. A light switch was found on the wall to the left of this piece of trim molding and had a transfer stain in blood on it.

D. The south or right side trim molding for the stairwell opening showed transfers in blood from 264" above the floor to a height of 364" on the opening side. Another transfer stain in blood could be seen from 35" above the floor to 394" in height on the right side of the same piece of trim. On this piece of trim, along the inside of the stairwell opening and above step #15, there were finger-like transfer stains in blood, drips in blood, and hair-like transfers in blood. The finger-like transfer stain contained three individual stains at the end of the handrail above step #15. The first stain was 244" up from step #15, the second was 254", and the third transfer stain was 264" up from step #15. The hair-like transfer stain in blood was from the surface of step #15 to 54" above the step.

E. There were blood spatters, smears, transfers, and drips in blood on the north wall at the bottom of the stairs. This was the area over steps #18, #17, and #16. A large smear in blood was noted on the north wall and the smear had a blood spatter pattern on top of it. The blood spatter patterns cover the entire width of the north wall of the stairwell and were found to a height of 70" above step #18. An area of unstained wall was found in the middle of this pattern. It was approximately 26" up the wall from step #17 and 20" from the east wall of the stairwell. It was approximately 10" long and 4" wide. A reconstruction of the blood spatter patterns on this wall revealed two points of origin for the patterns. One point of origin was approximately 19" up from step #17, 6" out from the north wall and 8" out from the east wall. Another point of origin for a blood spatter pattern was approximately 11" up from step #17, 2" out from the north wall, and 8" out from the east wall. A minimum of two blows were delivered to the source of blood in the corner of the north and east walls above step #17 in the stairwell.

F. Blood spatters could be seen on the east wall of the stairwell above steps #16 and #17. The patterns were examined for points of origin along with the patterns on the north wall and the results were listed in Item E. The blood spatters were from the surface of step #17 to a height
of 61\%" up the wall. A line of blood spatter was noted in this pattern. The line ran above step \#16 toward the corner with the north wall of the stairwell. The blood spatter line matched the edge of the lift chair when it was positioned in the lowest position in the stairwell. The lift chair had blood spatter on it. There were also blood spatter stains behind the lift chair on the east wall when it was placed in the lowest position. Blood spatter was seen on the floor molding in this area of the east wall above step \#16.

G. Smears in blood could be found on the corner of step \#16 next to the east wall of the stairwell. Smears in blood were seen on step \#17 along the edge above step \#18. No bloodstains were visible on the surface of step \#17 toward the north wall and step \#16. Blood spatters could be seen on top of step \#16 and the edge of the chair lift rail that adjoins step \#16. Blood spatters can also be seen on the riser between steps \#16 and \#15.

H. Blood spatters, transfers, and contact stains in blood were found on the riser between steps \#16 and \#17.

I. Above step \#15 on the west wall were found blood spatters. A reconstruction of this blood spatter pattern was made and a point of origin from the source of the blood was found to be approximately 27" up from step \#18, 2" forward of step \#14, and 5" out from the west wall of the stairwell. A minimum of one blow was delivered to the source of blood near the west wall above step \#15 in the stairwell. Drips, smears, and transfers in blood were noted on the surface of steps \#12, \#13, \#14 and \#15. A transfer on step \#15 demonstrated sharp edges. These bloodstains were found next to the west wall of the stairwell. A castoff bloodstain could be seen on the west wall and floor molding of the stairwell above steps \#12 and \#13. Drips were also seen on this piece of floor molding. A fingerprint-like transfer stain in blood was also seen in this location.

J. Two drops of blood were found on step \#7, the largest was approximately 5\%" from the west wall, 6\%" from the front edge of step \#7, and 4\%" from the riser between steps \#7 and \#6.

K. A transfer stain in blood was noted on the underside on the wood flooring on the landing at the top of the stairs. This transfer was made just above the riser between step \#1 and the top landing. This transfer was made on the underside of
the wood flooring of the top landing of the stairwell and was approximately 13.5” from the west wall of the stairwell. Directly below the transfer is a blood spatter on the riser. The pattern is approximately 44” up from step #1 to the top of the stain and 3” up from step #1 to the lowest drop of the stain. The center of the blood spatter pattern was approximately 134” from the west wall of the stairwell. The blood spatter came from a source directly above the stain.

L. In the kitchen, transfers in blood were noted on a cabinet next to the south wall. The cabinet contained two shelves with drinking glasses on each shelf. The transfer stains were finger-like and were found on the knob of the cabinet door and the first shelf up from the bottom of the cabinet. This transfer was on the front edge of the shelf, 164” from the south wall of the kitchen and 44” from the right or north edge of the cabinet. A drop of blood was noted on the counter top 6” from the south wall of the kitchen and directly below the front of the cabinets. Two drinking glasses and an opened green bottle smelling of alcohol could be seen sitting around a sink basin in a bar to the north of the cabinets described. A cooking pot containing a food strainer was found in the sink basin. SA Deaver raised the pot from the sink and noted the strong odor of alcohol coming from the drain in the sink.

The blood spatter examination on the listed areas was completed at 11:10 p.m. Sunday, December 9, 2001.

PDD: vlg
EXCERPTS OF DEAVER’S CRIME SCENE NOTES

- North wall
- Movie poster
- Shadow
- Spatter pattern
- Wall at bottom of steps
- Heavy spatter
- Step 18th step
- Step 17th step
- Step 14th step
- Step 13th step
- Step 12th step
- Step 11th step
- Step 10th step
- Step 9th step
- Step 8th step
- Step 7th step
- Step 6th step
- Step 5th step
- Step 4th step
- Step 3rd step
- Step 2nd step
- Step 1st step
At the request of the Durham Police Department, a bloodstain pattern examination was conducted on items of clothing submitted to the North Carolina State Bureau of Investigation Crime Laboratory. SA Deaver took possession of ten paper bags of evidence on Tuesday, January 22, 2002. Those ten bags represent 11 items as detailed in this report. The bags were taken to the Molecular Genetics Section where an examination area was provided. Criminal Specialist Dennis Honeycutt was present during the examinations on January 22 and 24, 2002.

Item #1 was a sealed brown paper bag containing a pair of short pants identified as collected from Michael Peterson. The pants were Brooks Sport brand, size 36, and 100% cotton. The following points of interest were noted:

A. The front of the pants were heavily bloodstained. The blood had soaked through the front to the inside fabric of the pockets. The bloodstain on the front of the pants had also been diluted. The diluted blood was in a "V" pattern on the front of the pants.

B. Smears, contact stains, and blood spatters were visible on the front of the shorts.

C. Contact and soaking stains in blood, and blood spatters were
found on the back of the shorts. On Thursday, January 24, 2002, a test was made on the back of the shorts. The test consisted of placing a drop of blood on the back, in an unstained area of the shorts. The test was made to determine expansion of drops of blood as they were absorbed into the fabric. The drop was placed in a marked square on the shorts. The drop expanded from .7 mm to 1.5 mm in diameter in three minutes. A large drop of blood also put into the test square on the shorts could not be measured initially and was not used in the test results. On Tuesday, January 29, 2002, SA Deaver looked at blood spatters on the inside of the right leg of the pants. This was done while the pants were in the custody of SA John Bendure of the SBI Crime Laboratory.

Item #2 was a sealed brown paper bag containing four athletic style socks identified as collected at the bottom of the stairs. They were white in color and contained soaking and smear stains in blood. No blood spatters were visible on the socks.

Item #3 was a sealed brown paper bag containing a pair of Converse "Chuck Taylor" brand athletic style shoes identified as collected at the bottom of the stairs. They were low cut, leather type, size 8.5 shoes. Both shoes were laced at the time of this examination. The following points of interest were noted:

A. The soles of each shoe were bloodstained.
B. The right shoe had blood spatters, drips, smears, and contact stains in blood on it.
C. The left shoe had blood spatters, smears, and contact stains in blood on it.

The shoes were examined again on Monday, February 4, 2002. The shoes were in the custody of SA Joyce Petzca and were examined in her office at the SBI Laboratory. During this examination, the following points of interest were noted:

A. Blood spatter on the right side of the right shoe came from sources of blood located on the right and left sides of the shoe.
B. Blood spatter on the left side of the right shoe came from a source of blood on the left side of the shoe.

C. Blood spatter on the right side of the left shoe came from sources of blood located on the right and left sides of the shoe.

D. Blood spatter on the left side of the left shoe came from a source of blood on the left side of the shoe.

E. The toe of each shoe had blood spatter that came from a source of blood directly above the toes.

The remaining items were examined on Thursday, January 24, 2002, in the Molecular Genetics Section of the SBI Crime Laboratory.

Item #4 was a sealed brown paper bag containing a knit short sleeve shirt identified as collected from Michael Peterson. The shirt was navy in color, Asics brand, and size large. The shirt had a heavy odor of perspiration about it. Dark bloodstains were visible on the left chest, left and right sleeves of the shirt. The dark color of the shirt prevented a complete examination of the bloodstain characteristics.

Item #7 was a sealed brown paper bag containing a knit, short sleeve shirt identified as collected from Todd Peterson. It was a gray in color, Structure brand, size large shirt. The shirt had a light odor of perspiration. The following points of interest were noted:

A. The shirt had contact stains in blood over the top of the shoulders and the top of the sleeves.

B. The front of the shirt had contact stains in blood from the collar down to the middle. The stains became lighter down the front of the shirt.

C. The back of the shirt had contact stains in blood along the top of the shoulders and sleeves. A contact stain in blood was found along the left shoulder blade at the back of the shirt.
Item #8 was a sealed brown paper bag containing a pair of blue jeans identified as collected from Todd Peterson. They were Perry Ellis America brand, size 34x32 pants. The following points of interest were noted:

A. In the front of the pants, smears in blood could be seen on the pants above the right pocket. No blood was seen in the pockets.

B. In the front of the pants, contact stains in blood were found on the side of the right leg and in the crotch area of the right leg.

C. In the front of the pants on the left side and leg, contact stains in blood could be seen below the pocket and below the crotch along the inseam.

D. In the back of the pants, contact stains in blood were seen along the inseam and seam just below the crotch on the left leg.

E. In the back of the pants, a contact stain in blood was found near the hem of the right leg. A drop of blood was found on the bottom of the right leg.

Item #9 was a sealed brown paper bag containing one pair of athletic style socks identified as collected from Todd Peterson. The socks were white with gray toes and heels. They had a strong odor and were soiled. No visible bloodstains were noted on these socks.

Item #10 was a sealed brown paper bag containing one pair of shoes identified as collected from Todd Peterson. They were Eastland brand, lace, leather type shoes. The shoes were size 13 D and brown in color. No bloodstains were visible on the shoes.

Item #11 was a sealed brown paper bag containing a long sleeve shirt identified as collected from Todd Peterson. It was a Brook Brothers brand, size large, purple plaid shirt. No bloodstains were visible on the shirt.
Items #32 and #33 were a sealed brown paper bag containing the following items:

Item #32 was a pair of light gray, sweat style pants identified as having been collected from Kathleen Peterson. They were light gray in color, women’s size medium, L.L.Bean/Russell Athletic brand pants. The following points of interest were noted:

A. Soaking stains in blood were seen on the front of the pants. These stains were found primarily in the waist area of the pants. The heaviest stain was seen along the left side of the pants.

B. A diluted bloodstain was visible along the crotch of pants and down the inside of each leg.

C. Contact, drips, and smears in blood were visible on the front of the pants.

D. Blood spatters were visible on the front of the left and right legs of the pants.

E. Soaking stains in blood could be seen along the waist area of the back of the pants.

F. Diluted bloodstains were found in the seat area of the back of the pants.

G. Soaking, transfer, and contact stains in blood were visible on the back of the left and right legs of the pants.

H. Blood spatters were visible on the back of the right leg of the pants.

I. A shoe track transfer stain in blood was found on the back of the right leg of the pants.

Item #33 was a dark gray fleece top identified as collected from Kathleen Peterson. It was a Pacer Petite brand, size petite small. The top was stained heavily with blood around the collar and down the back. The tail of the top was soaked in blood. The dark color of the top prevented a complete examination of the bloodstain characteristics.
Seven bags of evidence representing seven items were returned to the SBI Evidence Control Section on January 24, 2002. Three bags of evidence representing four items were submitted to SA S. L. Barker on January 24, 2002.

FDD: VFC
BLOODSTAIN PATTERN TESTS AND EXAMINATIONS:

On Thursday, September 12, 2002, a series of tests were performed based on blood spatter patterns found in the stairwell at 1810 Cedar Street, Durham, North Carolina, and on clothing submitted to the North Carolina State Bureau of Investigation by the Durham Police Department. The test materials included human blood, Styrofoam heads, white posterboard targets, sponges, clothing, and carpentered props. The following tests and examinations were performed:

Test #1: A source of blood was dropped from a height of 12' to a flat surface. An impact spatter pattern was found on the targets associated with the impact site. The impact spatters on the vertical targets extended from the impact surface up to 24". The majority of the drops in the pattern were from the surface to 10" in height. The targets from this test were labeled "T-1."

Test #2: 5 ml of blood was placed on a posterboard target and stomped multiple times from a standing position. The test was performed while using test shoes, socks, and short pants. The associated vertical target revealed impact spatter patterns 5" up from the impact surface. Examination of the test shoes revealed blood spatters on the sole of the right and left shoes in the area of the instep. Several small drops of blood could be seen on the outside sole of the right shoe, and one small drop of blood was visible on the outside sole of the left shoe. Blood was seen on the bottoms of both test shoes. No blood was visible on the top of the right or left shoes. No bloodstains were visible on the test shorts or test socks. All items were marked "T-2 standing."
5 ml of blood was placed on a posterboard target and stomped multiple times from a sitting position while using test shoes, socks, and short pants. The test was performed while sitting at a height of 7 3/4" above the source of blood. The associated vertical target revealed impact spatter patterns 1 1/4" up from the impact surface. Examination of the test shoes revealed blood spatters on the soles on both sides of the right and left shoes. The left shoe also had a smear on the right side of the shoe near the toe. Blood was seen on the bottoms of both test shoes. No blood was visible on the top of the shoes except the smears near the toe of the left shoe. No bloodstains were visible on the test shorts or test socks. All items were marked "T-2 sitting."

#3: A source of blood placed 4" above the surface and 18" from posterboard targets was struck multiple times. Examination of the associated targets revealed impact spatter patterns. The targets were labeled "T-3."

A source of blood was placed on a Styrofoam head. The head was then impacted into a posterboard target placed in the horizontal. Examination of the associated targets revealed impact spatter patterns. The vertical target had an impact spatter pattern which extended to a height of 5" about the impact surface. The targets were labeled "T-3 head."

#4: A source of blood, 36" in height, was struck multiple times. Test shoes and test socks were worn during the impacts. An examination of the test shoes and test socks revealed the following points of interest:

The test socks contained blood spatters and a drip in blood.

The right test shoe had blood spatters on the right and left sides of the toe. The top of the shoe on the toe also contained blood spatters. The directionality of the blood spatters revealed a source for the blood above the right shoe.

The left test shoe had blood spatters on the right and left sides of the toe. The top of the shoe on the toe also contained blood spatters. The directionality of
the blood spatters revealed a source for the blood above and slightly forward of the toe of the left shoe. The items were marked "T-4."

Test #5: A test shirt and a pair of test pants were stained by contacting them with bloody objects. An examination of the test shirt and test pants revealed contact stains in blood. The shirt and pants were marked "T-5."

Test #6: A source of blood was placed inside a reproduced stairwell at various positions corresponding to the points of origin for blood spatter. These points of origin were detailed in the Bloodstain Pattern Examination report dated January 25, 2002. The source of blood was struck multiple times producing impact spatter stains in blood on the walls and steps. A source of blood placed on a Styrofoam head was impacted into the surface of one of the steps producing impact spatters on the steps, the wall, and the risers between the steps. A bloody object came in contact with several portions of the reproduced stairwell producing transfer and smear stains in blood.

A reconstruction of blood spatter patterns on the wall at the bottom of the reproduced stairwell, which corresponds to the north wall of the stairwell at 1810 Cedar Street, Durham, revealed two points of origin for the pattern. One point of origin was approximately 20" up from the step corresponding to Step #17, 5" out from the wall corresponding to the north wall and 64" out from the wall corresponding to the east wall. Another point of origin for the blood spatter pattern was approximately 5" up from the step corresponding to Step #17, 8" out from the wall corresponding to the north wall and 11" out from the wall corresponding to the east wall. Examination of blood spatter patterns on the riser corresponding to the riser between Steps #17 and #16, revealed the source of blood from the surface of the step corresponding to Step #17.

A reconstruction was conducted on a blood spatter pattern located on the wall corresponding to the west wall of the stairwell at 1810 Cedar Street, Durham. The reconstruction revealed a point of origin for the blood approximately 28" up from the step corresponding
A test shirt and pair of short pants were worn on one occasion during the striking of the blood source. A blood source was also used to contact the test shirt and short pants producing contact stains and smears in blood. Examination of the test shirt and short pants revealed contact, soaking, and blood spatters on the front of the test short pants. Water was then applied to the front of the test short pants. Examination of the test short pants revealed a diluted bloodstain in the front of the test short pants and along the crotch. The blood spatter drops seen in the front of the test short pants prior to the application of water were washed out. Examination of the right leg of the test short pants revealed a blood spatter pattern on the inside of the right leg at the back of the leg. The droplets were from the bottom edge of the hem to 3 1/ 2 inches above the edge of the hem. The test short pants were given to SA John Bendure for further examination. Examination of the test shirt failed to reveal visible blood due to the dark color of the fabric. The clothes used in this test were marked “T=6.”

The tests were completed on September 12, 2002. The examination of test materials was completed by SA Deaver on September 27, 2002.

PDD:vrc
BLOODSTAIN PATTERN EXAMINATION CONCLUSIONS:

Examination of the stairwell at 1810 Cedar Street, Durham, clothing provided by the Durham Police Department, and tests conducted on clothing and carpentered props produced the following conclusions:

Bloodstains in the stairwell at 1810 Cedar Street, Durham were consistent with impacts to a source of blood in various positions and heights inside the stairwell.

Bloodstains in the stairwell were consistent with a source of blood having come in contact with the walls and door trim of the stairwell.

Bloodstains in the stairwell were consistent with impacts to a source of blood occurring before and after contact stains, and smears were made in the stairwell.

The unstained portion of the north wall at the bottom of the stairs, described in Paragraph E of the report dated January 25, 2002, was consistent with the application of a liquid to the wall resulting in the removal of a portion of the bloodstain pattern from that wall.

Bloodstains found on Steps #7 and #1 and in the kitchen were consistent with a source of blood having come in contact with objects in these areas.

Bloodstains on clothing Items #32 and #33, identified as coming
from Kathleen Peterson, and examination of bloodstains in photographs taken of the victim’s body, were consistent with the body having been in positions other than that observed in the photographs.

Bloodstains on short pants, Item #1, identified as collected from Michael Peterson, were consistent with the pants being in proximity to a source of blood at the time an impact was applied to the source of blood. Some bloodstains were consistent with a blood source having come in contact with the pants. Some bloodstains were also consistent with a liquid having been applied to the front of the pants after they were bloodstained.

Bloodstains on a pair of shoes, Item #3, identified as collected from the bottom of the stairs, were consistent with the shoes having been under a source of blood at the time of an impact to the source of blood.

Bloodstains on a shirt, Item #4, identified as collected from Michael Peterson, were consistent with the shirt having been in contact with a source of blood.

Bloodstains on a shirt and a pair of pants, Items #7 and #8, identified as collected from Todd Peterson, were consistent with the shirt and pants having been in contact with a source of blood.

FDD:vrc
BLOODSTAIN PATTERN EXAMINATION AND CONCLUSION:

On Thursday, April 17, 2003, Investigator R. H. Holland met
SA Deaver at the SBI Laboratory and asked for an examination of
a blow-poke fireplace tool. It was sealed in a clear plastic bag
and was labeled as Item #72. The tool was brass colored, hollow,
and had a pointed hook on one end. The hooked end also had soot
on it. Blood was placed on the hook end, and a transfer stain
was produced in blood on posterboard.

Conclusion:

The transfer stain made in blood during this examination
demonstrated characteristics similar to those of a transfer stain
in blood, seen on Step §15 of the crime scene. That transfer
stain in blood was described in Paragraph I of the report dated